TEXAS A&M

# HEALTH SCIENCE CENTER

*Bringing Learning to Life*

2007-2009 CATALOG

TEXAS A&M

# HEALTH SCIENCE CENTER


## VOLUME V

# 2007 - 2009 Catalog

TEXAS A&M

# Health Science Center

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## Introduction Table of Contents

# Introduction



## Purpose of Catalog

The provisions of this catalog do not constitute a contract, express or implied, between any applicant, student, faculty or staff member of the Texas A&M University System Health Science Center (hereinafter referred to as Texas A&M Health Science Center or HSC) or The Texas A&M University System. This catalog is for informational purposes only. The University reserves the right to change or alter any statement herein without prior notice. This catalog should not be interpreted to allow a student that begins his or her education under the catalog to continue the program under the provisions in the catalog.

# President's Biography

Nancy W. Dickey, M.D.
President, Health Science Center and
Vice Chancellor for Health Affairs, A&M System

Dr. Nancy W. Dickey is the President of the Texas A&M Health Science Center and the Vice Chancellor for Health Affairs for The Texas A&M University System. The Health Science Center is a University that includes the College of Medicine, Baylor College of Dentistry, School of Rural Public Health, Irma Lerma Rangel College of Pharmacy, Graduate School of Biomedical Sciences, Institute of Biosciences and Technology, and other institutes and academic programs.

Dr. Dickey is the visionary leader responsible for the Texas A&M Health Science Center becoming a premier assembly of colleges devoted to educating health professionals and researchers who possess extraordinary competence and integrity. She is making the Health Science Center a significant and energetic agent for health care, science and research in Texas. Dr. Dickey is well known for advocating the principle that all people, regardless of geography, economics or culture, deserve the benefits of compassionate care, superior science and exceptional health education.

Dr. Dickey was born in South Dakota and raised in Texas. She has served as Interim Dean of the College of Medicine, is the founding Program Director of the Family Medicine Residency of the Brazos Valley and is a Professor of Family and Community Medicine at the Texas A&M Health Science Center College of Medicine.

Dr. Dickey was the first woman ever to be elected President of the American Medical Association. She is the recipient of numerous awards, including five honorary doctorate degrees, in both science and law. Besides being a family physician, she serves on numerous committees, both locally and nationally, and writes for several medical and health policy journals. She is a member of the Board of Trustees for the Scott and White Foundation and is a frequent speaker at professional and civic organizations around the country and world.

Dr. Dickey has dedicated her life to bringing Texans the finest in health education, advocacy and care. She is advancing science and pushing the boundaries of existing knowledge. Dr. Dickey is a visionary leader who is educating our next generation of health care professionals and improving the lives of all Americans. We are grateful for her courageous leadership and we are thankful that she has the support of her husband, Franklin, and their three adult children.

# Academic Calendar

## *Academic Calendar - Baylor College of Dentistry*

### 2007

| Date | Activity | Class |
|---|---|---|
| May 29-June 1, 2007 | Registration and Payment of Fees for Summer Clinic for Current D.D.S. & D.H. Students | D.D.S. & D.H. |
| Monday, June 4, 2007 | Monday, SUMMER CLINIC BEGINS | |
| Monday, June 4, 2007 | Monday, QA/RM Program (D3-D4 & DH Sr.) Clinics Closed from 1 p.m.- 4:30 p.m. | D-3, D-4 & D.H. Sr. |
| Thursday, June 7, 2007 | Census Day | D.D.S. & D.H. |
| Friday, June 22, 2007 | 15th Class Day | D.D.S. & D.H. |
| Monday, June 25, 2007 | Orientation, Registration and Payment of Fees | Graduate Students |
| Monday, June 25, 2007 | SUMMER GRADUATE SESSION BEGINS | Graduate Students |
| Tuesday, June 26, 2007 | Graduate Core Courses Begin | Graduate Students |
| Thursday, June 28, 2007 | Census Date | Graduate Students |
| Wednesday, July 4, 2007 | *University Holiday (Offices Closed) | All |
| Friday, July 13, 2007 | SUMMER CLINIC ENDS | |
| Monday, July 16, 2007 | 15th Class Day | Graduate Students |
| Monday & Tuesday, July 16-17, 2007 | 9 a.m., National Board Exams Part I (Mon.) and Dental Hygiene (Tues.) (To be announced) | |
| Tuesday, July 17, 2007 | Summer Semester Grades Due by NOON | D.D.S. & D.H. |
| Monday, Aug. 6, 2007 | Registration and Payment of Tuition & Fees | D-1, Graduate Students |
| Thursday, Aug. 9, 2007 | Registration and Payment of Tuition & Fees | D-3, D-4, D.H., Graduate Students |
| Friday, Aug. 10, 2007 | Registration and Payment of Tuition & Fees | D-2, Graduate Students |
| Friday, Aug. 10, 2007 | SUMMER GRADUATE SESSION ENDS | Graduate Students |
| Monday, Aug. 13, 2007 | 8 a.m., FALL SEMESTER BEGINS | All |
| Tuesday, Aug. 14, 2007 | Summer Grades Due by NOON | Graduate Students |
| Tuesday, Aug. 21, 2007 | Last Day to File Proposal | Graduate Students |
| Tuesday, Aug. 28, 2007 | 12th Class Day - Census Date | All |
| Monday, Sept. 3, 2007 | University Holiday (Offices Closed) | All |
| Monday, Sept. 10, 2007 | 20th Class Day | All |
| Friday, Sept. 28, 2007 | Last Day to Schedule Defense | Graduate Students |
| Friday, Oct. 12, 2007 | Last Day to Defend | Graduate Students |
| Friday, Oct. 26, 2007 | Last Day to Submit ETD in Final Form | Graduate Students |
| Friday, Nov. 16, 2007 | Last Day to Submit Final Corrections of ETD | Graduate Students |
| Nov. 19-23, 2007 | Fall Semester Recess | All |
| Nov. 22 & 23 | University Holiday (Offices Closed) | All |
| Monday, Dec. 3 & Tuesday, Dec. 4, 2007 | 9 a.m., National Board Exams Part I (Mon.), Dental Hygiene (Tues.) | |
| Friday, Dec. 7, 2007 | FALL SEMESTER INSTRUCTION ENDS | All |
| Dec. 10-14, 2007 | Fall Semester Examination Period | All |
| Friday, Dec. 14, 2007 | 5 p.m., Holiday Recess Begins | All |
| Saturday, Dec. 15, 2007 | Saturday, Award M.S. and Ph.D. Degrees | Graduate Students |
| Tuesday, Dec. 25, 2007 | University Holiday (Offices Closed) | All |

### 2008

| | | |
|---|---|---|
| Tuesday, Jan. 1, 2008 | New Year's Day, Holiday (Offices Closed) | All |
| January Faculty Retreat | (To be announced) | |
| Thursday, Jan. 3, 2008 | Last Day to Submit Proposal | Graduate Students |
| Jan. 2-4, 2008 | Registration and Payment of Tuition and Fees for Spring Semester | All |
| Monday, Jan. 7, 2008 | Fall Semester Grades Due, Noon | |
| Monday, Jan. 7, 2008 | 8:00 a.m., SPRING SEMESTER BEGINS | All |
| January | Friday, CLINICS CLOSED - D.D.S. and D.H. - Southwest Dental Conference (To be announced) | |
| Wednesday, Jan. 16, 2008 | HSC Faculty Convocation | |
| Monday, Jan. 21, 2008 | University Holiday (Offices Closed) | All |
| Wednesday, Jan. 23, 2008 | 12th Class Day - Census Date | All |
| Monday, Feb. 4, 2008 | 20th Class Day | All |
| Friday, Feb. 8, 2008 | Last Day to Schedule Defense | Graduate Students |
| February | MOCK BOARDS - Fourth Year Dental (To be announced) | |
| Friday, March 7, 2008 | Last Day to Defend | Graduate Students |

| | | |
|---|---|---|
| Friday, March 28, 2008 | Last Day to Submit ETD in Final Form | Graduate Students |
| March 31-April 4, 2008 | Spring Semester Recess | All |
| March | NATIONAL BOARD EXAMS DENTAL HYGIENE (Part I D.D.S.; To be announced) | |
| Friday, April 11, 2008 | Last Day to Submit Final Corrections to ETD | Graduate Students |
| April, 2008 | Student Research Day-Clinic closed for D.D.S./D.H. (To be announced) | |
| April-May, 2008 | WREB EXAM-Fourth Year and Senior Dental Hygiene (To be announced) | |
| Friday, May 2, 2008 | Grades Due for Graduating Students by NOON | For Degree Candidates |
| Tuesday, May 6, 2008 | Afternoon, Graduation Announcement for Graduating Students | |
| Friday, May 9, 2008 | 5 p.m., SPRING SEMESTER INSTRUCTION ENDS | All |
| May 12-16, 2008 | Spring Semester Examination Period (Except Graduating Students) | |
| Friday, May 16, 2008 | GRADUATE SEMESTER ENDS | Graduate Students, D-4's |
| May 2008 | AWARDS CEREMONY (To be announced) | |
| May 2008 | GRADUATION EXERCISE (To be announced) | |
| Tuesday, May 20, 2008 | Spring Semester Grades Due for all Other Students by NOON | |
| Monday, May 26, 2008 | University Holiday (Offices Closed) | All |

***All Dates and Times are Subject to Change**

## *Academic Calendar - College of Medicine*

### *Class of 2011 Year 1 (M-1)*

**2007**

| | | |
|---|---|---|
| | July 20, 2007 | Last Day to Pay Tuition & Fees |
| | July 23, 2007 | Year I Orientation |
| WEEK | DATE (FIRST DAY) | ACTIVITY |
| 1 | July 30 | Year I Curriculum Begins |
| | Aug. 2, 2007 | Last Day to Add Electives |
| 2 | Aug. 6 | |
| | Aug. 7, 2007 | Census Day |
| 3 | Aug. 13 | |
| 4 | Aug. 20 | |
| 5 | Aug. 27 | |
| | Monday, Sept. 3, 2007 | University Holiday (Offices Closed) |
| 6 | Tuesday, Sept. 4 | Class Resumes |
| 7 | Sept. 10 | |
| 8 | Sept. 17 | |
| 9 | Sept. 24 | |
| 10 | Oct. 1 | |
| 11 | Oct. 8 | |
| 12 | Oct. 15 | |
| 13 | Oct. 22 | |
| 14 | Oct. 29 | |
| 15 | Nov. 5 | |
| 16 | Nov. 12 | |
| | Monday, Nov. 19 - Friday, Nov. 23, 2007 | Thanksgiving Break |
| 17 | Monday, Nov. 26 | Class Resumes |
| 18 | Dec. 3 | |
| 19 | Dec. 10 | |
| | Monday, Dec. 17, 2007 - Tuesday, Jan. 1, 2008 | Vacation |

## Academic Calendar

### *Academic Calendar - College of Medicine*

### *Class of 2011 Year 1 (M-1) continued*

**2008**

| | | |
|---|---|---|
| 20 | Wednesday, Jan. 2, 2008 | Class Resumes |
| 21 | Jan. 7 | |
| 22 | Jan. 14 | |
| | Wednesday, Jan. 16 | HSC Faculty Convocation |
| | Monday, Jan. 21 | University Holiday (Offices Closed) |
| 23 | Tuesday, Jan. 22 | Class Resumes |
| 24 | Jan. 28 | |
| 25 | Feb. 4 | |
| 26 | Feb. 11 | |
| 27 | Feb. 18 | |
| 28 | Feb. 25 | |
| 29 | March 3 | |
| | March 10-14, 2008 | Spring Break |
| 30 | Monday, March 17 | Class Resumes |
| 31 | March 24 | |
| 32 | March 31 | |
| 33 | April 7 | |
| 34 | April 14 | |
| 35 | April 21 | |
| 36 | April 28 | |

***All Dates and Times are Subject to Change**

### *Class of 2010 Year 2 (M-2)*

**2007**

| | | |
|---|---|---|
| | July 20, 2007 | Last day to Pay Tuition & Fees |
| WEEK | DATE (FIRST DAY) | ACTIVITY |
| 1 | July 23 | Year II Curriculum Begins |
| 2 | July 30 | |
| | Aug. 2 | Last Day to Add Electives |
| 3 | Aug. 6 | |
| | Aug. 7 | Census Day |
| 4 | Aug. 13 | |
| 5 | Aug. 20 | |
| 6 | Aug. 27 | |
| | Monday, Sept. 3, 2007 | University Holiday (Offices Closed) |
| 7 | Wednesday, Sept. 5 | Class Resumes |
| 8 | Sept. 10 | |
| 9 | Sept. 17 | |
| 10 | Sept. 24 | |
| 11 | Oct. 1 | |
| 12 | Oct. 8 | |
| | Friday, Oct. 12, 2007 | Fall Holiday |
| 13 | Monday, Oct. 15 | Class Resumes |
| 14 | Oct. 22 | |
| 15 | Oct. 29 | |
| 16 | Nov. 5 | |
| 17 | Nov. 12 | |
| | Monday, Nov. 19 | |
| | Tuesday, Nov. 20 - Friday, Nov. 23, 2007 | Thanksgiving Break |
| 18 | Monday, Nov. 26 | Class Resumes |
| 19 | Dec. 3 | |
| 20 | Dec. 10 | |
| | Monday, Dec. 17, 2007- Tuesday, Jan. 1, 2008 | Vacation |

**2008**

| | | |
|---|---|---|
| 21 | Jan. 2, 2008 | Class Resumes |
| 22 | Jan. 7 | |
| 23 | Monday, Jan. 14 | |
| | Wednesday, Jan. 16 | HSC Faculty Convocation |
| | Monday, Jan. 21 | University Holiday (Offices Closed) |
| 24 | Jan. 22 | Class Resumes |
| 25 | Jan. 28 | |
| 26 | Feb. 4 | |
| 27 | Feb. 11 | |
| 28 | Feb. 18 | |
| 29 | Feb. 25 | |
| 30 | March 3 | |
| | Monday, March 10- Friday, March 14, 2008 | Spring Break |
| 31 | Monday, March 17 | Class Resumes |
| 32 | March 24 | |
| 33 | March 31 | |
| 34 | April 7 | |
| 35 | April 14 | |
| 36 | April 21 | |
| 37 | April 28 | |
| 38 | Monday, May 5 | |

End of Academic Year

***All Dates and Times are Subject to Change**

### *Class of 2009 Year 3 (M-3)*

**2007**

| | | |
|---|---|---|
| | June 15, 2007 | Last Day to Pay Tuition & Fees |
| WEEK | DATE (MONDAY) | ACTIVITY |
| 0 | June 18 | Orientation |
| 1 | June 25 | |
| 2 | July 2 | |
| | July 3 | Census Day |
| 3 | July 9 | |
| 4 | July 16 | |
| 5 | July 23 | |
| 6 | July 30 | |
| | End of 6-Week Clerkships | Grades Due 8/13 |
| 7 | Aug. 6 | |
| 8 | Aug. 13 | |
| 9 | Aug. 20 | |
| 10 | Aug. 27 | |
| 11 | Sept. 3 | |
| 12 | Sept. 10 | |
| | End of 6- & 12-Week Clerkships | Grades Due 9/24 |
| 13 | Sept. 17 | |
| 14 | Sept. 24 | |
| 15 | Oct. 1 | |
| 16 | Oct. 8 | |
| 17 | Oct. 15 | |
| 18 | Oct. 22 | |
| | End of 6-Week Clerkships | Grades Due 11/15 |
| 19 | Oct. 29 | |
| 20 | Nov. 5 | |
| 21 | Nov. 12 | |
| 22 | Nov. 19 | |
| | Thanksgiving Holiday begins at 5 p.m. Wednesday, Nov. 21-25, 2007 | |

| | | |
|---|---|---|
| 23 | Nov. 26 | |
| 24 | Dec. 3 | |
| | End of 6- & 12-Week Clerkships | Grades Due 12/17 |
| 25 | Dec. 10 | |
| 26 | Dec. 17 | |
| | Christmas Holiday begins 5 p.m. Friday, Dec. 21, 2007 | |
| 27 | Dec. 24 | Vacation Week |
| 28 | Dec. 31 | |
| **2008** | | |
| 29 | Jan. 7 | |
| 30 | Jan. 14 | |
| | Wednesday Jan. 16 | HSC Faculty Convocation |
| 31 | Jan. 21 | |
| | End of 6-Week Clerkships | Grades Due 2/4 |
| 32 | Jan. 28 | |
| 33 | Feb. 4 | |
| 34 | Feb. 11 | |
| 35 | Feb. 18 | |
| 36 | Feb. 25 | |
| 37 | March 3 | |
| | End of 6- & 12-Week Clerkships | Grades Due 3/17 |
| 38 | March 10 | Vacation Week |
| 39 | March 17 | |
| 40 | March 24 | |
| 41 | March 31 | |
| 42 | April 7 | |
| 43 | April 14 | |
| 44 | April 21 | |
| | End of 6-Week Clerkships | Grades Due 5/5 |
| 45 | April 28 | |
| 46 | May 5 | |
| 47 | May 12 | |
| 48 | May 19 | |
| 49 | May 26 | |
| 50 | June 2 | |
| | End of 6- & 12-Week Clerkships | Grades Due 6/16 |

***All Dates and Times are Subject to Change**

### *Class of 2008 Year 4 (M-4)*

**2007**

June 8, 2007 — Last Day to Pay Tuition & Fees

| Module | Week | Date |
|---|---|---|
| I. | 1 | June 11 |
| | 2 | June 18 |
| | 3 | June 25 |
| | | June 26-Census Day |
| | 4 | July 2 |
| II. | 5 | July 9 |
| | 6 | July 16 |
| | 7 | July 23 |
| | 8 | July 30 |
| III. | 9 | Aug. 6 |
| | 10 | Aug. 13 |
| | 11 | Aug. 20 |
| | 12 | Aug. 27 |
| IV. | 13 | Sept. 3 |
| | 14 | Sept. 10 |
| | 15 | Sept. 17 |
| | 16 | Sept. 24 |
| V. | 17 | Oct. 1 |
| | 18 | Oct. 8 |
| | 19 | Oct. 15 |
| | 20 | Oct. 22 |
| VI. | 21 | Oct. 29 |
| | 22 | Nov. 5 |
| | 23 | Nov. 12 |
| | 24 | Nov. 19 |
| VII. | 25 | Nov. 26 |
| | 26 | Dec. 3 |
| | 27 | Dec. 10 |
| | 28 | Dec. 17 |
| | 29 | Dec. 24 (Nine weeks vacation including Christmas Holiday) |
| VIII. | 30 | Dec. 31 |
| **2008** | | |
| | 31 | Jan. 7 |
| | | Wednesday, Jan. 16, HSC Faculty Convocation |
| | 32 | Jan. 14 |
| | 33 | Jan. 21 |
| IX. | 34 | Jan. 28 |
| | 35 | Feb. 4 |
| | 36 | Feb. 11 |
| | 37 | Feb. 18 |
| X. | 38 | Feb. 25-Last day to Drop/Add Electives |
| | 39 | March 3-Becoming a Clinician |
| | 40 | March 10 |
| | 41 | March 17 |
| | | March 20, 2008 - Match Day (tentative) |
| XI. | 42 | March 24 |
| | 43 | March 31 |
| | 44 | April 7 |
| | 45 | April 14 |
| XII. | 46 | April 21 |
| | 47 | April 28 |
| | 48 | May 5 |
| | 49 | May 12 |

May 17, 2008-Commencement

***All Dates and Times are Subject to Change**

## Academic Calendar

### *Academic Calendar - Graduate School of Biomedical Sciences, Institute of Biosciences and Technology, School of Rural Public Health*

**2007**

| Date | Activity | Time |
|---|---|---|
| Monday, April 16, 2007 | Fall 2007 Web Registration Opens for Current Students (Closes April 27, 2007) | |
| Monday, April 30, 2007 | Fall 2007 Web Registration Opens for New Students (Closes May 11, 2007) | |
| Friday, Aug. 10, 2007 | New Admit Packets Due | |
| Monday, Aug. 13, 2007 | Registration Opens for All Students (Closes Aug. 17, 2007) | |
| Friday, Aug. 17, 2007 | All Registrations Due | |
| Sunday, Aug. 19 - Tuesday, Aug. 21, 2007 | SRPH Orientation | |
| Tuesday, Aug. 21, 2007 | Last Day to File Proposal | |
| Friday, Aug. 24, 2007 | Last Day to Pay Tuition & Fees | 5 p.m. |
| Monday, Aug. 27, 2007 | 1st Class Day | |
| Thursday, Aug. 30, 2007 | Last Day to Add or Late Register | |
| Monday, Sept. 3, 2007 | University Holiday (Offices Closed) | |
| Wednesday, Sept. 12, 2007 | Census Day; Last Day to Drop or Withdraw with No Record | |
| Monday, Sept. 17, 2007 | Last Day to Apply for Fall Graduation | |
| Friday, Sept. 28, 2007 | Last Day to Schedule Defense | |
| Friday, Oct. 12, 2007 | Last Day to Defend | |
| Friday, Oct. 26, 2007 | Last Day to Submit ETD in Final Form | |
| Tuesday, Oct. 30, 2007 | Spring 2008 Schedule Released | |
| Wednesday, Nov. 14, 2007 | Last day to Drop/Withdraw; "W" posted to Record | |
| Friday, Nov. 16, 2007 | Last Day to Submit Final Corrections of ETD | |
| Thursday, Nov. 22 & 23, 2007 | University Holiday (Offices Closed) | |
| Friday, Dec. 14, 2007 | Term Concludes | |
| Wednesday, Dec. 19, 2007 | Grades Due at Noon | |
| Friday, Dec. 21, 2007 | Graduation (No Ceremony) | |
| Monday, Dec. 24 - Monday, Dec. 31, 2007 | University Holidays (Offices Closed) | |

**Spring 2008**

| | | |
|---|---|---|
| Monday, Nov. 5, 2007 | Web Registration Opens for Spring 2008 | |
| Tuesday, Jan. 1, 2008 | University Holiday (Offices Closed) | |
| Thursday, Jan. 3, 2008 | Last Day to Submit Proposal | |
| Thursday, Jan. 3, 2008 | New Admit Packets Due | |
| Thursday, Jan. 10, 2008 | All Registrations Due | |
| Friday, Jan. 11, 2008 | Last Day to Pay Tuition & Fees | |
| Monday, Jan. 14, 2008 | 1st Class Day | |
| Wednesday, Jan. 16, 2008 | HSC Faculty Convocation | |
| Thursday, Jan. 17, 2008 | Last Day to Add or Late Register | |
| Monday, Jan. 21, 2008 | University Holiday (Offices Closed) | |
| Wednesday, Jan. 30, 2008 | Census Day | |
| Friday, Feb. 8, 2008 | Last Day to Schedule Defense | |
| Friday, Feb. 15, 2008 | Last Day to Apply for Spring Graduation | |
| Friday, March 7, 2008 | Last Day to Defend | |
| Monday-Friday, March 10-14, 2008 | Spring Break | |
| Friday, March 28, 2008 | Last Day to Submit ETD in Final Form | |
| Wednesday, April 9, 2008 | Last Day to Drop/Withdraw; "W" Posted to Record | |
| Friday, April 11, 2008 | Last Day to Submit Final Corrections to ETD | |
| Friday, May 9, 2008 | Term Concludes | |
| Tuesday, May 14, 2008 | Grades Due | Noon |
| Saturday, May 17, 2008 | Commencement (SRPH-morning; GSBS/IBT/COM-afternoon) | |

**Summer 2008**

| | | |
|---|---|---|
| Monday, April 14, 2008 | Web Registration Opens for Summer 2008 | |
| Tuesday, May 6, 2008 | Last Day to File Proposal | |
| Monday, May 19, 2008 | New Admit Packets Due | |
| Monday, May 26, 2008 | University Holiday (Offices Closed) | |
| Tuesday, May 27, 2008 | All Registrations Due | |
| Friday, May 30, 2008 | Last day to pay Tuition & Fees | |
| Monday, June 2, 2008 | 1st Class Day-SSI & 10-Week | |
| Thursday, June 5, 2008 | SSI Census Day; Last Day to Add/Late Register | |
| Tuesday, June 10, 2008 | 10-Week Census Day | |
| Friday, June 13, 2008 | Last Day to Schedule Defense | |

| | | |
|---|---|---|
| Monday, June 16, 2008 | Last Day to Apply for Graduation | |
| Wednesday, June 18, 2008 | Last Day to Drop/Withdraw SSI; "W" Posted to Record | |
| Thursday, July 3, 2008 | Last Day to Register & Pay for SSII | |
| Friday, July 4, 2008 | University Holiday (Offices Closed) | |
| Tuesday, July 8, 2008 | SSI Term Concludes | |
| Wednesday, July 9, 2008 | SSII 1st Class Day; SSI Grades Due; Last Day to Defend | Noon |
| Monday, July 14, 2008 | SSII Census Day; Last Day to Add/Late Register; Last Day to Submit ETD in Final Form | |
| Wednesday, July 23, 2008 | Last day to drop/withdraw SSII & 10-Week; "W" Posted to Record | |
| Friday, Aug. 1, 2008 | Last Day to Submit Final Corrections | |
| Tuesday, Aug. 12, 2008 | SSII & 10-Week Finals | |
| Thursday, Aug. 14, 2008 | SSII & 10-Week Grades Due | Noon |
| Friday, Aug. 15, 2008 | Graduation (No Ceremony) | |

***All Dates and Times are Subject to Change**

## *Academic Calendar - Irma Lerma Rangel College of Pharmacy*

### Fall 2007

| Date | Activity | Time |
|---|---|---|
| Friday, Aug. 10, 2007 | Last day to pay Tuition & Fees-5 p.m. | All |
| Monday, Aug. 13, 2007 | 1st Class Day | All |
| Thursday, Aug. 16, 2007 | Last day to Add or Late Register | All |
| Tuesday, Aug. 28, 2007 | Census Day; Last Day to Drop or Withdraw With No Record | All |
| Monday, Sept. 3, 2007 | University Holiday (Offices Closed) | All |
| Wednesday, Nov. 14, 2007 | Last Day to Drop/Withdraw; "W" Posted to Record | All |
| Thursday-Friday, Nov. 22 & 23, 2007 | University Holiday (Offices Closed) | All |
| Tuesday, Dec. 11, 2007 | Term Concludes | All |
| Tuesday, Dec. 18, 2007 | Grades Due at Noon | All |
| Monday, Dec. 24, 2007–Monday, Dec. 31, 2007 | University Holidays (Offices Closed) | All |

### Spring 2008

| | | |
|---|---|---|
| Tuesday, Jan. 1, 2008 | University Holiday (Offices Closed) | All |
| Friday, Jan. 11, 2008 | Last Day to Pay Tuition & Fees | All |
| Monday, Jan. 14, 2008 | 1st Class Day | All |
| Wednesday, Jan. 16, 2008 | HSC Faculty Convocation | |
| Thursday, Jan. 17, 2008 | Last Day to Add or Late Register | All |
| Monday, Jan. 21, 2008 | University Holiday (Offices Closed) | All |
| Thursday, Jan. 24, 2008 | Census Day | All |
| Monday-Friday, March 10-14, 2008 | Spring Break | All |
| Wednesday, April 9, 2008 | Last Day to Drop/Withdraw; "W" Posted to Record | All |
| Wednesday, May 14, 2008 | Term Concludes | All |
| Monday, May 19, 2008 | Grades Due at Noon | Noon |

### Summer 2007

| | | |
|---|---|---|
| Friday, May 16, 2008 | Pharmacy Internships May Begin | All |
| Monday, May 26, 2008 | University Holiday (Offices Closed) | All |

***All Dates and Times are Subject to Change**

# Introduction

The Texas A&M Health Science Center reaches across Texas through its six components: Baylor College of Dentistry at Dallas; the College of Medicine at College Station and Temple; the Graduate School of Biomedical Sciences at Dallas, College Station and Houston; the Institute of Biosciences and Technology at Houston; the School of Rural Public Health at College Station; and the latest addition, the Irma Lerma Rangel College of Pharmacy at Kingsville. Southern regions of the state also are served by the Coastal Bend Health Education Center, which covers a 19-county region surrounding Corpus Christi, and the South Texas Center at McAllen.

Service is extended through the HSC's work with Rural and Community Health Institute efforts to assist rural hospitals across the state.

The HSC received full accreditation by the Southern Association of Colleges and Schools in December 2002. Accomplishments such as a nearly two-fold increase in research funding, continuing exemplary performance on professional licensing exams and new degree offerings are all evidence of the HSC's growing momentum. The A&M System's Health Science Center is well on its way to becoming a premier institution – within the System and statewide.

## Accreditation

The Texas A&M Health Science Center is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane; Decatur, Ga. 30333-4097; 404-679-4501) to award baccalaureate, master's, doctoral and professional degrees. In addition, the HSC components are accredited by accrediting organizations specific to their areas.

HSC-Baylor College of Dentistry has accredited programs in dentistry, dental hygiene and the advanced dental education programs of dental public health, endodontics, oral and maxillofacial pathology, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontics, prosthodontics and advanced general dentistry. These programs are accredited by the Commission on Dental Accreditation (211 E. Chicago Ave.; Chicago, Ill. 60611; 312-440-2719). The commission is a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and by the U.S. Department of Education.

The HSC-College of Medicine is fully accredited by the Liaison Committee on Medical Education (LCME), which was formed in 1942 by the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association. It accredits all medical schools in the United States and Canada. LCME also is recognized as the accrediting body for medical schools by the U.S. Secretary of Education, by the U.S. Congress in various health-related laws, and by state, provincial (Canada) and territorial licensure boards. Further information about accreditation can be obtained from the LCME secretary at either the American Medical Association (1515 N. State St.; Chicago, Ill. 60610; 312-464-5000) or at the Association of American Medical Colleges (2450 N. Street, N.W.; Washington, D.C. 20037-1126; 202-828-0400).

The HSC-Irma Lerma Rangel College of Pharmacy has received pre-accreditation status from the Accreditation Council for Pharmacy Education (20 North Clark St., Suite 2500; Chicago, Ill. 60602-5109; 312-664-3575). It is the national agency for the accreditation of professional degree programs in pharmacy and providers of continuing pharmacy education.

The HSC-School of Rural Public Health is accredited by the Council on Education for Public Health (800 Eye St. N.W., Suite 202; Washington, D.C. 20001-3710; 202-789-1050). It is the sole accrediting body for all public health programs and schools of public health in the United States.

## Catalog

This catalog provides information about the academic programs of the Texas A&M Health Science Center (HSC) to students, prospective students, faculty and staff. It includes information concerning admissions, academic regulations and requirements, services available to students, academic offerings, and a list of the administrative officers and faculty of the HSC. While every effort has been made to make this catalog as complete and accurate as possible, changes may occur at any time in requirements, deadlines, fees, curricula and courses.

This catalog was prepared in advance of its effective date; therefore, the course descriptions and rotations may vary from actual course content due to advancements in the discipline, interests of individual professors or decisions to change the scope of a course. Thus, the catalog is not provided in the nature of a contractual obligation.

The state of Texas, through the legislature and administrative agencies, approves statutes and regulatory language. System policies and regulations are formulated by The Texas A&M University System Board of Regents and system administration respectively to comply with laws and regulations of the state and federal governments. Component rules and procedures are developed by the administrations of the components to put into effect the policies and regulations. Policies and regulations are subject to modification through acts of legislature, agency regulation or the Board of Regents, and these changes supersede all component rules, procedures and other printed materials. Therefore, a student in a program of the HSC is subject to the policies and regulations of The Texas A&M University System.

Until detailed rules or regulations are approved by the HSC, the rules and regulations of Texas A&M University will generally be used for HSC students. Refer to the HSC website for updated information.

**The provisions of this catalog do not constitute a contract, express or implied, between any applicant, student, faculty or staff member and the HSC or The Texas A&M University System. This catalog is for informational purposes only. The college reserves the right to change or alter any statement herein without prior notice. This catalog does not create a right on the part of any student to continue his or her educational program under its terms.**

## Diversity Statement

The Health Science Center's educational programs are designed to meet the health work force needs of Texas. HSC admissions criteria are aligned to foster the graduation of health professionals who will be responsive to the needs of the increasingly diverse population of the state. The HSC is committed to the importance of diversity in the recruitment and education of future health professionals and holds that diversity enhances the delivery of care and service to communities across a broad range of racial and ethnic groups, and promotes efforts to reduce health disparities among these groups. A diverse student body raises the cultural competence of all health professional students. Diversity is not solely limited to race and ethnicity, but also encompasses talents, life skills and special attributes. This commitment to diversity is expressed through the identification, recruitment, selection, matriculation and graduation of qualified health professions students from different racial, ethnic and/or disadvantaged backgrounds. Our goals are for the HSC student body to mirror the growing diversity of the Texas population and the promotion of understanding, among our students and graduates, of the multiple and varied needs of the individuals and communities that comprise the population of Texas.

## Notice of Nondiscriminatory Policy

The Texas A&M Health Science Center, in compliance with applicable federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, handicap or status as a veteran in any of its policies, practices or procedures. This includes, but is not limited to, admissions, employment, financial aid and educational services.

The Texas A&M University System does not discriminate on the basis of an individual's handicap and complies with Section 504 in its admissions, accessibility, treatment and employment of students in its programs and activities. The designated 504 Coordinator for the Texas A&M University System is the Assistant Executive Director, System Human Resources Office, who is responsible for equal opportunity/affirmative action matters, telephone (979) 845-2026. The HSC provides academic adjustments and auxiliary aids to students with handicapping conditions, as defined under the law, who are otherwise qualified to meet the institution's academic requirements. The Texas A&M University Office of Support Services for Students with Handicaps coordinates Texas A&M University programs and efforts for the benefit of the individuals covered within both the Texas A&M University and the HSC under the statute. For additional information, contact the office at (979) 845-1637.

## Mission

In all we do, we dedicate the full measure of our resources and abilities to advancing the knowledge and technologies of our professions, and to bringing Texans the finest in health education, promotion and care. Because of our work, people's lives are changed - across our state, around the nation and throughout the world.

## Goals

The goals of the Texas A&M Health Science Center include the following:

- Improve the health of Texans by extending the efforts of the Health Science Center across the state and the nation;
- Attract, develop and retain a diverse group of exemplary faculty who promote the Health Science Center's mission through their research, education, service and commitment to the health of populations they serve;
- Promote an optimal educational environment that develops and strengthens necessary competencies of current, future and former students;
- Serve the state of Texas by operating a well-managed institution guided by visionary leaders who are committed to excellence in the health professions;
- Enhance the financial foundation of the Health Science Center in order to strengthen its capacity to address the health needs of Texas; and
- Develop a distinctive, service-oriented organizational culture within the Health Science Center which embraces the ethnic diversity of the state, geographic diversity of our institution, and diversity of talents among students, staff and faculty.

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## The Texas A&M University System Health Science Center Administration

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P. David Romei, Ph.D., Vice President for External Affairs and Development
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Jenny Young, M.A., Vice President for Governmental Affairs

## Historical Background

The Texas A&M Health Science Center, established in 1999, is committed to improving the health of Texans through integrated education, research and public service programs that emphasize accessibility and public and community health. This approach extends the land-grant philosophy of The Texas A&M University System to improving the quality of life through good health and strengthening the economy by encouraging a healthy work force.

The Board of Regents of the A&M System officially approved the establishment of the Texas A&M Health Science Center in September 1997. One year prior, in September 1996, the Board of Regents authorized the chancellor to undertake a comprehensive analysis of the feasibility of consolidation of the major health-related elements within the A&M System into a System-wide health science center. The rationale for this analysis included the potential for better service to the people of Texas through a statewide emphasis on community health, increased effectiveness through multidisciplinary collaboration, a central focal point for health-related issues within the A&M System and enhanced external support for the health programs.

The results of this study recommended to the Board of Regents that the Texas A&M University College of Medicine, the then-proposed School of Rural Public Health, Baylor College of Dentistry, and the Institute of Biosciences and Technology be integrated into a new institution – The Texas A&M Health Science Center. The recommendation also included creating a Graduate School of Biomedical Sciences to offer graduate degree programs in medicine, dentistry and public health.

In addition to these four components, the Texas A&M Health Science Center has established relationships with Texas Cooperative Extension and the Texas Agricultural Experiment Station, which have employees serving all 254 Texas counties.

As a result of the study, a resolution was written by the 75th Texas Legislature in support of the desire of the Board of Regents to accomplish the consolidation. The formal reorganization of existing members into an A&M System Health Science Center was approved by the Texas Higher Education Coordinating Board on January 23, 1998, and the School of Rural Public Health was officially approved by the Texas Higher Education Coordinating Board on April 23, 1998. During the 76th Texas Legislature, funding was approved to consolidate and create the new A&M System Health Science Center effective September 1, 1999.

Since then, the Texas A&M Health Science Center has continued to evolve and grow. It received full accreditation for 10 years from the Southern Association of Colleges and Schools in 2002. Accreditation by the Commission on Colleges signifies the HSC has a purpose appropriate to higher education and has resources, programs and services sufficient to accomplish its purpose on a continuing basis.

A 23,000-square-foot South Texas Center was constructed in McAllen and dedicated in 2004 to expand the Health Science Center's presence in the Lower Rio Grande Valley and complement the current programs of its initial component program, the School of Rural Public Health. It features laboratories, offices, classrooms and conference areas so the HSC can develop a wide range of health training, clinical research, medical education, community medicine and public health programs with local partners.

In 2003, an education center was constructed in Temple to enhance the partnership between the College of Medicine and Scott & White Memorial Hospital and Clinic. The 45,000-square-foot facility – containing a library, lecture halls, classrooms, an auditorium, a lecture resources center and more – is used for numerous medical programs involving medical students, residents, fellows and faculty/staff.

Also that year, the Rural and Community Health Institute (RCHI) was established. The RCHI supports academic programs and works to strengthen community outreach and research programs to reduce the shortage of health care professionals in rural communities and the disparity in health status between rural and urban communities.

The Texas Enterprise Fund awarded $50 million in 2005 for the creation of the Texas Institute for Genomic Medicine, a non-profit organization founded by the Institute of Biosciences and Technology at Houston, Texas A&M University in College Station and Lexicon Genetics, Inc. in the Woodlands. The Institute is designed to pioneer the development of life-changing medical innovation, accelerate the pace of medical discoveries and foster the development of the biotechnology industry in Texas.

After years of borrowing space in Bryan and College Station, the School of Rural Public Health finally has a home of its own to continue innovative efforts for assisting underserved and rural areas of the state. A formal ribbon-cutting occurred in February 2006 for the new three-building, 100,000-square-foot complex located on the Texas A&M University campus.

Another noteworthy Health Science Center development was creation of the Office of Homeland Security to address homeland security issues related to human health. Lt. Gen. Paul K. Carlton Jr., M.D., was chosen as its first and current director.

The College of Medicine recently was given the go-ahead to incrementally expand its class size from 80 to 200 students per class. Possible through the expansion of pre-clinical and clinical experiences in Bryan-College Station and Temple, the increase is an effort to address the health needs for the state's increasing population.

Following approval of the Texas A&M University System Board of Regents and the Texas Higher Education Coordinating Board, the Irma Lerma Rangel College of Pharmacy officially joined the Texas A&M Health Science Center in April 2006. Classes for the first approximately 70 students in the College, located on the Texas A&M University-Kingsville campus, began in August 2006.

In addition to the Doctor of Pharmacy (Pharm.D.) degree, faculty within the College and HSC components - including the College of Medicine at College Station and Temple, Baylor College of Dentistry at Dallas and Institute of Biosciences and Technology at Houston - will benefit from collaboration opportunities for basic science and translational research.

The Rangel College of Pharmacy is named for District 35 Rep. Irma Lerma Rangel, chair of the House Higher Education Committee who long fought for the first professional school in South Texas and died of cancer in March 2003. A groundbreaking on the three-story, 63,000-square-foot facility – featuring wireless access and research laboratories – occurred the same month Rangel died, and the College officially was named after her in October 2004.

Back in 2002, the Health Science Center held its first academic convocation. The ceremonial assembly recognized the inauguration of Nancy W. Dickey, M.D., as President of the HSC and Vice Chancellor for Health Affairs for the Texas A&M System.

A second convocation occurred in January 2006. This event celebrated a new vision and declared the Health Science Center's commitment to providing quality programs and services throughout Texas. The HSC also affirmed its dedication to meeting the health-related needs of Texans.

The principles of the "Pathways to Excellence 2015" strategic plan are pursuit of excellence, statewide service, exemplary diversity, steadfast integrity, academic freedom, active collaboration, professional development and unshakable commitments. These core values lend distinction to the Texas A&M Health Science Center's pursuits of quality in educational programs, prominence in scientific discovery, and innovation in treatment, practice and public service.

## Texas A&M Health Science Center Components

### *Baylor College of Dentistry*

Baylor College of Dentistry at Dallas opened its doors more than 100 years ago as the State Dental College. Today, with an enrollment of approximately 520 and more than 8,000 graduates, the college is internationally recognized for its oral health sciences education, research, specialized patient care and community service programs. The school provides the Doctor of Dental Surgery (D.D.S.), Master of Science (M.S.) and Bachelor of Science (B.S.) in Dental Hygiene degrees, and graduate training in dental specialties.

### *College of Medicine*

The College of Medicine educates and equips physicians who are compassionate about their patients and dedicated to the communities in which they serve. With campuses at College Station and Temple and programs throughout Central Texas and the Coastal Bend, approximately 700 basic scientists and clinicians instruct students during the course of their medical education. The school offers the M.D. degree and specialty training for most medical and surgical specialties.

### *Graduate School of Biomedical Sciences*

The goal of the Graduate School of Biomedical Sciences is to prepare future faculty and researchers to improve the health of Texans through scientific discovery and education. The graduate school offers master's and doctoral programs in biomedical and public health sciences.

Since its inception in 1999, students pursuing graduate degrees through the GSBS have increased from 64 to 108 in 2005. These programs use an interdisciplinary approach to provide educators and biomedical researchers for the future. Students and faculty are located in College Station, Houston and Dallas.

### *Institute of Biosciences and Technology*

Located in Houston in the Texas Medical Center, the Institute of Biosciences and Technology researchers work fervently toward cures for cancer, heart failure, stroke, birth defects, bacterial infections and hereditary diseases. It is also a primary component of the Texas Institute for Genomic Medicine, a non-profit organization designed to pioneer the development of life-changing medical innovation, accelerate the pace of medical discoveries and foster the development of the biotechnology industry in Texas. Graduate students earn a Ph.D. in Medical Sciences from the HSC-GSBS.

### *Irma Lerma Rangel College of Pharmacy*

The newest addition to the Texas A&M Health Science Center is the HSC-Irma Lerma Rangel College of Pharmacy, located on the campus of Texas A&M University-Kingsville. The first class of more than 70 students began studies in August 2006 in a new approximately 63,000-square-foot, $14.5-million facility. Students will be pursuing a Doctor of Pharmacy (Pharm.D.) degree.

### *School of Rural Public Health*

In its eight short years of academic existence, the School of Rural Public Health has developed three master's and two doctoral degree programs, a distance education program spanning Central and South Texas, and several centers of research excellence. It was awarded full accreditation in 2004.

The school recently moved into a new three-building complex adjacent to the College of Medicine at College Station. The school offers the Master of Public Health (M.P.H.), Master of Health Administration (M.H.A.), Master of Science in Public Health (M.S.P.H.), Ph.D. in Health Services Research and a Doctor of Public Health (Dr.P.H.) with a concentration in Social and Behavioral Health.

## Texas A&M Health Science Center Intercomponent Regional Centers

### *Coastal Bend Health Education Center*

The Texas A&M Health Science Center Coastal Bend Health Education Center, located in Corpus Christi, provides health education for health professionals and the greater Coastal Bend community. The center maximizes state funds by collaborating with private organizations and sharing community resources. In delivering health education programs, HSC-CBHEC has been successful in regionalizing programs and resources by partnering with colleges, universities and hospital systems. HSC-CBHEC's initiatives address recruitment into health careers, community health education and public health issues.

In order to alleviate the health professions shortage, HSC-CBHEC initiated the Health Careers Recruitment Program and continues to develop Health Care Career Clubs in area high schools. HSC-CBHEC also supports the HSC-College of Medicine in its recruitment efforts. The Partnership for Primary Care program encourages exceptional high school students to pursue a career in rural medicine by offering early admission to the HSC-COM. The Continuing Medical Education Program provides medical education to both the urban and rural physicians. This program is a result of collaboration among hospitals and the Port Industries of Corpus Christi.

HSC-CBHEC's programs address the region's high priority health care issues such as diabetes, asthma and geriatric care. HSC-CBHEC's diabetes education program provides classes for patients as well as health care professionals. The center, in conjunction with the CHRISTUS-Spohn Family Practice Residency Program, has developed clinical clerkships that prepare training physicians in the management of diabetes and geriatrics care. A clinical rural site also has been developed in Beeville to encourage residents to pursue a career in rural medicine.

### *South Texas Center*

The HSC-South Texas Center, located in McAllen, provides comprehensive and accessible public health educational services and programs to residents of rural and underserved areas of South Texas. The first formal Master of Public Health degree program offered in the Lower Rio Grande Valley is accessible through a distance education program linking the HSC-School of Rural Public Health to the center. Other public health programs at HSC-STC focus on offering continuing education to public health professionals, conducting needs assessments, instituting high-quality public health services education and outreach programs, and conducting research on critical South Texas health issues. The center is participating in a diabetes prevention program, which represents a major effort in reducing the incidence and severity of diabetes.

The center also operates the Integrated Health Outreach System project, a $5 million, four-year effort funded by the Robert Wood Johnson Foundation (RWJF) and the Bureau of Primary Health Care, Health Resources and Services Administration (HRSA). The major goals of this project include creating a proactive public health model that will help isolated *colonias* (rural, unincorporated communities) border residents to enhance their understanding of how to remain healthy or reduce physical and mental health problems. Other major goals are to improve their access to appropriate primary care services and participate in building the capacity of their community. A related project, also funded by RWJF and HRSA, is the South Texas Health Status Assessment, which assists the health-related institutions of Hidalgo and Starr counties and District IV in the Mexican state of Tamaulipas, in collecting pertinent and useful information that can form the basis of regional health improvement efforts.

Most recently, HSC-STC has developed partnerships with different community organizations in sponsoring continuing medical education programs, health fairs and prescription assistance programs. In partnership with South Texas Community College, a new Associate's Degree in Respiratory Therapy has been developed.

## Library Resources

The Texas A&M Health Science Center operates or has access to a number of extensive library facilities at various HSC and Texas A&M University locations, which collaborate to provide students and faculty members from each component with a wealth of scholarly and reference material. Information on the major library facilities available to students of the HSC follows.

The *Baylor Health Sciences Library* at HSC-Baylor College of Dentistry meets the academic and professional information needs of students, faculty and staff by providing ready accessibility to current and comprehensive information sources and services. The library contains approximately 37,000 volumes and subscribes to more than 2,800 journals, including 2,100 full-text online publications. In addition, some 2,000 volumes comprise the Sellers Collection of rare books in medicine, religion and art. The library provides access to a variety of electronic resources, including Ovid MEDLINE, CINAHL, ERIC, Web of Science and more than 500 electronic textbooks.

Also at HSC-BCD, the *Instructional Computer Laboratory* (ICL) is a PC-based classroom with video projection and multimedia equipment. This facility is operated by the Department of Information Technology Services for use by HSC-BCD students, faculty and staff. The PCs are networked to allow access to electronic information resources at the college library and on the Internet. The laboratory is designed for hands-on, computer-based instruction to small groups of students. When not in use for classes, workshops and training sessions, ICL is available for self-directed learning using computer-aided instruction and other audiovisual materials. Many of the materials have been developed by HSC-BCD faculty to support the instructional program.

### *Medical Sciences Library*

The Medical Sciences Library serves the College of Veterinary Medicine and Biomedical Sciences, Texas A&M University Health Science Center, and the College of Agriculture and Life Sciences. The library houses a specialized collection of biomedical books, journals and electronic resources as well as related materials in the areas of agriculture and the life sciences such as biochemistry, animal science, nutrition and the plant sciences. The Medical Sciences Library's collection includes more than 100,000 volumes of journals and books in print and other media, including electronic formats. Participation in a regional consortium of medical libraries expands access to several hundred more science, medicine and electronic journals. As one of the Texas A&M University libraries, the Medical Sciences Library offers access to more than 17,000 electronic journals and almost 600 databases from its website.

Through outreach programs, MSL also offers access to biomedical information to local health institutions, as well as health care professionals in the community and immediate region. In addition, as the only veterinary library in Texas, MSL serves veterinarians state-wide. The staff also works with remote extension service sites to meet information needs for agricultural uses throughout Texas.

While the professional staff provides reference services to local and remote customers, the staff also provides instruction in database searching and managing biomedical and agricultural information. In addition, librarians attend rounds in veterinary clinics, providing information for patient care decision. The MSL administers the only Clinical Veterinary Librarian program in the nation.

Open extensive hours to serve students, staff and faculty of the TAMU System, the Medical Sciences Library offers remote access to its catalog and other electronic resources through its website at library.tamu.edu. For more information about MSL's services and policies, please visit its website or call (979) 845-7428.

### *Library Facilities*

*Sterling C. Evans Library*

The University Libraries complex consists of the Sterling C. Evans Library and Annex, the Cushing Memorial Library and Archives, the West Campus Library, the Policy Sciences and Economics Library, and the Medical Sciences Library. The University's principal research collections, numbering more than 3.5 million volumes and 5.4 million microforms, are housed in the centrally located Sterling C. Evans Library and Annex.

The Cushing Memorial Library and Archives, repository for rare books, manuscripts, special collections and archives, is located on the west side of Evans Library, across from the Academic Building. The Educational Media Services (EdMS) on the fourth floor of the Annex provides audiovisual and multimedia services and videotape resources.

Through the online catalog, LibCat, users can access the Library's books and thousands of journal articles by author, title, subject and keyword searching. Approximately 45,710 serial titles are currently received, including some 150 state, national and foreign newspapers. The library is a depository for selected U.S. federal documents, Texas state documents and U.S. patents.

The West Campus Library primarily serves the Mays Business School. It has a limited, specialized collection of 650 periodicals, reference works and current monographs in business.

The Barclay Center offers a variety of electronic resources, including compact disc and online databases, as well as access to the Internet to serve the needs of business.

The Policy Sciences and Economics Library in the Annenberg Presidential Conference Center has a limited, specialized collection of periodicals, reference works and current monographs in political science, government, and public service and economics. It also offers several hundred electronic journals and databases.

Information and services for these libraries can be accessed on the web at library.tamu.edu.

### *Learning Resources Centers*

The HSC-College of Medicine operates two Learning Resources Centers (LRCs), one in College Station and one in Temple. The LRCs are student-centered and independent study environments that support the use of curriculum materials. Both LRCs include reserve and circulating books and software, computers, study and small group rooms. LRC staff manage curriculum databases and assist students in using resources. More information can be found on the Learning Resources website at: http://medicine.tamhsc.edu/lrc/

# THE TEXAS A&M HEALTH SCIENCE CENTER CATALOG
# PROGRAM TABLE

| PROGRAM | LENGTH | GENERAL ADMISSIONS REQUIREMENTS | APPLICATION DEADLINE | START TERM | SPECIALIZATION, PROGRAM OF STUDY | DEGREE | CONTACT | CONTACT ADDRESS |
|---|---|---|---|---|---|---|---|---|
| **BAYLOR COLLEGE OF DENTISTRY** | | | | | | | | |
| Doctor of Dental Surgery | 4 yrs. | Dental Admissions Test, 60 semester hours college course work | Oct. 1 | Fall | General Dentistry | D.D.S. | Office of Recruitment & Admissions BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Graduate Dental Education | 24 to 72 months | D.D.S. or D.M.D. degree, National Board, competitive academic record and references | Varies by program | Summer | Advanced Education in General Dentistry, Endodontics, Oral and Maxillofacial Pathology, Oral and Maxillofacial Surgery, Orthodontics, Pediatric Dentistry, Periodontics. Public Health Sciences, Prosthodontics | M.S./ Certificate M.D./ Certificate or Certificate | Office of Research and Graduate Studies or Specialty Department BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Dental Hygiene | 2 yrs. | 60 semester hours college course work, including core courses for B.S. degree | Encouraged application by Dec. 31 | Fall | Dental Hygiene | B.S. | Office of Recruitment & Admissions BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Dental Hygiene | 2 yrs. | B.S. degree, National Board scores, graduate of dental hygiene program, license to practice dental hygiene, GRE | No set date | Summer | Administrative Track Education Track | M.S. | Office of Recruitment & Admissions BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Biomaterials Science | 2 yrs. | B.S., B.D.S., D.D.S. or D.M.D. degree; minimum GPA of 2.7; acceptable GRE; competitive academic history and references | No set date | Summer preferred | Biomaterials | M.S. | Office of Research and Graduate Studies or Department of Biomaterials Science BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Health Professions Education | 2 yrs. | D.D.S. or D.M.D. degree; National Board scores; GRE; competitive academic history and references | No set date | Summer preferred | Dental Education | M.S. | Office of Research and Graduate Studies BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Oral Biology (with associated specialty certificate) | M.S. 2-4 yrs. | D.D.S. or D.M.D. degree, National Board scores, GRE; competitive academic and clinical history and references | Application date of the specialty | Summer | Endodontics, Orthodontics, Pediatric Dentistry, Periodontics, Prosthodontics | M.S. | Office of Research and Graduate Studies or Specialty Department BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| **GRADUATE SCHOOL OF BIOMEDICAL SCIENCES** | | | | | | | | |
| Biomedical Sciences Master of Science Doctor of Philosophy | 2-6 yrs. | D.D.S. degree recommended, B.S. degree in scientific discipline, competitive academic history references and GRE | 3 months prior to start of term | Fall, Winter, Summer | M.S.; Anatomy, Molecular and Cellular Biology, Neurosciences, Micro-biology / Immunology, Physiology / Pharmacology<br><br>Ph.D.; Craniofacial Biology, Stomatology, Biomaterials | M.S. Ph.D. | Office of Research and Graduate Studies or Department of Biomedical Sciences BCD | P.O. Box 660677 Dallas, TX 75266-0677 |
| Doctor of Dental Surgery / Master of Science (D.D.S. / M.S.) Doctor of Philosophy (D.D.S. / Ph.D.) in Biomedical Sciences | D.D.S. / M.S.: 5 years<br><br>D.D.S. / Ph.D.: 7-8 years | Dental Admissions Test, 60 semester hours college course work, GRE | Nov. 1 | Fall | Same as for the M.S. and Ph.D. | D.D.S. and M.S./ Ph.D. | Office of Research and Graduate Studies or Department of Biomedical Sciences | P.O. Box 660677 Dallas, TX 75266-0677 |
| Dental Specialty Ph.D. | 5-8 years | B.S. degree in scientific discipline, competitive academic history, references, GRE and Dental Admissions Test | Application date of specialty | Fall | Specialty plus BMS areas | Ph.D. and associated specialty certificate | | P.O. Box 660677 Dallas, TX 75266-0677 |

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|---|---|---|---|---|---|---|---|---|
| **COLLEGE OF MEDICINE** | | | | | | | | |
| Doctor of Medicine | 4 yrs. | Medical College Admissions Test | Nov. 1 | Fall | | M.D. | Office of Admissions College of Medicine | 159 Joe H. Reynolds Medical Building College Station, TX 77843-1114 |
| **GRADUATE SCHOOL OF BIOMEDICAL SCIENCES** | | | | | | | | |
| Medical Sciences Master of Sciences, Doctor of Philosophy | 2-6 yrs. | Baccalaureate degree in scientific discipline, GRE, competitive academic history and references | Feb. 1 | Fall | Cell & Molecular Biology, Pharmaceutical Sciences & Therapeutics, Biochemistry & Structural Biology, Cardiovascular & Integrative Biology, Neurosciences, Microbial & Molecular Pathogenesis | M.S. Ph.D. | Associate Dean for Graduate Studies College of Medicine | 153A Joe H. Reynolds Medical Bldg. College Station, TX 77843-1114 |
| Doctor of Medicine / Doctor of Philosophy | 7-8 yrs. | Must meet requirements for admission to medical school and graduate school, MCAT, GRE (recommended), competitive academic history and references | Nov. 1 | Fall | Same as for the Ph.D. | M.D. and Ph.D. | Office of Student Affairs and Admissions, College of Medicine | 159 Joe H. Reynolds Medical Building College Station, TX 77843-1114 |
| **IRMA LERMA RANGEL COLLEGE OF PHARMACY** | | | | | | | | |
| Doctor of Pharmacy | 4 yrs. | Admission on individual basis, minimum 2.75 GPA; 50 percent and above composite PCAT (Pharmacy College Admission Test) score; completion of pre-pharmacy courses | March 10 | Fall | Pharmaceutical Sciences, Pharmacy Practice | Pharm.D. | Office of Student Affairs Irma Lerma Rangel College of Pharmacy | 700 University Blvd., MSC 131 Kingsville, TX 78363 |
| **SCHOOL OF RURAL PUBLIC HEALTH** | | | | | | | | |
| Master of Public Health | 2-7 yrs. | B.S., B.A. or advanced degree; 3.0 GPA or higher; references. Applicants with less than 3.0, GRE recommended | July 15 (March 1 for international) for fall admission Nov. 15 (July 1 for international) for spring admission April 15 (Dec. 1 for international) for summer admission | Fall & Spring | Biostatistics and Epidemiology, Environmental and Occupational Health, Health Policy and Management, Social and Behavioral Health, Community Public Health and Management | M.P.H. | Office of Student Affairs School of Rural Public Health | SRPH Bldg. Adriance Road College Station, TX 77843-1266 |
| Master of Health Administration | 2-7 yrs. | B.S., B.A. or advanced degree; 3.0 GPA or higher; GRE or GMAT required | July 15 (March 1 for international) for fall admission Nov. 15 (July 1 for international) for spring admission April 15 (Dec. 1 for international) for summer admission | Fall, Spring, Summer | Health Policy and Management | M.H.A. | Office of Student Affairs School of Rural Public Health | SRPH Bldg. Adriance Road College Station, TX 77843-1266 |
| Doctor of Public Health | 3-7 yrs. | Master's degree from an accredited institution; Master of Public Health degree or comparable course work; 3.5 GPA or higher; GRE | July 15 (March 1 for international) for fall admission Nov. 15 (July 1 for international) for spring admission April 15 (Dec. 1 for international) for summer admission | Fall & Spring | Social and Behavioral Health | Dr.P.H. | Office of Student Affairs School of Rural Public Health | SRPH Bldg. Adriance Road College Station, TX 77843-1266 |
| **GRADUATE SCHOOL OF BIOMEDICAL SCIENCES** | | | | | | | | |
| Master of Science in Public Health | 2-7 yrs. | B.S., B.A. or advanced degree; 3.0 GPA or higher; GRE required | July 15 (March 1 for International applicants) | Fall & Spring | Biostatistics, Environmental Health, Epidemiology, Health Policy and Management, Occupational Safety and Health, Social and Behavioral Health | M.S.P.H. | Office of Student Affairs School of Rural Public Health | SRPH Bldg. Adriance Road College Station, TX 77843-1266 |
| Doctor of Philosophy in Health Services Research | 3-7 yrs. | Master's degree from an accredited institution; 3.5 GPA or higher; GRE or GMAT | July 15 (March 1 for international applicants) | Fall & Spring | Health Services Research | Ph.D. | Office of Student Affairs School of Rural Public Health | SRPH Bldg. Adriance Road College Station, TX 77843-1266 |

### *Clinical Campus Libraries*

The libraries of the Olin E. Teague Veterans Center and the Scott & White Memorial Hospital and Clinic extend library privileges to HSC-COM medical students. The Teague library consists of a collection of 5,330 books, 600 audiovisuals and 400 current journals. The Scott & White library contains a collection of 8,960 books and more than 980 current journal subscriptions.

## HSC Communications

Texas A&M Health Science Center Communications provides communications support for the HSC and its components. Communications performs public information functions such as press releases, event coordination, newsletters, publications and publicity, media relations and development, and maintenance of the HSC website at http://tamhsc.edu.

HSC Communications also offers full support for research publication graphics, brochures, PowerPoint presentation slides and computer presentations. Publication design, layout and production services are available for brochures, instructional materials, technical publications, posters, newsletters and catalogs. Conventional and computer illustration services are available as well.

HSC Communications offers photographic services, including digital and traditional photography, copy photography, film scanning, and clinical and specimen photography (including photomacrography and photomicroscopy). Complete black-and-white and color laboratory services are available as well.

## Health Science Center Centers and Institutes

### *Rural Community Health Institute (RCHI)*

In June 2003, the Texas A&M Health Science Center received authorization by the Texas A&M System Board of Regents to establish the Rural and Community Health Institute (RCHI). Under the direction of Dr. Josie P. Williams, HSC-RCHI strives to partner with rural and community health facilities, clinics and physicians to provide a variety of educational programs, clinical outcomes, quality and patient safety services, benchmarking health care delivery services, health care delivery assessments, database management and analysis, research medical education, graduate medical education and policy research that may be difficult for small or rural facilities to accomplish alone.

HSC-RCHI's mission is to improve access to health care and to reduce disparities in health status, clinical outcomes, and health care services between rural and urban communities in Texas.

For more information, see the HSC-RCHI website at www.rchitexas.org/.

### *Baylor College of Dentistry*

#### *Center for Craniofacial Research and Diagnosis*

The Center for Craniofacial Research and Diagnosis at HSC-Baylor College of Dentistry is a multidisciplinary center of excellence with a mission to address the many faceted problems of the causes, consequences and treatment of craniofacial deformities through basic and clinical research. The center delivers national leadership in the study of craniofacial growth and development disorders.

#### *Oral and Maxillofacial Imaging Center*

The Oral and Maxillofacial Imaging Center at HSC-BCD offers sophisticated diagnostic imaging services to health care professionals. An integral part of the college, the center brings together advanced technology and faculty expertise to serve as a referral source for all clinicians.

#### *Sjögren's Multi-Specialty Referral Center*

The Sjögren's Multi-Specialty Referral Center at HSC-BCD enhances collaboration among medical and dental specialists in the care of patients with Sjögren's syndrome, a debilitating chronic autoimmune disease. It is a cooperative effort of HSC-BCD, Baylor University Medical Center and The University of Texas Southwestern Medical Center at Dallas.

#### *Stomatology Center*

The Stomatology Center at HSC-BCD facilitates diagnosis and treatment of patients with debilitating problems of the mouth.

### *College of Medicine*

#### *Cardiovascular Research Institute*

The Cardiovascular Research Institute was established in 1998 when the Texas A&M University System Board of Regents approved changing the name from the Microcirculation Research Institute, which was established in 1981. The name change reflected the expanding scope and role of the scientists' work. The purpose of the cardiovascular science faculty is to foster communication and collaboration among faculty involved in cardiovascular research, education and training. As part of the Texas A&M Health Science Center College of Medicine, the institute is made up of four divisions: Vascular Biology, Molecular Cardiology, Molecular Medicine and Lymphatic Biology.

#### *Center for Health Systems and Design*

The Center for Health Systems and Design was established in collaboration with the Texas A&M University College of Architecture to coordinate interdisciplinary research and education programs that transfer technology developed by disciplines outside medicine into health care. The center supports programs for graduate student training in interdisciplinary approaches to problems in health care facility design and development. The center has undertaken programs that incorporate units of study from public health and preventive medicine, health care economics and medical sociology. The center studies ways to increase understanding of the effects of health care facility design and planning on the organization and delivery of care through health services research.

#### *Center for Microencapsulation and Drug Delivery*

The Center for Microencapsulation and Drug Delivery (CMDD) is a multidisciplinary faculty group from five colleges with the capability to design and test delivery of pharmaceuticals. Ongoing research includes basic and applied microencapsulation technologies for biomedical use, controlled release drug delivery systems, non-biomedical applications in nanotechnology, molecular biology assay systems, and microcapsule products for petrochemical, agricultural and environmental control industries. Associate members of the CMDD include researchers from other universities, the Institute for Research, Inc., Houston and NASA.

## Teaching/Research Affiliations

### *Institute for Ocular Pharmacology*

The Institute of Ocular Pharmacology conducts research to benefit individuals who suffer from age-related and other conditions of the eye. Its research includes the delivery of drugs to the eye through the eyeball as well as through the bloodstream. It is the first institute of its kind in the world to develop collaboration between opthamologists and pharmacologists to advance eye drug research. As an interdisciplinary organization with members from the HSC-COM and numerous other colleges and institutes, the institute studies and develops formal mechanisms at the molecular level.

### *J.L. Huffines Institute for Sports Medicine and Human Performance*

An unprecedented interest in sports medicine and sports science has occurred over the past several years. It is now recognized that there is a fundamental scientific foundation for the training of athletes, both to improve performance as well as to reduce the risk of injury or reinjury. New surgical techniques allow athletes to return to competition sooner and with minimum effect on subsequent performance. New training techniques and an improved understanding of the nutritional needs of the athlete have resulted in substantial improvements in athletic performance.

The Institute for Sports Medicine and Human Performance (ISMHP) serves as a central administrative structure to facilitate an active interchange among scientists and practitioners (strength and sport conditioning coaches, athletic trainers, health and wellness coordinators, clinicians, and rehabilitation specialists), as well as a first-class research and teaching facility at Texas A&M University.

### *Institute of Biosciences and Technology*

### *Center for Cancer Biology and Nutrition*

The goals of the Center for Cancer Biology and Nutrition are to aid in eliminating cancer and allied diseases by understanding their causes at the cellular and molecular levels; to discover how cells communicate with each other and how improper communication causes cancer; and to discover how nutrition and plant products can both prevent and treat cancer.

### *Center for Extracellular Matrix Biology*

The goal of the Center for Extracellular Matrix Biology is to discover new ways to treat and prevent diseases in human and animal connective tissues. Research at the molecular and cellular levels is done on the structure and function of healthy and diseased bone and cartilage, as well as connective tissue diseases caused by bacterial infections. Research results will help fight osteoporosis, arthritis and infectious diseases, including Lyme disease.

### *Center for Genome Research*

The goal of the Center for Genome Research is to understand human disease in molecular terms. Special emphases include DNA structure and human hereditary neuromuscular diseases (such as muscular dystrophy and hereditary mental retardation syndromes), viral gene expression (e.g., pox viruses), and effects of environmental factors (like carcinogens and radiation) on DNA structure and function.

### *Center for Molecular Development and Disease*

The goals of the Center for Molecular Development and Disease are to pursue advanced studies of major diseases that affect hundreds of millions of people worldwide. It has developed state-of-the-art technology for visualizing *in vivo* gene activity to discover new molecules that regulate the activity of important health-related genes. Novel methods continue to be developed by center members that will advance abilities in these areas, both of which represent paradigms that will have a significant and long-lasting impact in improving global health.

### *The Margaret M. Alkek Center for Environmental and Genetic Medicine*

In April 2002, the HSC-Institute of Biosciences and Technology opened the Margaret M. Alkek Center for Environmental and Genetic Medicine, with $1.6 million in private support. Heading the center is Distinguished Professor Stephen H. Safe, D.Phil., whose research in toxicology and breast cancer is world-renowned. The center also has large research programs seeking the causes and cures for birth defects, whether genetically or environmentally induced.

### *Spina Bifida Research Resource*

The Spina Bifida Research Resource is a project, funded by the National Institutes of Health, to study the causes of spina bifida and anencephaly. To succeed, this project requires a partnership between scientists and families.

### *School of Rural Public Health*

### *Center for Community Health Development*

Approved by the Texas A&M System Board of Regents in spring 2005, the center works collaboratively with communities and other partners to translate, evaluate and disseminate effective individual, organizational, community and regional strategies for addressing critical public health and health-related issues in rural and underserved populations. The overall goal of the center is to improve the health status of minorities, rural and border residents and the working poor through community health development approaches.

## Teaching/Research Affiliations

### *Baylor College of Dentistry*

### *Program and Faculty Resource Sharing*

Teaching and cooperative program arrangements exist between HSC-BCD and several area universities for the purpose of expanding the offerings of each for advanced education students. The participating institutions are Texas A&M University at Commerce, Texas Woman's University, The University of Texas at Arlington, The University of Texas at Dallas and The University of Texas Southwestern Medical Center.

### *Affiliation Early Admission Programs*

Affiliation agreements provide exceptional students – those with superior academic records, leadership and a dedication to return to serve in their communities – with an early entry program that expedites their undergraduate and professional education. HSC-BCD has this relationship with four A&M System universities and with several other universities around the state.

### *Children's Medical Center of Dallas and Texas Scottish Rite Hospital for Children*

HSC-BCD's Department of Pediatric Dentistry has significant involvement in the community. Students at the college have the opportunity to acquire experience in care of special populations of children in both of these facilities.

### *Veterans Affairs North Texas Health Care System: Dallas Veterans Affairs Medical Center*

The medical center provides education and training to HSC-BCD students by allowing them to care for the unique dental needs of a broad cross-section of adult patients, including medically compromised individuals.

### *James and Louise Addison Children's Oral Health Center*

HSC-BCD maintains an affiliation for education and training with the center.

### *Nelson-Tebedo Health Resource Center*

The clinic provides education and training programs for HSC-BCD students.

### *Baylor University Medical Center*

Oral and maxillofacial surgery and periodontics oral pathology residents from HSC-BCD share an educational and training relationship that includes the provision of emergency room patient care within the scope of their discipline.

### *Parkland Health and Hospital System*

HSC-BCD utilizes the Oral and Maxillofacial Surgery Clinic at Parkland. HSC-BCD also provides oral health care services at the hospital and on-site at the college.

### *Texas Tech University Health Sciences Center*

Residents in the combined M.D./certificate program in oral and maxillofacial surgery at HSC-BCD receive their medical training at this center's School of Medicine.

### *Chickasaw Nation Health Services and Oklahoma City Area Indian Health Services*

Dental hygiene students at HSC-BCD provide patient care to Native American communities at various sites.

### *Counseling Affiliations*

Cooperative counseling efforts between area institutions and HSC-BCD's Caruth School of Dental Hygiene allow a seamless transition for students moving into the college's upper-division hygiene program by guaranteeing transferability of credit. Some of these institutions include Collin County Community College, Dallas County Community College District and The University of Texas at Arlington.

## *College of Medicine*

### *Driscoll Children's Hospital*

This leading children's hospital in Corpus Christi is one of the locations for HSC-COM residents to obtain their training. A number of HSC-COM students do two weeks of pediatric course work at this facility. The hospital is a nonprofit regional referral medical center specializing in the care of pediatric patients. Driscoll's location is in one of the state's primary areas that is presently underserved in terms of medical care – the Coastal Bend.

### *Scott & White Memorial Hospital and Clinic*

Scott & White Memorial Hospital, a 472-bed, not-for-profit institution in Temple, offers a full range of medical services, from advanced trauma services to neonatal intensive care to transplant technology. The hospital is staffed by the physicians of Scott & White Clinic, the largest multi-specialty medical practice in Texas and one of the largest in the nation. In 1974, Scott & White became a teaching campus of the HSC-COM to train future physicians. Most Scott & White physicians hold faculty appointments with the HSC-COM, and the hospital remains the principal teaching campus of the college. Scott & White has sponsored residencies for more than 75 years.

### *Carl R. Darnall Army Medical Center*

Located at Fort Hood in Killeen, Carl R. Darnall Army Medical Center is another key affiliate of the HSC-COM. The hospital serves the largest armored military installation in the world, with more than 900,000 annual outpatient visits and 10,279 hospital admissions. Darnall is accredited to train residents in orthopedics, general surgery, obstetrics and psychiatry, and has residency programs in family practice and emergency medicine.

### *Central Texas Veterans Health Care System*

The Central Texas Veterans Health Care System is one of the largest VA medical consortiums in the United States, with approximately 2,700 staff and a budget of almost $240 million. It comprises one of the newest VA medical/surgical hospitals in the country (Olin E. Teague Veterans' Center in Temple), a large psychiatric hospital in Waco, several VA nursing home facilities, and outpatient clinics throughout Central Texas. The Teague Center has been a principal teaching campus for the HSC-COM since the college's inception.

### *John Peter Smith Hospital*

Located in Fort Worth, the John Peter Smith Hospital serves as a partner location with the HSC-COM for residencies in family medicine. The Family Medicine Residency Program is geared toward providing residents with a broad base of knowledge that enables them to enter any area of family medicine. In addition, the hospital is licensed for 459 beds along with a freestanding outpatient care center and a dedicated facility for psychiatric services. There is a new patient tower currently under construction across from John Peter Smith Hospital, which will take JPS into the next era.

### *CHRISTUS Spohn Health System*

The HSC-COM is partnered with the CHRISTUS Spohn Health System to train medical residents in the Coastal Bend. CHRISTUS Spohn is the region's largest not-for-profit hospital system in South Texas, providing health care to more than 600,000 people in the 13 counties served. The Corpus Christi Family Residency Program began in 1972 and has grown from 12 residents to 36. The program focuses on training physicians to become board-certified in family practice and will serve as a training program for HSC-COM third- and fourth-year medical students beginning in 2009.

## Teaching/Research Affiliations

### *Brazos Family Medicine Residency*

The Brazos Family Medicine Residency is a community based program partnering with the HSC-COM, St. Joseph Regional Health Center, College Station Medical Center, the Brazos-Robertson Counties Medical Society, the Brazos Valley Chapter of the Texas Academy of Family Physicians (TAFP), the Brazos County Health Department, and the Scott & White Clinic in College Station. The residency program serves as a community resource by supporting research, providing continuing medical education for physicians and serving the health care needs of the Brazos Valley.

## *Institute of Biosciences and Technology*

### *Graduate and Postdoctoral Education*

The institute conducts graduate and postdoctoral education in cooperation with university programs at Texas A&M University in College Station, Baylor College of Medicine in Houston, The University of Texas at Houston Health Science Center and The University of Texas M.D. Anderson Cancer Center in Houston. Doctoral studies are conducted at the institute in conjunction with these and other institutions, including UT-Houston's graduate school.

## *School of Rural Public Health*

### *Scott & White Memorial Hospital and Clinic*

Scott & White Memorial Hospital and Clinic serves as one of the primary locations for degrees offered through the school's distance education program. Approximately every three years (depending on demand), new classes are offered for interested students to pursue a degree in public health at Scott & White's education and research facilities.

### *Coastal Bend Health Education Center*

The HSC-Coastal Bend Health Education Center, located in Corpus Christi, provides health education for medical professionals and the greater Coastal Bend community. The center maximizes state funds by collaborating with private organizations and sharing community resources. HSC-CBHEC has been successful in regionalizing programs and resources by partnering with colleges, universities and hospital systems. HSC-CBHEC's initiatives address recruitment into health careers, health education and public health issues. The center has also served as a distance education site for the master's degree program at the HSC-SRPH.

### *South Texas Center*

The HSC-South Texas Center, located in McAllen, provides comprehensive and accessible public health educational services and programs to residents of rural and underserved areas of South Texas. The first formal Master of Public Health degree program offered in the Lower Rio Grande Valley is accessible through a distance education program linking the HSC-SRPH to the center. Other public health programs at HSC-STC focus on offering continuing education to public health professionals, conducting needs assessments, instituting high-quality public health services and health education and outreach programs, and conducting research on critical issues identified by South Texas.

# Admissions Requirements

# Admissions Requirements

## Equal Opportunity

Admission to and participation in the educational programs and activities of the Texas A&M Health Science Center shall be open to all qualified individuals regardless of race, color, religion, sex, national origin or disability. Preference should be given to Texas residents over nonresidents.

## Race and Ethnicity in Admissions

As authorized by the Texas A&M University System Board of Regents, race and ethnicity have been added to the pool of non-cognitive factors considered for admissions decisions to HSC academic programs. As state law requires one year notification of changes to admissions criteria prior to their use in admissions decisions, the addition was effective June 7, 2005. More information is available in our case statement for the change, as well as our diversity statement.

## Diversity Statement

HSC educational programs are designed to meet the health work force needs of Texas. HSC admissions criteria are aligned to foster the graduation of health professionals who will be responsive to the needs of the increasingly diverse population of the state. The HSC is committed to the importance of diversity in the recruitment and education of future health professionals and holds that diversity enhances the delivery of care and service to communities across a broad range of racial and ethnic groups and promotes efforts to reduce health disparities among these groups. A diverse student body raises the cultural competence of all health professional students. Diversity is not solely limited to race and ethnicity, but also encompasses talents, life skills and special attributes. This commitment to diversity is expressed through the identification, recruitment, selection, matriculation and graduation of qualified health professions students from different racial, ethnic and/or disadvantaged backgrounds. Our goals are for the HSC student body to mirror the growing diversity of the Texas population and the promotion of understanding, among our students and graduates, of the multiple and varied needs of the individuals and communities that comprise the population of Texas.

## *Admissions Requirements - Baylor College of Dentistry*

### *Doctor of Dental Surgery (D.D.S.)*

#### *Basis for Acceptance*

The quality of academic achievement is the first point of consideration. The GPA and the Dental Admission Test (DAT) are the primary factors used in this evaluation. An interview with the Admissions Committee is required before acceptance. Preference for admission is given to those students with:

- Upper-division biology courses similar to those taken by the first-year dental students;
- A GPA at or above the average for the prior incoming class;
- DAT scores above national averages in all examined areas;
- Careful attention given to details in filing the application;
- Residency in Texas or the surrounding states that do not have a college of dentistry;
- A comprehensive biographical sketch that includes:
  - Information that will help the Admissions Committee to know the applicant better;
  - Details about the procedures observed in a general practice dental office;
  - A description concerning what has been done to improve manual dexterity and to show an imaginative, creative ability;
  - A statement concerning participation in community service projects;
  - Information concerning skills, abilities and attitudes to the commitment required for a career in dentistry.

A comprehensive review is performed to reveal characteristics critical to the practice of dentistry and factors that indicate success in the dental curriculum that are not evident from academic history or standardized test performance. They include:

- Motivation to pursue a career in dentistry;
- Involvement in community service;
- Observation or involvement in a dental office or clinic;
- Involvement in a summer pre-dental preparatory program;
- Letters of evaluation;
- Communication capabilities, including writing (as evidenced in personal statement) and English proficiency;
- Socioeconomic background;
- The applicant's ability to contribute to the diversity of the class, including their race or ethnicity, talents, life skills, and experiences and special attributes;
- Region in which applicant resides;
- Employment while attending college;
- Residence in county designated as underserved by dental health professionals;
- Preparation to attend and succeed in post-secondary education;
- Parents' educational background;
- Applicant is first college attendee in his/her immediate family;
- History of extreme hardship;
- Leadership positions held in societies or organizations;
- Evidence of diverse cultural experience;
- Multilingual capabilities.

#### *Interviews*

Processing of applications begins in May, and the procedure continues until the Oct. 15 deadline. It is to the applicant's advantage to apply as early as possible. When all materials have been received and evaluated, the applicant may be invited for an interview with the Admissions Committee. The interview gives the opportunity for evaluation of non-cognitive factors. Presentation, communication skills and motivation toward dentistry, as well as genuine concern for human welfare, are some of the factors considered.

Interviews are scheduled by the Office of Recruitment and Admissions and are conducted from late August through January. Although an official interview is not granted to all applicants, Texas A&M Health Science Center Baylor College of Dentistry gladly provides complete information and counseling for all prospective students. Visits to the campus for conferences and observation of the facilities are the best ways to obtain information about the college.

### *Required Courses*

A minimum of 90 semester hours is required for application. Additional information concerning undergraduate and prerquisite course work can be accessed at the online application website for the Texas Medical and Dental Schools Application Service, http://www.utsystem.edu/tmdsas. Most applicants have three years of college or university course work completed when they apply. Preference is given to applicants who will complete a baccalaureate degree before entering.

| *Required Courses* | *Minimum Semester Hours* |
|---|---|
| English | 6 |
| Inorganic Chemistry | 8 |
| Organic Chemistry | 8 |
| Physics | 8 |
| Biology | 14 |
| Biochemistry | 3 |

In order to meet the minimum application requirement of 90 semester hours, students are permitted to major in the field of their choice although a major in a biological field is strongly encouraged. Some courses that have proven advantageous include anatomy, physiology, embryology, histology, psychology, sociology, business management, speech, foreign language, neuroscience, cell and molecular biology, and reading improvement. Computing and word processing skills are essential.

Students entering without a bachelor's degree, but who have met specific requirements of some colleges, may qualify for a combined academic degree from their undergraduate college or university. Details concerning this type of degree must be negotiated with the specific college; the only role of HSC-BCD is to provide the necessary transcripts.

HSC-BCD has affiliation agreements with several universities and colleges that guarantee entry into the first year of dental school if all criteria is met. These cooperative arrangements allow a competitive selection of students with excellent academic backgrounds to enter a three- or four-year program leading to acceptance to HSC-BCD.

Additional information may be accessed at the admissions webpage of HSC-BCD's website at www.bcd.tamhsc.edu/admissions/admissions.html.



### *Dental Admission Test*

Applicants are required to complete the Dental Admission Test (DAT) offered through the American Dental Association with an acceptable score. Computer administration of the DAT is offered through Prometrics Testing Center. You may apply online at http://www.ada.org/prof/ed/testing/index.asp. Links to additional information can be accessed at http://www.tambcd.edu/html/faqadmissions.html. Test scores should be submitted as early as possible since the Admissions Committee will not review applications without these scores.

### *Procedure for Making Application*

HSC-BCD participates in the Texas Medical and Dental Schools Application Service (TMDSAS). This central processing service allows the applicant to apply to any or all of the three dental schools in the state of Texas. TMDSAS accepts and processes all materials of the primary application for admission to the Doctor of Dental Surgery Degree Program only. The college participates in the American Association of Dental Schools Application Service for out-of-state students only. Applicants to other programs of HSC-BCD should contact the Office of Recruitment and Admissions. To apply to the program leading to the D.D.S. degree, the applicant should:

- Access full information and the online application at the website for
  The Texas Medical and Dental Schools Application Service
  702 Colorado, Suite 6.400
  Austin, Texas 78701
  http://www.utsystem.edu/tmdsas/
- Applicants needing assistance or who have no Internet access may contact TMDSAS by telephone at (512) 499-4785 or by fax at (512) 499-4786.
- Timetable for filing application:
  Earliest date: May 1 in year prior to desired admission
  Latest date: Application deadline is Oct. 1 in year prior to desired admission.
- Application Fees:
  TMDSAS has a variable fee based upon the number of schools for which you apply.
  HSC-BCD requires a secondary application but charges no additional processing fee.

It is to the applicant's advantage to apply as early as possible. The TMDSAS online application is usually accessible by May 1 of the application cycle. Selection for interviews begins in early August and requires a transmitted complete application. TMDSAS will not transmit incomplete applications to the participating dental schools. A definition of the completed application is available on the TMDSAS website. Processing time from submission to mailing is approximately 15 working days and may be longer during the peak period from Sept. 15 to Oct. 1.

HSC-BCD requires the submission of a secondary application in addition to the primary application. This application can be accessed from links while completing the online TMDSAS application or at http://www.tambcd.edu/admissions/dental/secondaryapplication/secondaryapplication.html. This application should be completed and mailed to:

Baylor College of Dentistry
The Texas A&M University System Health Science Center
Office of Recruitment and Admissions
P.O. Box 660677
Dallas, Texas 75266-0677

THE APPLICATION FOR ADMISSION IS NOT COMPLETE UNTIL THE SECONDARY APPLICATION IS SUBMITTED.
To receive verification of receipt of the secondary application at HSC-BCD, please enclose a self-addressed, stamped postcard.
To receive verification of receipt of materials at TMDSAS, check the policy published on its website.
Applicants will be informed of acceptance after Dec. 1 of the year prior to matriculation.

## *Baccalaureate of Science in Dental Hygiene*

### Dental Hygiene

#### *Prerequisite Courses*

HSC-BCD's Caruth School of Dental Hygiene requires a minimum of 60 semester hours for admission to the degree program. No more than six semester hours may be earned through correspondence courses. Common course numbers are provided for comparison purposes. Your college counselor will be able to advise you in equivalencies to common course numbers. Information is available on the Internet at www.tcchs.org.

| **Minimum Required Courses:** | **Semester Hours** |
|---|---|
| Biology (four hours of General Biology with lab, such as science major 1406, or 1306 plus 1106, and four hours of Anatomy and Physiology. Additional biology such as Anatomy, Physiology II and Microbiology are encouraged but not required.) | 8 |
| Chemistry (two courses with lab, such as science major 1411 and 1412 or nonscience major 1405 and 1407) | 8 |
| English (two courses in basic freshman composition and two courses in literature) | 12 |
| American Government (three hours in United States and three hours in Texas State and Local) | 6 |
| American History (three hours may be in Texas History) | 6 |
| Mathematics (one course in College Mathematics, College Algebra, Trigonometry, Calculus or Statistics) | 3 |
| Introduction to Psychology | 3 |
| Introduction to Sociology | 3 |
| Speech (public speaking) | 3 |
| Nutrition | 2-3 |
| Computer Science/Literacy | 3-4 |
| Electives | 1-3 |

It is beneficial to have three of the four science courses completed by Dec. 31 of the year before anticipated entrance into the program.

#### *Transfer of Undergraduate Credit*

Transfer policies vary by component program. Disputes concerning lower-division courses are resolved by the following rule:

In accordance with the Texas Higher Education Coordinating Board (THECB), the following procedures shall be followed by public institutions of higher education in Texas in the resolution of credit transfer disputes involving lower-division courses:

1. If an institution of higher education does not accept course credit earned by a student at another institution of higher education in Texas, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied.
2. The two institutions and the student shall attempt to resolve the transfer of the course credit, in accordance with the THECB rules and guidelines.
3. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the institution whose credit is denied for transfer shall notify the commissioner of the denial.

The Commissioner of Higher Education or the commissioner's designee shall make the final determination about the dispute concerning the transfer of course credit and give written notice of the determination to the involved student and all involved institutions.

Transfer credit will be determined by the staff of HSC-BCD's Office of Academic Records on a course-by-course basis from official transcripts submitted in the competitive admissions process. Course content will be determined by catalog course description or course syllabus. Course acceptability is guided by these criteria:

1. Courses given by regionally accredited institutions are considered for transfer if:
   a. They are acceptable as credit for a bachelor's degree at a regionally accredited institution.
   b. Course content is at or above the level of courses specified in HSC-BCD's requirements for admission.
2. Courses intended for use in a vocational, technical or occupational program normally do not transfer; general courses within this type of program may transfer.
3. Credit on the transcript must appear in semester hours or credits that may be converted to semester hours.
4. Credit by examination courses may be transferred if accepted by another college and followed by sequenced course work.
5. Equivalency of course work is determined by content found in catalog course descriptions or syllabi of courses. In case of doubt, departmental faculty will determine equivalency. The final determination is left to the director of the Department of Dental Hygiene.
6. As a general policy, course work with a passing grade may be transferred, but the applicant must keep in mind that admission to the hygiene program is on a competitive basis, and grades of "F" are calculated into the grade point average.
7. Course hours will be evaluated on a course-by-course basis but will be transferred as a block of hours, and the grades do not calculate into the GPA for the hygiene program.
8. Credit will be given for correspondence courses on a select basis.
9. Credit will not be given for courses completed at institutions not accredited by a regional accrediting agency.

#### *Texas Success Initiative*

The Texas Success Initiative (TSI) was instituted to ensure that students enrolled in Texas public colleges and universities possess the necessary academic skills to perform effectively in college. As a transfer student, applicants to the Caruth School of Dental Hygiene must submit qualifying scores on tests acceptable to the THECB if they were so required when entering their undergraduate institutions. Established cutoff scores on the SAT, ACT or TAKS tests qualify students for exemption. Proof of these scores must be submitted in place of scores on qualifying tests mentioned earlier. Alternative test scores accepted by the THECB may be provided as proof of compliance with academic skills regulations.

## Admissions Requirements - Baylor College of Dentistry

Applicants from out-of-state colleges or private colleges who have never been required to take a qualifying test must take the test prior to acceptance for admission. Additional criteria exist to fulfill the TSI requirement. Non-resident students should contact the college for additional information.

Request that test scores be sent to the Office of Academic Records at HSC-BCD directly from the testing agency.

### *Fresh Start*

An applicant for admission who is a Texas resident may seek to enter this institution pursuant to the state's "academic fresh start" statute. If the applicant informs the admissions office in writing of his or her election under the statute, the institution will not consider academic course credits or grades earned by the applicant 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who makes the election to apply under this statute and is admitted as a student may not receive any course credit for courses undertaken 10 or more years prior to enrollment under this section.

### *Application Procedures*

- You may download application information and forms from the admissions website: www.bcd.tamhsc.edu/admissions/Hygiene_Admissions/hygiene_admissions.html or request application materials from the Office of Academic Records at HSC-BCD.
- Timetable for filing of formal application:
  - Earliest date: June 1 of year prior to desired admission.
  - Latest date: Application and supporting documentation is encouraged by Dec. 31.
- Application Fee: $35 due with application.
- The following must be included with the application:
  - Application fee
  - Biographical sketch
  - High school transcripts
  - List of courses in progress
  - List of courses planned
  - Photograph
  - Residency questions
  - Secondary application
- Out-of-state applicants must comply with Texas Success Initiative criteria.
- Observation Verification Sheet
- An application is valid for one academic year only.
- Official transcripts are required and will be accepted only when sent directly from each school the applicant has attended. (Transcripts must be sent after each semester's course work for courses in progress.)
- Recommendations are required from a dentist or dental hygienist, a biology or chemistry instructor and an individual who has known the applicant for some time (e.g., an employer or supervisor).
- It is the responsibility of the applicant to keep the application file current. Failure to supply grades, transcripts or recommendations may be perceived as an indication that the applicant is no longer interested in admission.

### *Interviews*

Processing of applications begins the fall prior to entrance into the professional program and continues until the class is filled. The applications are evaluated, and an invitation for an interview may be extended. The purpose of the interview is to determine the applicant's knowledge of the dental hygiene profession. It also provides an opportunity for the applicant to see the facility, meet with the Admissions Committee and ask questions about the program.

All prospective students are encouraged to contact HSC-BCD with questions regarding prerequisite courses or the program.

### *Residency*

Each student is responsible for declaring a legal state of residency at the time of application. Residency requirements are described in the Texas Education Code. A copy of the THECB rules and regulations on determination of residency status is available in the Office of Academic Records at HSC-BCD or may be downloaded from the web at http://www.thecb.state.tx.us/uhri/students.efm.

### *Basis For Acceptance*

- The quality of the applicant's scholarship is a prime consideration. A GPA is computed based on all courses taken in college.
- Preference for admission is given to students with:
  - A cumulative GPA and science GPA indicating likelihood of succeeding in the program.
  - Attention given to detail when completing the application. The more complete the application, the more competitive the applicant will be.
  - A comprehensive biographical sketch that includes information that will help the Admissions Committee know the applicant better. The biographical sketch must include:
    - Details about the dental hygiene procedures that have been observed.
    - A description of community service projects in which the applicant has participated.
    - Information concerning the applicant's interests, abilities and attitudes that have motivated him/her to make the commitment required for a career in dental hygiene.
  - Other information that may be helpful to the committee may also be included.
- In no case will an applicant be notified of acceptance before March 1 of the year of anticipated entrance into the program. Final acceptances are usually completed by May 15.

## *Advanced Education*

*General Requirements*

To be admitted to graduate studies, an applicant must:

1. Hold a four-year baccalaureate degree or a dental degree from a college or university of recognized standing;
2. Show promise of ability to pursue advanced study and research satisfactorily;
3. Have had adequate preparation to enter graduate study in the field chosen; and
4. Submit, with the application, acceptable scores on the General Test of the Graduate Record Examination (GRE). GRE scores more than five calendar years prior to application for admission to graduate studies may not normally be used to satisfy admission requirements, except in the case where the applicant has been involved in graduate or professional academic programs for the majority of time since the testing date. Scores made on the GRE more than 10 calendar years prior to application for admission to graduate studies may not be used to satisfy admission requirements. Applicants to the endodontics program are required to submit GRE scores **only** if they are graduates of non-U.S., non-Canadian dental schools.

*International Student Requirements*

An applicant from another country seeking admission to graduate studies must meet the same requirements for admission as applicants from the United States; namely 1-4 above. In addition, the applicant must demonstrate the ability to read, write, speak and understand the English language. Prospective students whose native language is not English must take the Test of English as a Foreign Language (TOEFL). All applicants from non-English-speaking countries must present a score of at least 550 on the paper-based TOEFL examination (or comparable computer-based score) in order to be admitted to graduate studies. In certain circumstances, a student may be admitted to graduate studies prior to obtaining 550 (or 213 on the computer-based exam) on the TOEFL, but in all cases a TOEFL score must be submitted for the application to be complete.

This circumstance shall apply only to students who are already residing in the United States at the time of application and where the appropriate Admissions Committee can determine that the candidate has adequate English language skills to begin instruction. In these cases, the applicant must receive a 550 (or 213 on computer-based exam) on the TOEFL by the end of their second semester in residence; otherwise, participation in the program will be terminated. TOEFL may be waived if the candidate has a previous degree (B.A./B.S., M.S. or D.D.S./D.M.D.) from a fully accredited U.S. institution.

*Certificate in Dental Public Health*

- Doctor of Dental Surgery or Doctor of Dental Medicine from a fully accredited institution;
- Graduate degree in public health-related area (e.g., M.P.H., M.S.P.H., Dr.P.H., Ph.D.); and
- A minimum score of 550 (or 213 on computer-based exam) on the Test of English as a Foreign Language and fluency in English for applicants from all international applicants from non-English-speaking countries.

*Certificate and M.S. in Oral Biology*

- Doctor of Dental Surgery or Doctor of Dental Medicine from a fully accredited institution;
- A minimum total GPA of 2.7 (0.0 to 4.0 point system) and a record of study and experience that is predictiveof success in advanced education;
- Except for international applicants, acceptable scores on the National Board Examination;
- Acceptable scores on the Graduate Record Examination are required for the M.S. and are required of all international applicants (except Advanced Education in General Dentistry);
- A minimum score of 550 (or 213 on computer-based exam) on the Test of English as a Foreign Language and fluency in the English language are required of all international applicants from non-English-speaking countries; and
- Approval for admission from the Program Admissions Committee and the associate dean for Research and Graduate Studies.

*M.S. in Biomaterials Science*

- A B.S., B.D.S. or its equivalent in the biological or engineering sciences from a fully accredited institution, or a D.D.S. or D.M.D. from a fully accredited institution;
- A minimum total GPA of 2.7 (0.0 to 4.0 point system) and a record of study and experience that is predictive of success in advanced education;
- Acceptable scores on the Graduate Record Examination;
- A minimum score of 550 (or 213 on computer-based exam) on the Test of English as a Foreign Language and fluency in English for applicants from all international applicants from non-English-speaking countries; and
- Approval for admission from the program director and the associate dean for Research and Graduate Studies.

*M.S. in Biomedical Sciences*

- A B.S. or its equivalent in the biological sciences from a fully accredited institution, or a D.D.S. or D.M.D. from a fully accredited institution;
- A minimum total GPA of 2.7 (0.0 to 4.0 point system) and a record of study and experience that is predictiveof success in advanced education;
- Acceptable scores on the Graduate Record Examination;
- A minimum score of 550 (or 213 on computer-based exam) on the Test of English as a Foreign Language and fluency in the English language are required of all international applicants from non-English-speaking countries; and
- Approval for admission from the Program Admissions Committee and the associate dean for Research and Graduate Studies.

*M.S. in Dental Hygiene*

- Graduation from an accredited dental hygiene program, successful completion of the National Board Dental Hygiene Examination, a baccalaureate degree from an accredited college or university and eligibility for a license to practice dental hygiene from any state;
- A minimum total GPA of 2.7 (3.0 in dental hygiene course work) on a 4.0 scale and a record of study and experience that is predictive of success in advanced education;
- Acceptable scores on the Graduate Record Examination;
- Approval for admission from the Program Admissions Committee and the associate dean for Research and Graduate Studies; and
- Proof of current CPR certification and Hepatitis B immunization before starting the program.

*M.S. in Health Professions Education*

- A professional degree (e.g., D.D.S., D.M.D.) from a fully accredited institution;
- A minimum total GPA of 3.0 (0.0-4.0 point system) and a record of study and experience that is predictive of success in graduate studies;
- Acceptable scores on appropriate National Board exams and the Graduate Record Exam;

- A minimum score of 550 (or 213 on computer-based exam) on the Test of English as a Foreign Language and fluency in English are required of all international applicants from non-English-speaking countries; and
- Approval for admission from the Program Admissions Committee and the associate dean for Research and Graduate Studies.

*Ph.D. in Biomedical Sciences*

- Candidates with a D.D.S. or its equivalent and dental specialty training will be most competitive. Those with a B.S. or its equivalent with a major in a scientific discipline and/or graduate-level course work in the biological sciences also will be considered for admission;
- A minimum total GPA of 2.7 (0.0 to 4.0 point system) and a record of study and experience that is predictive of success in graduate studies;
- Acceptable scores on the Graduate Record Examination;
- A minimum score of 550 (or 213 on computer-based exam) on the Test of English as a Foreign Language and fluency in English are required of all international applicants from non-English-speaking countries; and
- Approval for admission from the Ph.D. Program Admissions Committee and the associate dean for Research and Graduate Studies.

### *Application Procedures*

Obtain application material from the Office of Research and Graduate Studies or from the dental specialty area of your choice and return it to the Office of Admissions and Academic Records at HSC-BCD when completed. Application deadlines follow:

*Advanced Education in General Dentistry*

Oct. 15 of the year prior to the desired date of admission; participates in PASS (see below).

*Biomaterials Science*

Applications are accepted roughly once every two years. Applicants should contact the program director regarding the next available starting date.

*Biomedical Sciences*

M.S.: Applications are accepted two months before the semester of matriculation for domestic applicants and three months before the semester of matriculation for international applicants.

Ph.D.: Students interested in pursuing a combined graduate degree (clinical specialty and a Ph.D. in biomedical sciences) are encouraged to apply for both programs at the deadline indicated for the clinical program. Others are accepted two months before the semester of matriculation for domestic students and three months for international applicants.

*Dental Hygiene*

Applications are accepted throughout the year with a recommended summer semester (July 1) start date; no deadline is required, but a March 1 submission date is suggested.

*Dental Public Health*

Jan. 30 of the year of desired entry into the program.

*Endodontics*

Aug. 15 of the year prior to the desired date of admission; program participates in PASS.

*Health Professions Education*

Applications are accepted throughout the year with a recommended summer semester start date. No deadline is in place, but a March 31 submission date is suggested.

*Oral and Maxillofacial Pathology*

Dec. 1 of the year prior to the desired date of admission.

*Oral and Maxillofacial Surgery*

Oct. 1 of the year prior to the desired date of admission; program participates in PASS and MATCH (see below).

*Orthodontics*

Sept. 1 of the year prior to the desired date of admission; program participates in MATCH.

*Pediatric Dentistry*

Nov. 1 of the year prior to the desired date of admission; program participates in PASS and MATCH.

*Periodontics*

Aug. 20 of the year prior to the desired date of admission.

*Prosthodontics*

Sept. 1 of the year prior to the desired date of admission.

An application fee must accompany the completed application. Applications are valid for one year only. The reapplication fee must accompany subsequent applications. International applicants must submit the application fee in the form of a money order drawn on a U.S. bank.

In addition, the following items must be received directly by the Office of Academic Records before an application is considered complete:

- An official transcript must be sent from each college the applicant has attended.
- International transcripts must be evaluated by Educational Credentials Evaluators; Post Office Box #17499; Milwaukee, Wisconsin 53217. Request the "course-by-course" report.
- Three completed reference forms must be mailed directly to the Office of Academic Records at HSC-BCD.
- A letter from the dean of the dental school certifying the applicant's GPA and class standing (applies only to applicants for the certificate programs).
- National Board Examination scores.
- Test of English as a Foreign Language score.

### *PASS and MATCH Services*

PASS (Postdoctoral Application Support Service) and MATCH (Postdoctoral Dental Matching Program) are two separate and distinct services. If your program of choice participates in MATCH, you will have to register with MATCH to be considered for admission. Likewise, if PASS is indicated with your program of choice and you want to use that service, you will need to register with PASS.

### *Matriculation and Registration*

All students are required to register on the dates specified in the official school academic calendar. A matriculation fee of $15 is required of every student upon first admission to any program of the college. New students who fail to report for registration at the specified time may lose their place in their program unless they have previously received permission for late registration.

Veterans who have obtained a certificate of eligibility should report to the director of Student Aid for handling of veteran's affairs. Detailed information about student aid and veteran's affairs is available form the Office of Student Aid.

### *Physician's Statement*

Before enrollment, the accepted applicant must return a completed physical examination form furnished by the college. Information concerning required immunizations is included with the physician's statement form.

### *Criminal Background Check*

Effective immediately, individuals accepted into programs of the college must satisfactorily complete a criminal background check review as a condition of matriculation. These checks disclose all actions, including convictions, arrests, charges, grand jury indictments and deferred adjudications. Enrollment will not be final until the completion of the criminal background check with results deemed favorable. Admission may be rescinded based on a review of the criminal background check. This policy also applies to those students or program participants entering or continuing in programs that do not involve the review of the Admissions Committee or a program director.

Students who refuse to submit to a criminal background check or do not pass the criminal background check review may be refused admission or dismissed from the program.

To access the complete policy concerning CBC, please visit the following website:
http://www.tamhsc.edu/facultystaff/rules/
The pertinent rule is 11.04.99.Z2.01

### *Drug Screening*

Effective as of the date of this policy, individuals accepted into programs of the college must submit to and satisfactorily complete a drug screening as a condition of admission. This screen must be completed and satisfactory results received by HSC-Baylor College of Dentistry within 30 days after matriculation or before participation in a rotation or patient treatment that requires such a screening, whichever comes first. This policy also applies to those students or program participants entering or continuing in programs that do not involve the review of the Admissions Committee or a program director. Students who refuse to submit to or do not pass the drug screening review may be dismissed from the program.

Drug screening results will be honored by HSC-BCD and all of its affiliates for the duration of the student's enrollment in the program if the participating student has not had a break in enrollment at the college. A break in enrollment is defined as nonattendance of one full semester (fall or spring) or more. The above information must be verifiable through HSC-BCD.

To access the complete policy concerning Drug Screening please visit the following website:
http://www.tamhsc.edu/facultystaff/rules/
The pertinent rule is 11.04.99.Z1.02



## *Admissions Requirements - College of Medicine*

## *Doctor of Medicine (M.D.)*

The Texas A&M Health Science Center College of Medicine (HSC-COM) currently enrolls 100 students per year. The small class size permits every student to receive individual attention in both the basic sciences and clinical experiences. Admission to the HSC-COM is highly competitive and considers for enrollment only individuals who have completed at least 90 semester credit hours (or equivalent quarter hours) of their undergraduate course work at a fully accredited college or university in the United States. By state mandate, enrollment of individuals who are residents of states other than Texas may not exceed 10 percent.

The HSC-COM is explicit about its commitment to excellence in improving the health of Texans, particularly rural and underserved populations, through the integrated education of humane and highly skilled physicians and the development of knowledge in the biomedical and clinical sciences. It is also committed to the important role of diversity in the training of future medical professionals. The college believes that diversity, which is not solely limited to race and ethnicity, but also encompasses talents, life skills and special attributes, enhances its ability to provide care to communities across a broad range of racial and ethnic groups and is critical for the amelioration of disparities in health care. This mission is the philosophy by which the HSC-COM guides itself and the admissions process. It is the foundation on which the Admissions Committee makes important individual admissions decisions and strives to admit students whose goals and attitudes are consistent with the philosophy of the HSC-COM.

Applicants, therefore, must demonstrate strong intellectual ability to master a challenging educational experience. In addition to intellectual ability and a record of academic achievement, successful applicants must exhibit the personal attributes necessary to interact with others in an effective and compassionate manner.

### *Undergraduate Course Requirements*

Most entering students complete a baccalaureate degree before enrolling. However, students may enroll with 90 semester hours of college work or without a baccalaureate degree, provided their academic record and intellectual capacity, dedication to service, capacity for effective interactions, and life experiences are comparable or superior to those students who complete the baccalaureate degree.

The following courses are required with at least a grade of "C" from a fully accredited college or university in the United States and must be completed before or by the time of enrollment:

## Admissions Requirements - College of Medicine

| UNDERGRADUATE COURSE REQUIREMENTS | |
|---|---|
| General Biology (with laboratories) | 8 semester hours or 12 quarter hours |
| Advanced Biological Sciences | 6 semester hours or 9 quarter hours |
| • 3 semester hours or 5 quarter hours of Biochemistry is recommended | |
| General Chemistry (with laboratories) | 8 semester hours or 12 quarter hours |
| Organic Chemistry (with laboratories) | 8 semester hours or 12 quarter hours |
| General Physics (with laboratories) | 8 semester hours or 12 quarter hours |
| Calculus or Math-Based Statistics | 3 semester hours or 5 quarter hours |
| English | 6 semester hours or 9 quarter hours |
| TOTAL SEMESTER HOURS | 47 |

* The calculus course can be any calculus taught by a math or physics department. Business Calculus or any pre-calculus course IS NOT ACCEPTABLE.

* The statistics course should be taught in the math or statistics department. Statistics courses taught in other departments may be considered with appropriate documentation from faculty.

### *Application Information*

HSC-COM participates in the Texas Medical and Dental Schools Application Service (TMDSAS). TMDSAS is a centralized application processing service for applicants to first-year entering classes at the Texas public medical schools. TMDSAS provides one standardized application form online at http://www.utsystem.edu/tmdsas

The application for admission can be submitted as early as May 1 but no later than Oct. 1. The TMDSAS application fee is $55; the fee will increase $10 with each school selected. The fee schedule is detailed on the TMDSAS website. All supporting documents, which include academic transcripts and letters of evaluation, are to be mailed to:

- TMDSAS
  702 Colorado, Suite 6.400
  Austin, Texas 78701
  Contact: (512) 499-4785
  Email: TMDSAS@utsystem.edu

### *Secondary Admission Application*

Also available online is the COM Secondary Application Form. It may be accessed on the HSC-COM website at http://medicine.tamhsc.edu/admissions/index.htm or the TMDSAS website at http://www.utsystem.edu/tmdsas

The secondary application is required and must be completed and submitted online. The secondary application fee is $50 (non-refundable). The secondary application can be submitted as early as May 1 but no later than Oct. 1. Applicants will not be considered for further evaluation until the primary and secondary applications have been properly completed, appropriate MCAT scores released, and letters of evaluation submitted.

### *Screening of Applications*

The process of screening applications for an interview is selective. It is critical for us to understand the circumstances of applicants and give careful, but expeditious, consideration to their history of academic and MCAT performances and to those characteristics, backgrounds and situations that reflect a significant record of accomplishment. However, it must be understood that not all applications under review will result in either an interview or an offer of admission.

Applicants are screened for interviews on academic record and intellectual capacity, dedication to service and capacity for effective interactions, special life circumstances, and other compelling factors such as, but not limited to, the following:

- Involvement in community human service activities;
- Leadership in school organizations or community projects;
- Clinical or health care-related experiences;
- Quality of personal statement;
- Motivation for medicine as a career;
- Supportive letters of evaluation from faculty and mentors;
- Areas of interest in medicine;
- Circumstances indicative of some hardship or adversity;
- Socioeconomic background;
- Race and ethnicity;
- First generation to attend or graduate from an undergraduate program;
- Parents having high school or less education;
- Need to work while attending high school and/or college;
- Responsible for the care of others or the rearing of children;
- Region in which applicant resides;
- Region in which applicant's high school district is located;
- Comparative availability of physicians in the applicant's region of residence (underserved or health professions shortage area);
- Evidence of experience of other cultures and the human condition, including multilingual proficiency;
- Automatic admission to one of the state's public undergraduate institutions.

## Admissions Requirements - College of Medicine

### *Timeline for 2009 Admissions Process*

| | |
|---|---|
| Jan. 2008 | MCAT administration at testing sites across Texas and the United States begins. |
| May 1, 2008 | Primary applications for fall 2009 admission are available from the TMDSAS. |
| | Secondary applications for fall 2009 admission are available on the HSC-COM website. |
| | Primary and secondary applications are accepted **ONLINE** only. |
| June 1, 2008 | TMDSAS begins the processing of completed applications and supporting materials. |
| | HSC-COM begins the processing of secondary applications. |
| July 2008 | Review of primary and secondary applications begins. |
| Aug. 2008 | Interview period begins. |
| Oct. 1, 2008 | Deadline for filing primary and secondary applications. |
| | Deadline for receipt of letters of evaluation. |
| | Deadline for receipt of official transcripts. |
| Nov. 15, 2008 | First round of acceptance offers tendered. |
| Dec. 15, 2008 | Second round of acceptance offers tendered. |
| Dec. 31, 2008 | Open admissions period ends. |
| Jan. 2, 2009 | Financial aid process begins via the Free Application for Federal Student Aid (FAFSA). |
| Jan. 15, 2009 | Last day for accepted applicants to decline offers of acceptance received from any other TMDSAS participating school. |
| | Deadline for applicants to submit their preferences of schools at which they interviewed into the Match process. |
| | Deadline for medical schools to submit rank lists. |
| Feb. 1, 2009 | Medical School Match. |
| | TMDSAS Match is conducted to fill any remaining positions in the class. |
| | Offers of acceptance mailed out. |
| | Alternate list is formed. |
| | First set of matriculation materials mailed to accepted applicants. |
| March - April, 2009 | Alternate list is maintained. |
| | Second set of matriculation materials mailed to accepted applicants. |
| May 15, 2009 | Final notice to accepted applicants who hold one or more places at other medical schools. |
| June 15, 2009 | Last day to make offers of acceptance to alternates holding acceptances at other medical schools. |
| Last week of July, 2009 | Orientation, registration and first day of classes for incoming students. |

### *Letters of Evaluation*

Pre-medical advisors play an important role in helping the Admissions Committee assess intellectual ability and personal attributes and experiences. Therefore, prospective applicants are urged to get to know their advisors and teaching faculty early in their undergraduate education experience to ensure support of their application.

Submit letters of evaluation or Health Professions Advisory Committee Evaluation packet directly to TMDSAS. All letters of evaluation submitted by the evaluator or advising office must be written on, and mailed in, official school or business letterhead and envelope, and all evaluations must be current; otherwise, they will not be considered official. A minimum of two evaluations from professors is required. Letters of reference from work supervisors, medically related preceptors and research mentors are acceptable, but they must not be used in lieu of the minimum two professor letters. The HSC-COM may also request additional letters at any time.

If you are no longer in undergraduate school and cannot obtain an evaluation from your former health professions advisor, advisory committee or a faculty member, you should proceed as follows:

- If you are attending graduate school, one of your evaluation letters must be from your graduate advisor, a major professor or the chairperson of your major department.
- If you have been out of college for one year or more and are currently employed or in military service, submit at least two letters with one of your evaluations written by your immediate supervisor or commanding officer.
- If self-employed, one of your recommendation letters must be from a business associate. The evaluation must detail your performance. Additional letters from employment supervisors, medically related preceptors, community service coordinators and/or research mentors are acceptable.

### *Personal Interviews*

Applicants are invited for personal interviews based upon their competitiveness within the screening process described above. Interview sessions typically are scheduled on Thursdays from August to mid-December and follow a one-day format, beginning in College Station in the morning and concluding in Temple in the afternoon. Each applicant is given two individual 30-minute interviews by a combination of faculty admissions committee members, student admissions

committee members and faculty or administrator guest interviewers. Personal interviews at the HSC-COM are a two-way exchange. Students are encouraged to use this experience to inquire and form opinions about the strengths and opportunities available at the HSC-COM. Although intellectual ability and record of achievement are important factors, the personal interview gives the Admissions Committee another measure by which to evaluate and understand other traits necessary to foster the development of a competent, compassionate and responsible physician. Ability to communicate and interact, social consciousness, maturity, integrity of character, tolerance and motivation for a career in medicine are among the characteristics sought.

### *Tender of Acceptance Offer*

The HSC-COM tenders acceptances on a rolling basis between Nov. 15 and Dec. 31. A match will be conducted on Feb. 1 to fill any remaining positions. For more information on the TMDSAS medical schools acceptance policy and procedures, refer to the TMDSAS website at: http://www.utsystem.edu/tmdsas.

### *Scholarships*

All students accepted to the HSC-COM are considered competitively for scholarships. The Scholarship Committee gives careful consideration to a student's background that may indicate strong need and potential for success in medical school. Scholarships are both merit and need based.

### *Overview and Profile of Entering Class 2007*

The HSC-COM received 3,122 applications for 100 places in the 2007 entering class. Seven-hundred-and-twenty-four (724) applicants were interviewed. The class is comprised of 93 percent Texas residents, 53 percent women and 16 percent underrepresented minorities. Among the students enrolled, 100 percent received baccalaureate degrees and 11 percent had graduate degrees. The choice of major varied among the students, but 72 percent chose majors in the sciences. Among the non-science degrees, some of the fields of concentration were advertising, business, foreign language, history, music, political science, psychology, public health and religion. Thirty-six colleges and universities throughout the state and nation are represented among the members of the entering class. The class is distinguished by a mean college GPA of 3.76 and average total MCAT score of 29.

### *Medical College Admission Test*

Almost all U.S. medical schools require applicants to submit Medical College Admission Test (MCAT) scores. Medical college admission committees consider MCAT scores as part of the admission decision process. MCAT is a standardized, multiple-choice examination designed to assess problem solving, critical thinking and writing skills in addition to the examinee's knowledge of science concepts and principles prerequisite to the study of medicine. Scores are reported in each of the following areas: Verbal Reasoning, Physical Sciences, Writing Sample and Biological Sciences.

The MCAT is offered 22 times over 19 test periods per year. The MCAT is a computer-based test, and Thomson Prometric delivers the computerized MCAT on behalf of the AAMC multiple times per year at hundreds of testing sites in North America and select sites in Europe, Asia, Australia, Africa and the Middle East. Once the MCAT has been taken, scores must be released directly to TMDSAS for those scores to be considered with your application. Refer to TMDSAS for instruction. The MCAT must have been taken no earlier than five years before the expected date of enrollment.

Although an applicant's performance on the MCAT is used in the admissions and the competitive scholarship processes, it is not used as the sole criterion for consideration or as the primary criterion to end consideration. In the evaluation process, MCAT scores are used in combination with academic record and a host of other factors, as well as to compare an applicant's scores with those of other applicants from similar socioeconomic backgrounds. This is possible only to the extent that this information can be appropriately ascertained and identified by the Admissions Committee in the application process.

For questions about registration and test administration:

The MCAT Care Team
Association of American Medical Colleges
Section for Applicant Assessment Services
2450 N St., NW
Washington, DC 20037
Phone: (202) 828-0690
www.aamc.org/mcat
Email: mcat@aamc.org

## *M.D./Ph.D. Program*

### *Program Description*

The HSC-COM offers a training program leading to the combined M.D./Ph.D. degree. The purpose of this program is to provide research training for highly motivated medical students planning careers in academic medicine. To accomplish this, the M.D./Ph.D. Program integrates the studies and requirements for both the M.D. and Ph.D. degrees, providing students with many opportunities to relate their study of clinical medicine with basic biomedical science. Such training produces medical scientists with unique insights into human disease processes. Entry into the program is competitive and based on a selective process.

### *Admission Requirements*

Admission to the M.D./Ph.D. Program requires:

- A bachelor's degree from an accredited institution in the United States;
- An outstanding academic record and research background;
- Above average MCAT performance (MCAT scores will be used in place of GRE scores);
- Acceptance into the HSC-COM and the HSC-Graduate School of Biomedical Sciences.

Students who desire to apply for the M.D./Ph.D. Program must complete the American Medical College Application Service (AMCAS) application and the HSC-COM's secondary application as described above. Applicants should indicate on the HSC-COM's Secondary Admission Application that they are an M.D./Ph.D. applicant. Applicants may then contact the director of the M.D./Ph.D. program at (979) 845-7288 or by email at leibowit@medicine.tamhsc.edu for additional information about the graduate programs.

Questions regarding the status of applications through the process of evaluation can be addressed to the assistant dean for admissions at the HSC-COM Office of Student Affairs and Admissions.

Interviews for the M.D./Ph.D. Program are conducted in conjunction with interviews for medical school. Pending the outcome of the admission process for medical school, accepted students will be simultaneously informed of their eligibility for the joint M.D./Ph.D. Program.

Students enrolled in the M.D. program also may elect to transfer into the program during the first, second or third year of the medical curriculum at the HSC-COM. Transfer students should have established a strong record of academic performance, meet the admissions requirements for entry into the graduate program and must receive approval from the M.D./Ph.D. Advisory Committee.

## *Admission Requirements - Graduate School of Biomedical Sciences (M.S., Ph.D.)*

Applications for the fall semester are requested by Feb. 1 but will be considered throughout the year. A four-year baccalaureate degree from a four-year accredited university is required. Students applying to a graduate program should have a strong undergraduate background in subjects relevant for graduate training in biomedical sciences and public health. Strong letters of recommendation indicating academic excellence, personal maturity, and exceptional motivation and interest in the experimental sciences are an important part of the application. The graduate program in biomedical sciences at the Texas A&M Health Science Center Baylor College of Dentistry is especially oriented toward Ph.D. students who already have a D.D.S./D.M.D. and may be concurrently enrolled in a clinical specialty program. Graduate Record Examination (GRE) general test scores are required for master's and doctoral programs. A Test of English as a Foreign Language (TOEFL) score is required from applicants whose native language is not English, with the exception of those applicants completing all four years of a baccalaureate degree in the United States or achieving a 450 Verbal score on the GRE. A TOEFL score of 550 (213 computer-based) or higher is usually required for admission. Required courses vary with the individual program.

### *Procedure for Making Application*

For more information, contact the associate dean or director at the appropriate component:
Director of Graduate Studies
College of Medicine
Texas A&M Health Science Center
153A Reynolds Building
College Station, Texas 77843-1114
(979) 845-0370
Fax: (979) 845-4604
Email: gradofficeHSC@medicine.tamhsc.edu

Director, Biomedical Sciences Graduate Program
Baylor College of Dentistry
Texas A&M Health Science Center
P.O. Box 660677
Dallas, Texas 75266-0677
(214) 828-8100
http://www.tambcd.edu

Assistant Director for Graduate Programs
Institute of Biosciences and Technology
Texas A&M Health Science Center
2121 W. Holcombe Blvd.
Houston, Texas 77030-3303
(713) 677-7777
http://www.ibt.tamhsc.edu/

Associate Dean for Academic Affairs
School of Rural Public Health
Texas A&M Health Science Center
SRPH Administration Building, Room 282
College Station, TX 77843-1266
(979) 845-2387
http://www.srph.tamhsc.edu

### *Residency*

Graduate students are expected to be in residence and to devote most of their time and energy to graduate studies under the direction of a major professor and the advisory committee. Students who enter the doctoral degree program with baccalaureate degrees must spend at least two academic years in resident study. Students who hold master's degrees when they enter the doctoral program must spend at least one academic year in resident study.

### *Basis for Admission*

A combination of factors is considered for admission. The basis for admission includes the undergraduate or graduate record with a strong GPA, strong standardized test results (GRE), evidence of maturity, strong letters of recommendation supporting the preparation of the applicant to undertake graduate work, and any other supporting information regarding the aptitude and ability of the applicant. Typically, the successful applicant will present an undergraduate or graduate GPA of 3.0 or better and a combined minimum score of 1100 on the verbal and quantitative sections of the GRE.

## Admissions Requirements - Irma Lerma Rangel College of Pharmacy

Emails will be sent upon receiving your application packet. Make sure that the email address you provide in your application is current. If your email address changes after you submit your application packet, please contact the Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy as soon as possible with the change. The college will notify you of the outcome of your application. Incomplete application packets will not be considered. Applicants who apply after Feb. 1 cannot be assured evaluation. Applications will be accepted starting Sept. 15.

To apply for admission to the HSC-Rangel College of Pharmacy, you must meet the following requirements:

1. Admission will be on an individual basis, with a cutoff GPA of 2.75 required to be considered.
2. A 50 percent composite Pharmacy College Admission Test (PCAT) score and above will factor into the interview process.
3. All pre-pharmacy courses must be completed prior to entering the college if you are accepted (i.e., if you are accepted into the program, your admission is dependent on your completion of the prerequisites before the beginning of the fall class).

Below is the general screening process:

1. After Feb. 1, approximately 100 applicants will be chosen to move to the next phase of the process.
2. Applicants will be invited for an interview in the latter part of February or early March.
3. Approximately 70 applicants will be chosen to enter the HSC-COP and be notified in March.

In order for your application to be reviewed, you must follow these guidelines:

1. Enclose a non-refundable $100 personal check (no temporary checks), cashier's check or money order payable to HSC-College of Pharmacy. Write your full name and Social Security number on the memo line for the application fee.
2. Answer all questions completely.
3. All applicants must take the Pharmacy College Admission Test (PCAT). It is highly recommended that students take the November or earlier PCAT exams for fall class admission. January PCAT scores generally do not arrive on time for review. PCAT scores more than three years old will not be accepted for admission. Please request a copy of your score report to be sent to HSC-College of Pharmacy, code #097.
4. Enclose official transcripts in sealed envelopes from each of the colleges and universities you have attended. Do not have your institution send an electronic transcript to HSC-College of Pharmacy. All transcripts must be sent with the application packet.
5. Enclose three confidential recommendation forms in sealed envelopes; at least two of these references should be from your college professors.
6. Mail the completed application packet postmarked by Feb. 1 to:
   Irma Lerma Rangel College of Pharmacy
   Texas A&M Health Science Center
   MSC 131, 1010 West Avenue B
   Kingsville, Texas 78363

## Admissions Requirements - School of Rural Public Health (M.P.H., M.S.P.H., M.H.A., Dr.P.H., Ph.D.)

Applications can be downloaded from the Texas A&M Health Science Center School of Rural Public Health's website at http://www.srph.tamhsc.edu/ or directly from www.sophas.org. For domestic students, applications must be received in the school's Office of Student Affairs by June 1 to be considered for the fall semester (and by Oct. 1 to be considered for spring semester). For international students, applications must be received by March 1 to be considered for fall semester (and by Aug. 1 to be considered for spring semester). Applicants are urged to submit applications and supporting documents early to allow ample time for processing. This is especially important if the applicant is interested in a graduate assistantship.

The following information is required for an application to be considered complete and thus ready for review:

1. A completed graduate application;
2. Official degree conferred transcripts from each previously attended institution;
3. A nonrefundable application fee of $95;
4. Three completed letters of recommendation;
5. Official copies of applicable GRE, GMAT or TOEFL scores;
6. A description of prior work experience (particularly if applying for the M.H.A. degree program);
7. A statement of career objectives (specific to degree program).

Other special applicant characteristics may be considered by the selection committee if the information is provided by the applicant. Such circumstances include the following:

- Socioeconomic conditions;
- Being a first generation family member to graduate from college;
- Multilingual proficiency;
- Racial or ethnic characteristics;
- Special family responsibilities;
- Region of residency;
- Involvement in community activities;
- Demonstrated commitment to public health;
- Automatic admission to a general teaching institution as an undergraduate under Section 51.803 of the Texas Education Code.

### Admissions to the Master's Degree Programs

Applicants for any of the master's degree programs offered by HSC-SRPH must hold a bachelor's or graduate degree from an accredited college or university with a GPA of 3.0 (B) or better cumulative or based on the applicant's last 60 semester credit hours of course work. The Graduate Record Examination (GRE) currently is not required for admission to the Master of Public Health (M.P.H.) degree program. However, applicants with less than a 3.0 GPA are strongly encouraged to submit GRE scores as further support for their application. The GRE is required for admission to the Master of Science in Public Health (M.S.P.H.) degree program. Either the GRE or the Graduate Management Admission Test (GMAT) is required for admission to the Master of Health Administration (M.H.A.) degree program.

Applicants whose native language is not English are required to submit scores of 570 or higher (or computer-based score of 230 or higher or Internet score of 80 or higher) on the Test of English as a Foreign Language (TOEFL), or document English language proficiency by other approved means. International applicants should contact the Office of Student Affairs or the HSC Office of the Registrar for additional information.

### *Admissions Criteria for the Doctoral Degree Programs*

Applicants must hold a master's degree from an accredited college or university with a GPA of 3.5 or better. The GRE is required for admission to the Doctor of Public Health (Dr.P.H.). Either the GRE or the GMAT is required for admission to the Ph.D. in Health Services Research degree program. Three letters of recommendation will also be carefully considered. An applicant may be asked to participate in a personal interview if elements of their application need clarification.

Applicants whose native language is not English are required to submit acceptable scores (paper 570 or higher, computer 230 or higher, or Internet score of 80 or higher) on the TOEFL. Please see the HSC English Proficiency Requirements for alternatives to the TOEFL.

Complete student applications are reviewed by the relevant Department Doctoral Committee (DDC). The DDC members consider a number of factors during their evaluation process, including GPA, area of concentration in student's master's degree, letters of recommendation, letter of application describing prior work and rationale for seeking a doctoral degree in the specified area, and competitive GRE or GMAT scores. It is possible that a deficiency with respect to one criterion may be offset by strengths with respect to others.

### *Admissions Policy for Low GPA Master's Students*

Master's students with a GPA of 2.75-2.99, if admitted, will be admitted on probation. A letter requesting admission on probation must be submitted for approval by the head of the student's home department to the associate dean for Academic Affairs specifying: (1) the student must complete their first 9–12 semester credit hours at the HSC-SRPH with a GPA of 3.0 or better; and (2) the specific courses to be included in calculating the first 9–12 semester credit hours. Departments are strongly encouraged to include either the core epidemiology or biostatistics course as part of the required 9–12 semester credit hours. Additional specific requirements may be stipulated by individual departments with approval of the Office of Academic Affairs. All requisite conditions must be specified on the student's admission form and written notification provided to the student prior to initiating course work. Probationary students successfully completing a requisite 9-12 hours of course work with a GPA of 3.0 will be automatically removed from probation.

Applicants for one of the master's degrees within the school with a GPA of less than 2.75 can only enroll as non degree-seeking students. Requirements for admission of non degree-seeking students to a degree program would be similar to requirements for probationary students but would have to be determined on a case-by-case basis by the head of the host department and the school's associate dean for Academic Affairs. Exceptions to this policy may be made based on a case-by-case review and approval of the department head, the associate dean for Academic Affairs and the dean.

### *Provisional Admissions to the Doctoral Degree Programs*

Any departure from admission requirements must be based upon Department Doctoral Committee (DDC) recognition of compensating strengths in other areas of the student's application. Provisional admissions must be approved by the DDC, department head and associate dean for Academic Affairs. The criteria that provisional students must meet, and the times by which they must be met in order to be removed from provisional status, are specified at the time of admission.

## Fresh Start

An applicant for admission who is a Texas resident may seek to enter this institution pursuant to the state's "academic fresh start" statute. If the applicant informs the admissions office in writing of his or her election under the statute, the institution will not consider academic course credits or grades earned by the applicant 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who makes the election to apply under this statute and is admitted as a student may not receive any course credit for courses undertaken 10 or more years prior to enrollment under this section.

# Academic Standards

# Transfer Credit

## *Transfer Credit - Baylor College of Dentistry*

### *Dental Hygiene*

Transfer policies vary by component program. Disputes concerning lower division courses are resolved by the following rule:

In accordance with the Texas Higher Education Coordinating Board (THECB), the following procedures shall be followed by public institutions of higher education in Texas in the resolution of credit transfer disputes involving lower-division courses:

1. If an institution of higher education does not accept course credit earned by a student at another institution of higher education in Texas, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied.
2. The two institutions and the student shall attempt to resolve the transfer of the course credit, in accordance with the THECB rules and guidelines.
3. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the institution whose credit is denied for transfer shall notify the commissioner of the denial.

The Commissioner of Higher Education or the commissioner's designee shall make the final determination about the dispute concerning the transfer of course credit and give written notice of the determination to the involved student and all involved institutions.

### *Graduate Studies*

Courses taken in residence at an accredited U.S. institution or approved international institution with a final grade of "B" or greater will be considered for transfer credit if, at the time the courses were completed, the student was in degree seeking status, and if the courses would be accepted for credit toward a similar degree at Texas A&M Health Science Center Baylor College of Dentistry. Such courses must be approved by the program director and the associate dean for Research and Graduate Studies. Course work in which no formal grades are given or in which grades other than letter grades ("A," "B," "C," "D," etc.) are given (e.g., "P," "S," "U," etc.) is not accepted for transfer credit. An official transcript from the university registrar at which transfer courses are taken must be sent directly to the Office of Academic Records at HSC-BCD. Acceptance of transfer credit will not decrease the on-campus minimum residence requirement associated with each graduate program.

Several graduate programs at HSC-BCD utilize graduate courses offered at other selected educational institutions in the Dallas area. Through various written agreements with those institutions, our students are allowed to take preapproved graduate courses off-campus and receive credit toward their degree at HSC-BCD. All grades earned in such off-campus courses will be used in the calculation of the student's GPA (cumulative GPA of 3.0 or greater is required).

### *Dental*

Transfer students are considered only in unusual circumstances. A student transferring from another dental school in the United States may be granted advanced standing at the discretion of the Admissions Committee.

Applicants for transfer are required to submit the following:

- Reason for requesting transfer;
- A letter of clearance or recommendation from the dean of the dental school attended;
- Recommendation letters from basic science and a clinical science department chair or course directors;
- Transcripts of both predental and dental school courses;
- A copy of the American Dental Association Dental Admission Test (DAT) results.

The student's predental academic and DAT scores must be within the range established as acceptable in the competitive process for admissions of entering first-year students. In addition, the student must be in good academic standing.

When the applicant's application is complete, and if the applicant is accepted, he/she will be asked to interview with course directors in all areas where advanced placement in the dental curriculum is requested. The course directors will determine the candidate's level of accomplishment and provide approval of advanced placement in their courses, or the director also may recommend re-enrollment in the course, auditing or some specified preparatory work to allow the candidate credit for the course. Based on these recommendations, the director of admissions will provide a written decision concerning entry classification and outlining the applicant's course of study. All students accepted enter in good standing.

Further information concerning advanced standing may be obtained from the Office of Admissions and Recruitment:

Baylor College of Dentistry
Texas A&M Health Science Center
Office of Admissions and Recruitment
P.O. Box 660677
Dallas, Texas 75266-0677

## *Transfer Credit - College of Medicine*

For students enrolled in the M.D. degree program at other medical colleges to be eligible for admission in advanced standing, the HSC-College of Medicine policy is to consider only those individuals who:

- Have been and are in good standing both professionally and academically at their medical school;
- Have completed all their basic sciences in an LCME-accredited medical college in the United States;
- Seek admission into the beginning of the clinical years (Year Three of our medical program);
- Are making normal curricular progress where they are enrolled and eligible for continuation there;
- Are residents of the state of Texas; and
- Have extraordinary personal reasons for wishing to transfer.

Admission is on a competitive basis, and the number admitted depends on the availability of places, faculty and facilities. There is no specific number of places set aside for advanced standing candidates.

*General Requirements:*

Eligible candidates must provide:

- Letters of evaluation from at least two members of the faculty in the basic sciences by Nov. 1;
- A completed application and filing fee of $45 by Nov. 1 of the year preceding enrollment;

- Official transcripts from all undergraduate colleges, graduate schools and medical colleges attended by Nov. 15; and
- Official MCAT scores by Nov. 1. (For MCAT scores to be a part of the application materials, scores must be reported directly to the HSC-COM's Office of Student Affairs and Admissions from the MCAT office.)

For candidates to be enrolled in advanced standing, they must pass the USMLE Step I, report official scores to the Office of Student Affairs and Admissions and interview with three individual Admissions Committee members who are clinical faculty at the Temple campus. Candidates are likely to enroll if they meet the general requirements listed above, have satisfactorily completed the basic science course content as that required of first- and second-year medical students at the HSC-COM, and gained a recommendation for admission in advanced standing from the Admissions Committee. The dean of the HSC-COM ultimately approves or denies admission.

*Students Not Eligible For Admission In Advanced Standing:*

- Individuals who have been dismissed or who have withdrawn from their medical colleges will not be eligible for admission in advanced standing.
- Individuals who have completed all their premedical or medical school work in a foreign country will not be considered for admission in advanced standing.
- Individuals from related professions such as dentistry, or those who have completed the basic medical sciences in a graduate program, are not eligible for admission in advanced standing but may apply as first-year medical students.

For questions concerning admission in advanced standing, please contact:
College of Medicine
Texas A&M Health Science Center
Office of Student Affairs and Admissions
159 Joe H. Reynolds Medical Building
College Station, Texas 77843-1114

## *Transfer Credit – College of Medicine Graduate Program in Medical Sciences and Institute for Biosciences and Technology*

Normally, no more that 12 semester hours of transfer credit may be included in a degree plan. Departments or programs may have more restrictive requirements for transfer work. Courses for which transfer credit are sought must have been completed with a grade of "B" or greater and must be approved by the student's Advisory Committee and the associate dean for Research and Graduate Studies. Except for officially approved joint degree programs with other Texas A&M University System institutions, credit for thesis or dissertation research or the equivalent is not transferable. Course work in which no formal grades are given, or in which grades other than letter grades ("A," "B," "C," etc.) are given (e.g.: "DR," "P," "S," "U," "H," etc.) are not accepted for transfer credit. Courses completed at institutions other than Texas A&M University or components of the Texas A&M Health Science Center are normally not included in computing the GPA. An official transcript from the university at which transfer courses are taken must be sent directly to the HSC-COM Office of Graduate Studies.

Courses previously used for another degree are not acceptable for degree plan credit. A graduate student must file a degree plan that includes those courses to be applied to a particular degree. Changes in an approved degree plan may be made by petition to the associate dean for Research and Graduate Studies. The student must submit the degree plan using the accepted degree plan format as provided by the HSC Office of the Vice President for Research and Graduate Studies.

Students with previous graduate experience can apply for graduate study with advanced standing at the HSC-Institute of Biosciences and Technology. Depending upon their level of advancement toward degree completion, various requirements may be waived.

If you have questions concerning transfer of credit, please address them to:

Office of the Associate Dean for Research and Graduate Studies
Texas A&M Health Science Center
153A Joe H. Reynolds Medical Building
College Station, Texas 77843-1114

***or***

Institute of Biosciences and Technology
Texas A&M Health Science Center
Assistant Director for Graduate Program
2121 W. Holcombe Blvd.
Houston, Texas 77030-3303

## *Transfer Credit - Irma Lerma Rangel College of Pharmacy*

The College Pre-Pharmacy Program coordinator assists students with questions regarding course transfers and equivalencies in the HSC-Irma Lerma Rangel College of Pharmacy. To determine pre-pharmacy course equivalencies for accredited Texas institutions, students are advised to visit the following website: http://statecore.its.txstate.edu. Courses earned five or more calendar years (i.e., five or more years old) prior to applying to the college cannot be used to satisfy pre-pharmacy course requirements. Course substitutions for listed prerequisites are not permitted.

## *Transfer Credit - School of Rural Public Health*

Any student wishing to transfer to the school from another academic institution must file a complete application. Students may request up to a maximum of nine credit hours to be transferred into HSC-School of Rural Public Health from other graduate degree granting institutions (other than Texas A&M University; classes taken through Texas A&M are not considered transfer credits). All requests must be approved by the department and the associate dean for Academic Affairs.

If you have questions concerning transfer policies, please address them to:
Associate Dean for Academic Affairs
School of Rural Public Health
Texas A&M Health Science Center
SRPH Administration Building, Room 282
College Station, TX 77843-1266

### *Transfer Credits for the Master's Degree Programs*

Students may request up to a maximum of nine semester credit hours be transferred to their degree plan from other accredited graduate degree granting institutions. Course work completed at Texas A&M University at College Station is not considered transfer credit and thus is not included in this nine-semester credit hour maximum. Beyond HSC-SRPH course work, all course work completed at Texas A&M University (and included on the student's official degree plan) is calculated in the student's GPA. Course work transferred from an institution other than Texas A&M University is not included in the student's official GPA calculation.

### *Transfer Credits, Substitutions and Course Waivers for the Doctoral Degree Programs*

Up to 12 credits of course work taken at another accredited graduate degree granting institution (and that are not courses counted toward another degree) can be transferred to a doctoral student's degree plan if they satisfy program course requirements or electives. Additional required courses within the doctoral degree program may be waived if either (1) the specific courses were taken as a part of the M.S.P.H., M.P.H. or M.H.A. at the HSC-SRPH and the student earned either an "A" or a "B," or (2) similar courses were completed within the previous five years at another accredited graduate degree granting institution. In the second instance, the student must demonstrate that the course content either matched or exceeded the content of the required course work in question and that the student received either an "A" or a "B" for the course. Finally, students may be allowed to substitute more advanced or otherwise more appropriate courses for required course work depending upon prior experience or interest area. Irrespective of waivers, transfer credits or substitutions, students are still accountable for the general content of the core courses during the qualifying examination process. All transfer credits, waivers or substitutions must have the approval of the student's advising committee (SAC), the Department Doctoral Committee (DDC) and the associate dean for Academic Affairs.

No more than 21 semester credit hours of the doctoral degree program may be accounted for by transfer or waived courses. Thus, the minimum required number of credits, assuming the maximum number of transfer and or waived semester credit hours, is 44 semester credit hours.

## Authorized to Attend Class

No student is permitted to attend any class section unless he or she is an enrolled, admitted student and is officially registered for that class section. A student is considered registered only if his or her name appears on the official course roster.

Those wishing to audit a course must make arrangements to do so by following the course auditing procedures.

## Registration

Students will have the opportunity to register for classes during the semester prior to the semester they intend to enroll. Registration for classes should only take place after the student has met with his/her advisor. Students may be permitted (or in some instances required) to register for classes on the Texas A&M University campus. Registration at the HSC does not constitute registration at TAMU.

Registration consists of payment of tuition and fees and the completion of specified forms. Failure to complete either of these functions on the dates designated on the academic calendar constitutes late registration. Presentation of a check for tuition and fees that does not clear for lack of funds will constitute late registration, incurring a late fee as well as a returned check fee. Installment payment plans are available in the fall and spring semesters. All require at least half payment, then distribute the remaining payments throughout the academic term in effect at the school in which the student enrolls. A $15 service charge to cover the cost of handling will be assessed.

Students are required to pay tuition, fees and charges to the Texas A&M Health Science Center when due. Failure to do so may result in:

- The student being administratively withdrawn and removed from the rolls of the HSC, with loss of credit for academic work performed that semester.
- Assessment of a $200 late registration fee.
- Assessment of a $50 reinstatement fee.
- Assessment of a $20 ($25 at HSC-Baylor College of Dentistry) late payment fee.
- Denial of future registration in the HSC until all past due balances, including late charges and reinstatement fees, are paid.
- Denial of an official transcript until all past due balances, including late charges and reinstatement fees, are paid.

## Residence Requirement for Degrees Awarded by the Texas A&M Health Science Center

A major purpose of the residence requirement for graduate study is to ensure the advantages of the university environment. These activities include, among others, accessibility to libraries, laboratory experiences, seminars and colloquia presented by faculty and other professionals, and numerous cultural events. The requirement also provides the faculty the opportunity to properly evaluate the student and their development, to guide and direct studies, and to determine competency.

The majority of credits toward a graduate or post-baccalaureate professional degree must be earned through the Texas A&M Health Science Center. The dean of an academic unit may consider exceptions to this policy under special circumstances.

## Adding/Dropping

There is a designated period of time during which students can add and/or drop classes after the semester has begun. A student should neither add nor drop a course once enrolled without first consulting with his/her academic advisor to complete the requisite forms. Refer to the academic calendar published on the HSC website for specific dates for each semester. Additional fees may be assessed for adding a course after the designated add/drop period. Also, tuition is refunded for courses dropped after the designated add/drop period on a prorated basis. After consulting with their academic advisor, students attending classes at Texas A&M University are required to adhere to Texas A&M deadlines and add/drop requirements. The Office of Business Affairs will provide notification of any resulting changes to tuition or fees subsequent to the processing of the appropriate forms.

## Withdrawal

Students needing to withdraw from the institution should meet with their academic advisor to complete the necessary paperwork. The withdrawal form is located on the Office of the Registrar website. Depending on the time of the withdrawal, there may be a substantial loss of tuition and fees. See Refund Policy in the Tuition and Fees section of this catalog or your academic advisor for more information. Failure to drop or withdraw prior to the deadline may result in a grade of "F."

## Course Auditing Policy

Audit students are those who desire to attend class(es) without receiving academic credit. Fees are assessed for audit registration. The academic department should identify the courses available for audit.

Approval to audit or visit a course is permitted subject to completion of an audit application, seating availability and approval by the course instructor, department head and associate dean of Academic Affairs. Auditing normally conveys only the privilege of observing and does not include submitting papers, taking tests, or participating in laboratories or fieldwork.

An auditing student will pay an audit fee appropriate for the course(s). Late registration fees are not charged. Audit application forms can be obtained from the Office of the Registrar and all component student affairs offices.

## Leave of Absence

**Academic credit is not given for an audited course.** Should the individual wish to receive credit for the course, he/she must register, pay and retake the course. Students may not change to "audit" status after the Add/Drop period but must remain in the course or withdraw through normal withdrawal procedures.

There is no limit on the number of courses an individual may audit. The instructor may limit the number of students in the class who are taking the class as an audit.

On the official class rolls, grade sheets and student transcript, "N" or appropriate remark will appear adjacent to the name of the student who is auditing that course.

The refund policy for audit courses is the same as it is for regular courses.

## Leave of Absence

A leave of absence is generally granted for good cause, based on the rules and procedures established by the component in which the student is enrolled and federal policy. These most often involve students in clinical or first professional degree programs leaving for a specified period of time and with the permission of the faculty to return and resume their competitive position. The Leave of Absence Request form is available on the Office of the Registrar website.

## Transcripts

If a student wishes to obtain transcripts, the student may call (979) 862-3430 for instructions or write to the Office of the Registrar, Texas A&M Health Science Center, 010 Medical Sciences Library, College Station, TX 77843-1114. The request should include the student's full name, approximate dates of attendance and an original signature. For students in schools and colleges administered by the College Station campus, there are three pathways to request a transcript:

*In person* in the Office of the University Registrar, at a cost of $7 per transcript via cash or check.

*By mail*, sending a signed request and enclosing a check in the amount of $7 per transcript via check. The Services Request Form is available in the Office of the Registrar, on the Office of the Registrar website, or the student may submit a written request including the student's name, signature, student ID number, approximate dates of attendance and fee. The charge for transcripts is published in the current catalog.

*Online*

The Texas A&M Health Science Center (for students housed in College Station, Houston and South Texas) has authorized the National Student Clearinghouse to provide transcript ordering via the web. You can order transcripts using any major credit card. Your card will only be charged after your order has been completed.

To order an official transcript(s), login to the Clearinghouse secure site:

https://www.studentclearinghouse.org/secure_area/Transcript/login.asp?004948-00

If you are a first-time visitor, you will be directed to create a personal profile and user ID/password, which you will use to place future orders.

The site will walk you through placing your order, including delivery options and fees. You can order as many transcripts as you like in a single session. A $2.25 processing fee will be charged per recipient.

Order updates will be emailed to you. You can also check order status or history online.

If you need help or have questions about the Clearinghouse's transcript ordering service, contact (703) 742-7791 or transcripts@studentclearinghouse.org.

Transcripts will not be released if the student has a hold on his/her record or if the student has defaulted on a federal student loan. A Services Request form in available on the Office of the Registrar website.

HSC-Baylor College of Dentistry students may call the Office of Admissions and Academic Records at (214) 828-8230 or write P. O. Box 660677, Dallas, TX 75266-0677.

## Grading

Grading systems, standards, academic promotion and advancement are determined by the faculty of the program in which the student is enrolled. Further information concerning academic due process may be obtained through the Office of Student Affairs in the student's home component.

### *Grading - Baylor College of Dentistry*

The Administrative Council has established the following grade scale:

| Letter Grade | Numerical Range | Grade Pts. |
|---|---|---|
| A | 93-100 | 4.0 |
| B+ | 90-92 | 3.5 |
| B | 84-89 | 3.0 |
| C+ | 81-83 | 2.5 |
| C | 75-80 | 2.0 |
| D | 70-74 | 1.0 |
| F | 69 and below | 0.0 |
| S or P | Satisfactory or Pass | 0.0 |
| U | Unsatisfactory | 0.0 |

A: Excellent; B+, B: Good; C+, C: Fair; D: Poor, may require remedial work; F: Failure; I: Incomplete; P: Pass; S: Satisfactory; U: Unsatisfactory.

The grade of "I" will automatically become "F" if not removed within the prescribed time limits.

The standing of a student in any course is determined by the faculty by means of examinations, attendance, personal observations, evaluations and/or professional judgment.

The right and responsibility to evaluate student cognitive and noncognitive abilities rests with the faculty.

### *Grading - College of Medicine*

A student's grade in every course in the curriculum of the HSC-College of Medicine is based upon performance and/or participation in classes or clinical rotation, laboratory work, examinations, professional attributes and other activities applicable to that course. The proportionate weight of each factor is set by the department administering the course. The basis upon which the final grade is determined is announced in writing by the third class meeting and is not changed during the academic year.

Grades used in the HSC-COM and their significance are as follows:

| | | |
|---|---|---|
| A | Excellent | 4 grade points per credit hour |
| B | Good | 3 grade points per credit hour |
| C | Average | 2 grade points per credit hour |
| F | Failure | No grade points |
| F/C | Failed course remediated | 1 grade point per credit hour |
| I | Incomplete | No grade points |
| S | Satisfactory | |
| U | Unsatisfactory | |
| U/S | Unsatisfactory course remediated successfully | |
| W | Withdrawn | |

A grade of "A," "B," "C" or, in certain designated courses, "S," must be attained in all required courses of the medical curriculum in order to satisfy the requirements of the M.D. degree. The minimum overall GPA a medical student must attain for graduation is 2.00. Further information about grading and promotion can be found in the Student Handbook. A grade of "I" is converted to "F" at the close of the subsequent semester in which the "I" was given.

## *Grading - College of Medicine Program in Medical Sciences*

Grades used in the HSC-Graduate School of Biomedical Sciences and their significance are as follows:

| | | |
|---|---|---|
| A | Excellent | 4 grade points per credit hour |
| B | Good | 3 grade points per credit hour |
| C | Average | 2 grade points per credit hour |
| D | Below average | 1 grade point per credit hour |
| F | Failure | No grade points |
| I | Incomplete | No grade points |
| S | Satisfactory | |
| U | Unsatisfactory | |
| W | Withdrawn | |

Only grades of "A," "B," "C" and "S" are acceptable for graduate credit. Grades of "D," "F" or "U" for courses on the degree plan must be absolved by repeating the courses and achieving grades of "C" or above or "S." The cumulative GPA for a graduate student is computed by using all graded graduate and advanced undergraduate course work attempted at the HSC. Those involving withdrawal ("W"), satisfactory ("S"), unsatisfactory ("U") or other non-penalty drop shall be excluded.

Graduate students must maintain a GPA of 3.000 ("B" average based on a 4.000 scale) for all courses listed on the degree plan and for all graded and advanced undergraduate work eligible to be applied toward a graduate degree. Grades of "S" (satisfactory) or "U" (unsatisfactory) may be assigned in certain officially designated courses. If either of a student's cumulative GPA or the GPA for courses listed on the degree plan falls below the minimum 3.000, he/she will be considered to be scholastically deficient. If the minimum GPA is not attained in a reasonable length of time, the student may be dropped from graduate studies.

## *Grading - Irma Lerma Rangel College of Pharmacy*

A student's grade in every course in the curriculum of the Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy is based upon performance and/or participation in classes or clinical rotations, laboratory work, examinations, attendance, professional attributes and attitudes, personal observations, and other activities applicable to that course. The standing of a student in any course is determined by the faculty. The proportionate weight of each factor is set by the course coordinator, instructors and the department administering the course. A four-point (4.0) grading system is utilized in the HSC-Rangel College of Pharmacy. The basis upon which a final course grade is determined is explained in the course syllabus, announced at the beginning of each course, remains constant and will be consistently applied throughout the length of the course.

Students enrolled in the HSC-COP must complete all required course work in its entirety within six years after initial enrollment in the professional program. Remediation, withdrawals (medical or otherwise) and progression problems are included within this time frame. The associate dean for Academic Affairs will withdraw a student from the professional degree program when it becomes apparent that that student will not be able to meet this time frame. Appeals and exceptions to this policy will be considered by the dean on a case-by-case basis.

The HSC-COP's grading system and grade point values are listed below:

| | | | |
|---|---|---|---|
| A | Excellent | 90-100 | 4 grade points |
| B | Good | 80-89 | 3 grade points |
| C | Average | 70-79 | 2 grade points |
| D | Poor | 60-69 | 1 grade point (unsatisfactory performance) |
| F | Failure | below 60 | no grade points - punitive |
| I | Incomplete | | no grade points - non-punitive |
| IP | In Progress | | no grade points - non-punitive |
| S | Satisfactory | | no grade points |
| U | Unsatisfactory | | no grade points |
| W | Withdrawn | | no grade points - non-punitive |

The right and responsibility to evaluate student cognitive and noncognitive abilities rests with the faculty. A grade of "A," "B," "C" or, in certain designated courses, "S," must be attained in all required courses of the pharmacy curriculum in order to satisfy the requirements of the Doctor of Pharmacy (Pharm.D.) degree.

The minimum cumulative GPA a pharmacy student must attain for graduation is a 2.30, along with an "S" in all applicable courses and practice experiences. The successful completion of a course requires a grade of "A," "B" or "C"; students receiving any lower grade must repeat the course. Although "D" grades are awarded, they are not considered acceptable passing grades for professional course work in the HSC-COP. A student who has excessive unexcused absences or who is guilty of cheating/plagiarism in a course will receive an "F" for the semester grade. Unsatisfactory course work is indicated by the grade of "F" (failure). The grade of "F" cannot be removed from the transcript by repeating the course. The graduation GPA is the cumulative GPA calculated on course work earned toward the Doctor of Pharmacy (Pharm.D.) degree only. When a student repeats a course, the last grade received shall be accepted as the final grade in determining graduation requirements. The cumulative GPA is based upon successfully completing all requirements for graduation and having a cumulative GPA of 2.30 or above.

## Grading

Grades (other than "I" grades) that have been submitted in error to the HSC Registrar's Office can be changed only by a Change of Grade form and a Letter of Explanation certifying that an error has been made by the course coordinator teaching the course. Only entry errors and grade computation errors qualify for change. This form and error certification will not be valid unless approved by the course coordinator's department chair with a copy sent to the associate dean for Academic Affairs. The professor must initiate a request for a final grade change by the close of the subsequent semester in which the "I" was given.

When deemed appropriate, a professional course may be repeated only once with prior approval of the associate dean for Academic Affairs and the dean of the HSC-COP. When a course is repeated, only the second grade will be counted in the cumulative GPA calculation, but both grades will appear on the transcript.

### *Grading - School of Rural Public Health*

Grades in every course in the curriculum of the HSC-School of Rural Public Health will be based upon performance, professional behavior and/or participation in class or practicum as appropriate, laboratory work, examinations, and other activities that may be applicable to that course. The proportionate weight assigned to each factor shall be determined by the course instructor. The basis upon which the final grade will be determined shall be announced in writing at the beginning of each course and will remain constant for the semester.

Grades used in the school shall be as follows:

| | | |
|---|---|---|
| A | Excellent | 4 grade points per credit hour |
| B | Good | 3 grade points per credit hour |
| C | Average | 2 grade points per credit hour |
| D | Below Average | 1 grade point per credit hour |
| F | Failure | No grade points |
| I | Incomplete | No grade points |
| S | Satisfactory | No grade points |
| U | Unsatisfactory | No grade points |
| IP | In Progress | No grade points |
| W | Withdrawal | |

A grade of "A," "B," "C" or "S" must be attained in all required courses in order to satisfy the requirements for any of the master's degree or doctoral degree programs. In designated courses of the curriculum, a grade of "S" or "U" may be used. The hours for which a student receives a grade of "S" or "U" will not be calculated in the computation of the cumulative GPA. "I's" are converted to "F's" at the close of the subsequent semester in which the "I" was given.

### *Grade of "I"- Incomplete*

The grade of "I" is a temporary grade given when, for reasons beyond the control of the student, all course requirements are not met within the prescribed time. The "I" grade is not calculated in the GPA. An "I" must be completed before the end of the subsequent semester in which the "I" was given or the termination of the part of the course for which the grade was given. The grade of "I" will automatically become an "F" if not removed within the prescribed time limit; however, an extension may be requested by the instructor when the Request for an Incomplete Grade form is submitted, provided that a definitive time frame for completion is presented.

A grade of incomplete will be marked on the grade roster at the end of the term. It is the responsibility of the instructor to initiate and complete a Change of Grade form.

The instructor will complete a Request for an Incomplete Grade form that is filed with the Office of the Registrar, which includes a statement of the instructor's reason for giving an incomplete and a statement concerning the remaining work to be completed in a specified time frame. A copy of the form will be sent to the student. Any of the permanent grades may be earned.

### *Grade of "U"- Unsatisfactory*

The hours for which a student receives a grade of "S" or "U" will not be calculated in the cumulative GPA. However, a student is ineligible to graduate with a "U" posted to the transcript that has not been repeated for credit and/or remediated.

### *GPA calculations*

The cumulative GPA for a student's work in a school/college will be used to calculate and award honors. The degree plan GPA for a student's work in a school/college will be used to determine eligibility for graduation.

## Probation

Students are subject to probation based on the rules of the school in which they are enrolled. Disciplinary probation is determined by the rules of disciplinary conduct in effect in the school in which they are enrolled. Further information concerning disciplinary due process may be obtained through the Office of Student Affairs in the student's home component.

## Student Classification

Students are classified according to the following guidelines:

| | |
|---|---|
| DH-1 | First-year student dental hygiene program |
| DH-2 | Second-year student dental hygiene program |
| NDO | Non-Degree Objective – A student who has not been admitted to a graduate program. Students classified as "NDO" are not eligible for financial aid. |
| M.S. | A student possessing a baccalaureate degree or the equivalent and admitted to an approved master's degree program at the institution. |
| Ph.D. | A student admitted to an approved doctoral degree program at the institution. |
| M-1/D-1 | First-year student in a medical or dental degree program |
| M-2/D-2 | Second-year student in a medical or dental degree program |
| M-3/D-3 | Third-year student in a medical or dental degree program |
| M-4/D-4 | Fourth-year student in a medical or dental degree program |

| | |
|---|---|
| PR | A student with a medical or dental degree and who is admitted to a professional specialty program at the institution |
| P1 | First-year pharmacy student (0-36 semester hours) |
| P2 | Second-year pharmacy student (37-71 semester hours) |
| P3 | Third-year pharmacy student (72-108 semester hours) |
| P4 | Fourth-year pharmacy student (109-146 semester hours) |
| M.P.H. | A student possessing a baccalaureate degree (or equivalent) or higher and who has been admitted to the Master of Public Health graduate degree program |
| M.S.P.H. | A student possessing a baccalaureate degree (or equivalent) or higher and who has been admitted to the Master of Science in Public Health graduate degree program |
| M.H.A. | A student possessing a baccalaureate degree (or equivalent) or higher and who has been admitted to the Master of Health Administration graduate degree program |
| Dr.P.H. | A student admitted to the Doctor of Public Health degree program |

## Student Attendance Status

A full-time graduate student is considered full time if he or she is registered for a minimum of:

9 semester credit hours during a fall or spring semester;
6 semester credit hours in a 10-week summer semester; or a combination thereof; or
4 semester credit hours in a seven-week summer semester; or
3 semester credit hours in consecutive five-week summer semesters or a six-week summer semester.

A half-time graduate student is considered half time if he or she is registered for a minimum of:

5 semester credit hours during a fall or spring semester;
3 semester credit hours in a 10-week summer semester; or
2 semester credit hours in a seven-week, six-week or five-week consecutive summer semester.

Colleges and schools may impose additional semester credit hour requirements for students holding assistantships or fellowships that exceed the minimum stated above.

## Readmission

Students who have withdrawn from a clinical or first professional degree program of any of the schools of the Texas A&M Health Science Center must re-apply meeting all the criteria and procedures necessary for first-time applicants. Decisions on readmission are the responsibility of the Admissions Committee of the school to which the student reapplies.

## Graduation

Degrees or certificates are awarded on the recommendation of the faculty, dean of the school in which the student is enrolled, and the president of the Texas A&M Health Science Center after being certified as having completed all requirements of the program by the registrar or director of academic records and being free of financial obligations to the HSC as certified by the business office. Students with unmet financial obligations are not eligible to receive a diploma.

Graduation requirements are specified for individual programs in the specific school in which the student is enrolled. It is required that each student apply for graduation at https://oasis.tamhsc.edu/oasis/login.aspx by the given deadlines published in the academic calendar.

## Continuous Enrollment Requirement

Students in graduate degree programs requiring a thesis, dissertation or internship or record of study, who have completed all course work on their degree plans, are required to be in continuous registration until all requirements for the degree have been completed. Failure to maintain continuous enrollment will either invalidate any previous credit or will result in the student's dismissal by the dean. Registering either "In Absentia" or "In Residence" may satisfy the continuous registration requirement. Components may have additional or higher requirements.

Students attempting to meet continuous enrollment requirements are designated as a full-time student in the final semester of their degree program when registering for only the minimum number of hours necessary to complete their degree. These students are not eligible for financial aid. These students must be in residence. Students who register to comply with the continuous enrollment requirement and are not in residence must register and pay for at least one semester hour as an "In Absentia" registrant.

Registration during the summer term will not be required to fulfill the continuous registration requirement, unless a student plans to take examinations, graduate in the summer, defend a thesis or dissertation, or use any HSC resources (faculty time, library, etc.).

A student must be enrolled in the semester in which s/he graduates.

To remain in compliance with the Continuous Enrollment Policy, students must be registered for a minimum of one semester credit hour each term. This includes students who are taking only comprehensives, final examinations, or defending the thesis or dissertation. Also, students not in residence while writing a thesis or dissertation but using faculty assistance, university services or facilities such as sending chapters to an advisor by mail or email for review, must register in residence for a minimum of one semester credit hour per term. Registration should be for thesis or research or other appropriate component designated course.

**International students and students receiving financial aid or assistantships must consult with each respective office to ensure requirements are met to maintain eligibility and proper status for these programs.**

## Academic Actions

The Texas A&M Health Science Center has defined the following academic actions:

- Expulsion: A student must leave the institution permanently and has no recourse to be re-admitted.
- Suspension: A student must leave the institution for a specified length of time.
- Dismissal: A student must leave the institution indefinitely. However, a dismissed student has the option to re-apply for admission.

## English Proficiency Requirement of the Texas A&M Health Science Center

All international applicants whose native language is not English must fulfill an English Proficiency requirement, through either English Proficiency Verification or English Language Certification. The Test of English as a Foreign Language (TOEFL) score is required from applicants whose native language is not English, with the exception of those alternatives listed below. Individual components may choose to establish minimum standards that exceed the HSC minimum for English Proficiency Verification. The HSC requires an official copy of test scores and/or other documentation in order to verify English Proficiency requirements. Under most circumstances, scores older than two years are not accepted.

Applicants may meet English Proficiency Verification in one of the following ways:

*Note: Individual programs may have a preference and will specify this in their admissions literature.*

- An official TOEFL score of 550 (213 computer based; 80 on the Internet based test) or higher;
- GRE verbal score of 400 or higher (under most circumstances, scores older than five years are not accepted);

Applicants may meet English Proficiency Certification in one of the following ways:

- Taking the Texas A&M English Language Proficiency Examination (ELPE) prior to registration for the first semester at the HSC and scoring at least an 80 on each of the six sections;
- Obtaining grades of "A" or "B" in English Language Institute courses at the 300 level or higher; or
- Earning a baccalaureate degree following four years of study at an accredited U.S. institution; or
- English Language Proficiency Certification through appropriate English training programs at other U.S. institutions;
  or
- Taking the Academic Module of the International English Language Testing System exam and scoring a 6.0 overall band score.

## Visiting Graduate Student Program

Texas A&M University and the HSC offer an impressive variety of outstanding academic programs and engage in significant world-class research activities. A cooperative visiting students program has been approved by both institutions to help interested, qualified students take advantage of unique educational opportunities at both institutions and reduce procedural requirements for such students. Specifically, the visiting graduate students program allows graduate students enrolled at either Texas A&M or the HSC to take courses or engage in research at the other component during a regular semester or summer session.

### *Specific Features of the Agreement*

Officials at Texas A&M and the HSC have each agreed to the following:

- Accept for course credit and GPA calculation completed course work from one another's components;
- Waive any transfer credit restrictions such that courses from either institution will not be included in maximum allowable transfer credits;
- Include completed course work for transcript designation;
- Provide timely approval of a student's proposed visitation, contingent on space and desired courses being readily available in the proposed visitation programs and, for participation in a research laboratory, on approval of the director or principal investigator of the laboratory;
- Maintain enrollment of the visiting student at the home institution, subject to that institution's enrollment policies.
- A visiting student will not be regularly admitted by the host institution.
- A visiting student should not assume he or she would be eligible for transfer to the host institution.
- A visiting student will not be eligible to receive financial aid from the host institution and the home institution simultaneously.
- Send all official transcripts for visiting students in batch to the home institution's registrar at the end of each semester, thus eliminating the need for individual transcript requests by the student.

Additional details of this agreement are available through the Office of the Registrar at either institution.

# Student Services

## Harassment and Discrimination

The Texas A&M Health Science Center is committed to providing an educational and work climate that is conducive to the personal and professional development of each individual. To fulfill its mission as an institution of higher learning, the HSC encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, the nation and the world. The HSC also strives to protect the rights and privileges and to enhance the self-esteem of all its members. Faculty, staff and students should be aware that any form of harassment and any form of illegal discrimination against any individual is inconsistent with the values and ideals of the HSC community.

Individuals who believe they have experienced harassment or illegal discrimination are encouraged to contact the Office of Student Affairs in their respective component.

## Professional Conduct

It is the policy of the Texas A&M Health Science Center to provide an atmosphere of trust and respect that is essential to a comfortable and professional work, patient care and academic environment. All students in programs of the HSC are expected to uphold the highest standards of ethical conduct. Personal integrity, respect, courtesy, good manners and genuine concern for others are integral characteristics of a professional person and should be practiced at all times. Appearance, interactions with faculty and peers, care and handling of patients, and proper care of state property are all important to students' progress. Specific rules regarding conduct have been established for components of the HSC. Violation of any provision of federal, state or local laws may be subject to disciplinary action, including expulsion, notwithstanding any action taken by civil authorities because of the violation. Any student may be dismissed for improper conduct, following due process. Specifics of this process are contained in documents available in the Office of Student Affairs in the student's home components.

## Hazing

**Education Code § 51.936 requirement to publish a summary of *Education Code Ch. 37, subchapter F. Hazing* in the University Catalog**

*The following is a summary of Chapter 37, subchapter F. (§§ 37.151-157) of the Texas Education Code, which prohibits hazing in Texas public or private high schools. Texas Education Code § 51.936 applies Ch. 37's prohibition on hazing to institutions of higher education. This summary of Chapter 37 is provided as required by § 51.936(d).*

Hazing is a criminal violation under Texas law. A person may be found guilty of criminal conduct for hazing, encouraging hazing, permitting hazing, or having knowledge of the planning of hazing incidents and failing to report in writing his/her knowledge to the Dean of Students.

Both failing to report hazing and hazing that does not result in serious bodily injury are Class B misdemeanors. Hazing that results in serious bodily injury is a Class A misdemeanor. Hazing resulting in a death is a state jail felony. An organization found guilty of hazing may be fined $5,000 to $10,000 or, for incident causing personal injury or property damage, an amount double the loss or expenses incurred because of the hazing incident.

It is not a defense to prosecution that the person hazed consented to the hazing activity.

Any person reporting a specific hazing incident to the appropriate institutional official is immune from civil and criminal liability unless the report is in bad faith or malicious.

This state law does not limit or affect an educational institution's right to enforce its own penalties against hazing.

The Education Code defines hazing as "any intentional, knowing, or reckless act occurring on or off the campus of an educational institution, by one person or acting with others, directed against a student, that endangers the mental or physical health or safety of a student for the purpose of pledging, being initiated into, affiliating with, holding office in, or maintaining membership in an organization." The statute contains a list of conduct that constitutes hazing.

## Policy on Substance Abuse

The Texas A&M Health Science Center is committed to maintaining an environment that is free from substance abuse, as well as complying with state and federal laws. Its primary concern related to substance abuse in the workplace is prevention and treatment.

Consistent with the HSC's commitment to substance abuse prevention, the HSC provides an Employee Assistance Program (EAP) as an employee benefit. The EAP is available to HSC employees and their family members for confidential assistance with drug and alcohol problems, as well as other personal problems.

In order to comply with The Drug-Free Schools and Communities Act of 1994 (20 USCS 7101 et seq.) required information as outlined in System Regulation 34.02.01, Section 4.2 is distributed annually to all employees and students through training and education programs. Each component of the HSC also has policies in place to meet this requirement. Additionally, the information is published in component handbooks.

## Health Services

### *Baylor College of Dentistry*

Routine medical services are provided for all students in order to help maintain good health standards. Medical services that cannot be managed in the health clinic will be referred elsewhere. These referral services are not covered by the health clinic fee. Student health insurance is required during the student's entire curriculum. Please see the Office of Student Affairs for details. Dental services are available in the college's clinics.

### *College of Medicine/Graduate School of Biomedical Sciences/School of Rural Public Health*

The A.P. Beutel University Health Center is a modern clinic that provides outpatient services to students in Bryan/College Station. The medical staff is composed of general practitioners and consulting specialists in medicine, surgery, orthopedics, gynecology, radiology and a satellite counseling service.

First- and second-year Texas A&M Health Science Center College of Medicine students, Graduate School of Biomedical Sciences students and School of Rural Public Health students pay a health center fee that entitles them to clinic visits, most diagnostic examinations, and X-rays and laboratory tests as needed. There is a nominal charge for prescription medications, X-rays and immunizations.

Students interested in information concerning health insurance should contact the offices of student affairs of the component in which the student enrolls.

Health center services are available at specified hours with 24-hour urgent care service, except during official university holidays. Ambulance service may be provided in emergencies from the on-campus scene of illness or injury to the health center or appropriate local medical facility. Ambulance service provided by other than the university ambulance is not covered by health center fees and is at the expense of the individual. The information line for the health center is (979) 845-1511. Hours of operation are the following:

## Immunizations

| | | | |
|---|---|---|---|
| Health Center | Monday - Friday | 8 a.m. - 5 p.m. | (979) 845-1511 |
| Dial-A-Nurse | 7 days a week | 24 hours | (979) 845-2822 |
| EMS/Ambulance Service | 7 days a week | 24 hours | (979) 845-1525 (non-emergency) |

Students not showing proof of immunization will be prevented from registering for any Texas A&M University classes. If unable to register for a class due to immunization reasons, call Student Health Services Preventive Medicine at (979) 845-1549.

## Immunizations

Each component has its own policies pertaining to immunizations. Please check with the Office of Student Affairs in your school/college for immunization requirements.

## HIV/AIDS

The Texas A&M Health Science Center has policies relating to AIDS/HIV seropositivity, and they are available to all students, faculty and staff at each component's office of clinical services or its equivalent.

## Student Consumer Information

Information concerning campus security and crime statistics is available from the Office of Institutional Research. Several components publish their statistics on their websites, but the general public, potential students, students, faculty and staff are entitled to request these statistics in paper copy. The Texas A&M Health Science Center Office of Institutional Research is pleased to supply this information upon request.

Information regarding graduation rates is available from the Office of Institutional Research.

The HSC will assist students with disabilities. Information is available through the components' student affairs offices.

## Student Right to Know and Campus Security Act

In compliance with the Federal Right to Know and Campus Security Act of 1990, the following information is maintained and available upon request through the Office of Finance and Administration.

### *Campus Crime Statistics*

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act requires higher education institutions to make public their campus security policies and to release to the campus community crime data collected or reported. In compliance with the Clery Act, the HSC is required to distribute this information to all current and prospective employees and students. The document is now available on the Texas A&M Health Science Center website: www.tamhsc.edu/securityDB/

## Student Records: Family Educational Rights and Privacy Act of 1974

Student records at educational institutions funded wholly, or in part, by state revenue shall be made available only upon request of educational institution personnel, the student involved, that student's qualified parent, legal guardian or a person conducting a child abuse investigation required by Section 34.05, Texas Family Code. Nothing in the act should be construed to require the release of information contained in education records of any educational agency or institution except in conformity with the provisions of the Family Educational Rights and Privacy Act.

Annually, the Texas A&M Health Science Center informs students of the Family Educational Rights and Privacy Act of 1974. This act, with which the HSC complies fully, is intended to protect the privacy of education records, to establish the rights of students to inspect and review their education records and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office of the Department of Education in Washington, D.C., concerning alleged failures by the HSC to comply with the act.

Local policy explains in detail the procedures to be used by the HSC for compliance with the provisions of the act. Copies of the complete policy may be obtained in the Office of Admissions and Academic Records in Dallas and the Office of the Registrar in College Station. This rule and the procedures included within it are designed to meet FERPA provisions. The HSC is committed to the good faith implementation of this policy.

In case a student, the parent of a student or any other individual has a complaint that an official of the HSC is violating FERPA, and the complaint cannot be satisfactorily resolved within the HSC, that person has the right to file a complaint with the U.S. Department of Education.

For the purposes of this policy, the HSC has used the following definitions of terms:

> *Student:* Person who attends or has attended a program of instruction sponsored by the HSC and for whom the institution maintains education records. The term does not include an individual who has not been in actual attendance at the HSC.
>
> *Education Records:* Records include, but are not limited to, handwriting, print, video or audio tapes, film or computer media, microfilm or microfiche maintained by the HSC, an employee of the HSC or agent of the HSC, and which are related to the student.
>
> *Directory Information:* Includes the following, but is not limited to, relating to a student: the student's name, local address, home address including country, telephone numbers, date and place of birth, field of study, enrollment status (full-time, part-time), dates of attendance, student classification, degrees, certificates, honors and awards received, the type of award received, photos and video media, medical residency location and specialization, and the name of the most recent previous educational academic agencies or institutions attended by the student, and other similar information.

### *Notification of Rights*

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the HSC receives a request for access.
2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosures without consent, including published directory information. One additional exception permits disclosure without consent to administration, faculty or staff with legitimate educational interests.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the HSC to comply with the requirements of FERPA.

All the rights and protections given students under FERPA and this policy belong to the student. However, information in student records may be provided to parents without the written consent of the student if the eligible student is a financial dependent of his or her parents as defined under Section 152 of the Internal Revenue Code of 1954.

### *Records Not Available for Information and Review*

Students shall have access to all education records concerning them maintained by the HSC with the exception of the following, but not all-inclusive, list:

1. A personal record kept by a faculty member of the HSC or staff member that meets the following tests:
   a. It is in the personal possession of the individual who made it.
   b. Information contained in it has never been revealed or made available to any other person except the maker's temporary substitute.
2. An employment record that is used only in relation to a student's employment by the HSC, except when an individual in attendance at the HSC is employed as a result of his or her status as a student.
3. Records relating to a student that are created or maintained by a physician, psychiatrist, psychologist or other recognized professional or paraprofessional acting in his or her professional or paraprofessional capacity or assisting in that capacity that are used in connection with the provision of treatment to a student and are not disclosed to anyone other than the individuals providing the treatment.
4. Financial records and statements of a student's parents.
5. Confidential letters and statements of recommendation that were placed in the education records of a student prior to Jan. 1, 1975.
6. Confidential letters and statements of recommendation that were placed in the education records of a student on or after Jan. 1, 1975, if the student has waived his or her right to inspect and review the letters or statements.
7. Records concerning admissions to a program of the HSC that the student has never attended.

Questions regarding these policies and the appropriate paperwork to access these rights in available in the Office of the Registrar in College Station and the Office of Academic Records in Dallas.

## Attendance

Attendance rules are the prerogative of the faculty of the school in which the student is enrolled.

### *Absences on Religious Holy Days*

An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

The student should notify the instructor of each class the student has scheduled on that date, not later than the 15th day after the first day of the semester, that he or she will be absent for a religious holy day. The notification shall be in writing and shall be delivered by the student personally to the instructor of each class, with receipt of the notification acknowledged and dated by the instructor or by certified mail, return receipt requested, addressed to the instructor of each class. A student who is excused under this section may not be penalized for the absence, but the instructor may appropriately respond if the student fails to satisfactorily complete the assignment or examination.

### *Authorized to Attend Class*

No student is permitted to attend any class section unless he or she is an enrolled, admitted student and is officially registered for that class section. A student is considered registered only if his or her name appears on the official course roster.

Those wishing to audit a course must make arrangements to do so by following the course auditing procedures.

## Residency Classification for Tuition Purposes

Under state statutes and Texas Higher Education Coordinating Board rules and regulations interpreting those statutes, a person will be classified as a resident, nonresident or international student. Texas Higher Education Coordinating Board rules and regulations on residence are available at www.theca.state.tx.us.

All students are required to complete a Residency Core questionnaire to validate their in-state residency prior to registration. Students are responsible for registering under the proper residency classification and for providing documentation as required by the institution. If there is any question about the right to classification as a resident of Texas, before enrollment, students should ask for an official determination by the Office of the Registrar in College Station and the Office of Academic Records in Dallas. If the student has knowledge of an error in his/her residency status for tuition purposes, it is his/her responsibility to notify the registrar's office or admissions and academic records office immediately.

Certain individuals may qualify for tuition exemptions or waiver of tuition and/or fees if they fulfill criteria specified under Texas Education Code and described in the rules and regulations for residence status of the Texas Higher Education Coordinating Board.

There are many factors that affect residence status. Generally, students who have resided in the state and have been employed for twelve (12) consecutive months immediately preceding the time of enrollment are classified as residents, unless they are in the state primarily for the purpose of attending an educational institution. Dependents whose parent(s) or guardian(s) have resided in Texas for the twelve (12) months preceding enrollment and claim the student as a dependent for income tax purposes may be classified as residents. Nonresidents who may qualify to pay Texas resident tuition rates include:

1. Military personnel assigned to duty in Texas and their spouses and children.
2. Faculty employed at least one-half time on a regular monthly basis at state institutions of higher education in Texas and their spouses and children.
3. Teaching or research assistants employed by state colleges or universities in Texas at least one-half time in positions that are related to the assistants' degree programs under institutional regulations and their spouses.

4. Students who hold competitive academic scholarships for at least $1,000 that were awarded in competition with Texas students by a recognized Texas A&M Health Science Center scholarship committee.

Residency classifications are made by the Office of the Registrar. A student may appeal his/her classification. Appeals are reviewed by the HSC registrar. The decision of the registrar is final.

### *Oath of Residency*

All students are responsible for signing an Oath of Residency upon application to the programs of the HSC. This oath is used to determine residency along with other information provided in the application. The student is responsible for responding truthfully to this request. Providing false information is cause for disciplinary action by the HSC.

## Financial Aid

The financial assistance programs are designed for all students who have a demonstrated financial need for assistance to meet educational expenses and who are making satisfactory academic progress. A student's ability to pay for advanced education is not a factor in the admissions process. Assistance is generally in the form of federal, state, institutional and private funds, with the largest amount in long-term student loans payable after graduation. The Texas A&M Health Science Center participates in a variety of programs; students should refer to the Office of Financial Aid for more details on program participation and eligibility.

Financial aid for students in the components is processed through the HSC Financial Aid Office (979-862-3414), with the exception of Baylor College of Dentistry students whose financial aid is processed in the Dallas office (214-828-8236). The first step in the financial aid process is to complete a Free Application for Federal Student Aid (FAFSA) after Jan. 1 in the year of the expected enrollment. Students accepted to the HSC and who complete a FAFSA are automatically considered for a combination of loans, grants and/or scholarships for which they are eligible. More detailed information is provided when applicants are interviewed and/or accepted to their respective programs. Information is also available on the HSC financial aid website at www.tamhsc.edu/academics/finaid/.

## Competitive Scholarships

The application and award process for scholarships begins in each school/college. Please contact the Office of Student Affairs in your school/college for information on scholarships.

## 2006-2007 COMPETITIVE SCHOLARSHIPS

| SCHOLARSHIP NAME | AWARD AMOUNT | TERM OF AWARD | DURATION | CRITERIA | OUT-OF-STATE WAIVER | FUNDING SOURCE |
|---|---|---|---|---|---|---|
| **BAYLOR COLLEGE OF DENTISTRY** | | | | | | |
| Baylor Academic Scholarship | $6,600 based on available funds | Academic year, distributed on a long semester basis | 1-4 years | Combination grade point of pre-dental cumulative and science GPAs of 1st-year dental students; maintain satisfactory academic progress | Yes | Baylor Oral Health Foundation Account |
| Baylor Academic Scholarship | $6,600 based on available funds | Academic year, distributed on a long semester basis | 1 year | Combination grade point of pre-dental cumulative and science GPAs of 1st-year dental students; maintain satisfactory academic progress | Yes | Baylor Oral Health Foundation Account |
| Baylor Academic Scholarship | $4,000; $3,000; or $2,000 based on available funds | Academic year, distributed on a long semester basis | Single Year | Combination grade point of pre-dental cumulative and science GPAs of 1st-year dental students; maintain satisfactory academic progress | Yes | Baylor Oral Health Foundation Account |
| Baylor Academic Scholarship | $1,000 based on available funds | Academic year, distributed on a long semester basis | 4 years | Combination grade point of pre-dental cumulative and science GPAs of 1st-year dental students; maintain satisfactory academic progress | Yes | Baylor Oral Health Foundation Account |
| Oral & Maxillofacial Pathology Scholarship | $1,000 | Academic year | 1 year renewable | GPA, Nat'l Board Scores, prof. awards and honors, letters of recommendation; maintain satisfactory progress in program | Yes | Private donation |
| Bettye M. Whiteaker Endowed Scholarship in Periodontics | $2,500 | Academic year (3 disbursements of $500, $1,000 and $1,000 at each term) | 1 year | First year post-doctoral periodontics based on scholarship, need, self-help, community service/activities; credited only toward tuition | Yes; 2 or less | Endowed by Dr. Bettye M. Whiteaker |
| The Jim B. Rudd Scholarship | $1,000 | Academic year | 3 years | Score 90 on Part I of Nat'l Dental Board exam; top 15% of dental class selected by BCD Cmte; matching service with BCD Oral & Maxillofacial Surgery residency program; U.S. and Canada applicants in top 25% of class who applied for Oral & Maxillofacial Surgery training program at BCD; award continuation depends on satisfactory progress in medical school curriculum at Texas Tech University & satisfactory performance on USMLE step exams | Yes | Private donations |
| Comprehensive Dental Faculty Development Program Academic Scholarship | $1,000 | Academic year | Renewable each year until M.S. Degree in Health Professions Education is earned | Enrolled and in good standing in both Health Professions Educ. Program and Comprehensive Dental Faculty Development Program; be enrolled in required course work and maintain good academic standing | Yes | Special account 524-250280 |
| Graduate General Dentistry Scholarship | $1,000 | Academic year | 12 months | GPA/Class standing, Nat'l Board Scores, prof. awards/honors, community service, recommendation letters, letter of intent; acceptance into AEGD program; maintain satisfactory progress in program | Yes | Private donation/department special account |

## 2006-2007 COMPETITIVE SCHOLARSHIPS

| SCHOLARSHIP NAME | AWARD AMOUNT | TERM OF AWARD | DURATION | CRITERIA | OUT-OF-STATE WAIVER | FUNDING SOURCE |
|---|---|---|---|---|---|---|
| **COLLEGE OF MEDICINE** | | | | | | |
| Dean's Scholarship | $10,000 | Academic year | 4 years | Academic merit (maintain GPA 3.0) or financial need (maintain GPA 2.0) from all accepted students; remain in good standing | Yes | HSC Foundation funds or COM funds |
| Academic Distinction Scholarship | $6,500 | Academic year | 4 years | Academic merit (maintain GPA 3.0) or financial need (maintain GPA 2.0) from all accepted students; remain in good standing | Yes | HSC Foundation funds or COM funds |
| Academic Achievement Scholarship | $3,275 | Academic year | 4 years | Academic merit (maintain GPA 3.0) or financial need (maintain GPA 2.0) from all accepted students; remain in good standing | Yes | HSC Foundation funds or COM funds |
| College of Medicine Merit Scholarship | $1,000 | Academic year | 4 years | Academic merit (maintain GPA 3.0) or financial need (maintain GPA 2.0) from all accepted students; remain in good standing | Yes | HSC Foundation funds or COM funds |
| GV Brindley Scholarship | $6,550 or $3,275 | Academic year | 4 years | Academic merit and evidence of disadvantage (maintain GPA 2.0) from all accepted students; remain in good standing | No | Scott & White Foundation |
| Scott & White Scholarship | $2,000 | Academic year | 2 years - 3rd and 4th years | Academic achievement and evidence of professionalism in medicine from 2nd-year students; remain in good standing | No | Scott & White Foundation |
| **IRMA LERMA RANGEL COLLEGE OF PHARMACY** | | | | | | |
| The D.D. Hachar Charitable Trust and Lamar-Bruni Vergara Trust | $3,000 | Academic year | 1st two years | Admitted to HSC-COP; must be resident of Webb County, Texas; pre-pharmacy at Texas A&M-Kingsville must score 21 ACT or 970 SAT and maintain undergrad 3.0 GPA; maintain full-time status; selected from fall class | No | Endowed |
| The D.D. Hachar Charitable Trust and Lamar-Bruni Vergara Trust | $4,000 | Academic year | 4 years | Professional program; same as above plus full-time status with 3.0 GPA; selected from fall class | No | Endowed |
| The Irma Lerma Rangel Scholarship | $1,500 ($750 each semester) | Academic year (excluding summer) | Academic year; pre-pharmacy students may receive for 2 consecutive calendar years for max. 60 hrs. or 4 long semesters (whichever comes first) | South Texas resident for at least one year prior to award; enrolled at Texas A&M-Kingsville pre-pharmacy; receive award max. 4 semesters or 60 hours; admitted to HSC-COP; maintain 2.75 GPA; full time (12 credit hrs. min.); 3 letters of recommendation from non-relatives | No | Endowed |
| Robert Sumter Gerald Scholarship | $1,000 | Academic year | Annual | South Texas resident for at least one year prior to award; completed min. 60 semester hrs. with at least 30 at Texas A&M-Kingsville with 3.0 GPA min.; pre-pharmacy or HSC-COP major; full time (12 credit hrs. min.); 3 letters of recommendation from non-relatives | No | Endowed |
| Texas Federation of Drug Stores Scholarship | $1,000 | Academic year | Annual; student must re-apply | Pharmacy student in school's most senior fall class with interest in retail pharmacy; min. 2.3 GPA (meet college's progression standard); if possible, Federation member involved in presentation | Yes | The Voice of Chain Pharmacy in the state of Texas |

| 2006-2007 COMPETITIVE SCHOLARSHIPS | | | | | | |
|---|---|---|---|---|---|---|
| SCHOLARSHIP NAME | AWARD AMOUNT | TERM OF AWARD | DURATION | CRITERIA | OUT-OF-STATE WAIVER | FUNDING SOURCE |
| **SCHOOL OF RURAL PUBLIC HEALTH** | | | | | | |
| South Texas Environmental Education & Research | $1,000 | Semester/Academic year | 9/01/06-5/31/07 | Academic performance; rural and underserved community experience and interest; commitment to work in environmental or occupational health; financial need; if applicable, continuation if full-time student maintaining 3.0 GPA with no HSC or HSC-SRPH blocks | Yes | STEER - Laredo Program 23-206003 |
| Public Health Excellence Scholarship | $200 up to $1000 | By semester, academic year | 9/01/06-5/31/07 | Interest in rural or underserved public health areas; continuation if full-time student maintaining 3.0 GPA with no HSC or HSC-SRPH blocks | Yes | SRPH Student Affairs Scholarship Sub-Committee |
| Hunter Blakely Scholarship Award | $200 up to $1,000 | By semester, academic year | 9/01/06-5/31/07 | Interest in public health services and research, spec. health policy and mgmt; academic performance; experience and interest in rural and underserved community; financial need; continuation if full-time student maintaining 3.0 GPA with no HSC or HSC-SRPH blocks | Yes | Excellence in Public Health 23-500054-67010 |
| Health Resources Service Award | $250 up to $2,000 | By semester, academic year | 9/01/06-5/31/07 | Academic performance; experience and interest in rural and underserved community; commitment to work in epidemiology or environmental health; financial need; domestic students in Epidemiology and Biostatistics and Environmental & Occupational Health; continuation if full-time student maintaining 3.0 GPA with no HSC or HSC-SRPH blocks | Yes | Health Resources and Services Admin. Public Health Traineeships 99-456165 |



## Policy on Satisfactory Academic Progress and Title IV Student Financial Aid Eligibility

Federal regulations require the HSC to establish and apply reasonable standards of satisfactory progress for the purpose of the receipt of financial assistance under the programs authorized by Title IV of the Higher Education Act and require institutions to develop policies regarding satisfactory academic progress (SAP). Each institution must design criteria that outline the definition of student progress toward a degree and the consequences to the student if progress is not achieved. HSC students who wish to be considered for financial aid must maintain satisfactory progress in their selected course of study as set forth in this policy.

The Financial Aid Office verifies student academic progress with the Office of the Registrar at the beginning of each award period. Students are evaluated on the basis of credit hour completion and maximum time frame limitation (and in some components, GPA).

Students are notified of the SAP policy on the HSC Office of Financial Aid and Office of the Registrar websites. Information is also available in each component office.

*Qualitative Measurement*

To receive financial aid, a student must maintain a minimum qualitative measure of progress as listed below or as determined by the Promotions Committee:

1. Medical - Determined by the Promotions Committee
2. Dental - Determined by the Promotions Committee
3. Dental Hygiene - Determined by the Promotions Committee
4. School of Rural Public Health - 3.0 cumulative GPA
5. Graduate Studies - 3.0 cumulative GPA
6. Pharmacy - 2.30 cumulative GPA and determination of the Promotions Committee

As part of the qualitative measurement, federal regulations require clarification of the grading standards based on the following chart:

TABLE 1

| | Undergraduate | Graduate | Professional |
|---|---|---|---|
| Minimum GPA | 2.0 | 3.0 | N/A* |
| Required hours for full-time assistance per year | 24 | 18 | N/A |
| Required hours for full-time assistance per term | 12 | 9 | N/A |

| | | | |
|---|---|---|---|
| Required hours for 3/4-time assistance for year | 18 | 12 | N/A |
| Required hours for 3/4-time assistance per term | 9 | 6 | N/A |
| Required hours for half-time assistance per year | 12 | 12 | N/A |
| Required hours for half-time assistance per term | 6 | 5 | N/A |

**Eligibility to proceed in the curriculum is determined by the Promotions Committee.*

In cases of summer enrollment at HSC-Baylor College of Dentistry, the clock-to-credit-hour conversion chart is determined to be an acceptable form of measurement.

*Qualitative Measurement*

A student will be permitted a time limit of eligibility for financial aid according to the following table:

TABLE 2

| Degree | Standard | Maximum |
|---|---|---|
| Ph.D. (with advanced degree) | 4 years | 6 years |
| Ph.D. (without advanced degree) | 5 years | 8 years |
| M.D. | 4 years | 6 years |
| M.D./Ph.D. | 7 years | 10.5 years |
| D.D.S. | 4 years | 6 years |
| D.D.S. extended | 5 years | 7.5 years |
| D.D.S./Ph.D. | 7 years | 10.5 years |
| Dr.P.H. | 4 years | 6 years |
| M.S. | 2 years | 4 years |
| M.H.A. | 4 years | 6 years |
| M.S.P.H. | 3.5 years | 5.25 years |
| M.P.H. | 3.5 years | 5.25 years |
| B.S. | 2 years | 3 years |
| (Dental Hygiene) | | |
| D.H. extended | 3 years | 5.5 years |
| Pharm.D. | 4 years | 6 years |

Students are also subject to a quantitative measure of progress. Summer enrollment, if required, is considered part of the academic year for purposes of this measure.

A student registering for less than full-time enrollment will be allowed additional time of eligibility based upon a proportion of the actual registered hours since the time of first enrollment, as compared with normal full-time hours for the same time period. A student failing to meet this standard will be suspended from financial aid eligibility.

A student must complete with passing grades at least 75 percent of the credit hours for which the student registered and paid fees for each academic period (fall through summer terms). Any student failing to meet this 75 percent standard due to unsatisfactory or failing grades, withdrawal or a grade of incomplete will be placed on financial aid probation. *Note: Students enrolled in academic programs using semester-based enrollment will be placed on probation for a semester. A student on probation must achieve this 75 percent standard for all enrolled courses during the subsequent grading period.*

*Transfer Credit*

For transfer students, the total years of completion of a degree includes time spent at the previous institution, to the extent that credit hours are transferred and applied toward the degree objective at this institution.

*Remediation, Withdrawal and Remedial Courses*

A grade of "I" or a course withdrawal will be calculated in the number of hours of attempted course work. Remediation mandated by the component will not adversely impact the student's financial aid.

*Consequences of Violation*

A student will be placed on financial aid probation if any of the following occurs:

1. The student's GPA is below the minimum requirement, or the Promotions Committee deems the student is ineligible to proceed in the curriculum as defined by the component's internal satisfactory academic policy.
2. The student does not make incremental progress as determined by the component's policy or the decision of the component's Promotions Committee.
3. The student reaches the maximum time frame for completion of his/her program of studies.

Any student failing to meet the qualitative or quantitative requirements will be placed on financial aid probation. A student placed on probation for financial aid eligibility must, by the end of the following grading period, attain the standing specified for satisfactory academic progress. Failure to do so will result in suspension of Title IV student financial aid eligibility.

*Student Financial Aid Eligibility Appeal Process*

Any student denied Title IV student financial aid who can prove special circumstances (i.e., illness, injury, family emergency, etc.) pertaining to his/her case, may appeal the decision denying aid. Students who wish to appeal their Title IV student financial aid eligibility must submit in writing a detailed explanation of their special circumstances, provide a letter from their academic department delineating the student's academic standing and any support documents associated with the appeal (i.e., medical documentation, death notice of family member, etc.).

A committee comprised of the registrar (or designee), a representative of the component in which the student is enrolled and the executive director of Financial Aid (or designee) will collaboratively review the case and reach a decision to grant financial aid eligibility appeals. The assistant director (Dallas) or senior counselor (College Station) serves as the immediate backup in the absence of the financial aid director (Dallas) or the executive director (College Station). The executive director of Student Financial Aid (or designee) will provide notification of the appeal outcome to the student.

*Reinstatement of Eligibility*

It is the student's responsibility to present evidence to the Financial Aid Office at the time s/he has met minimum requirements for reinstatement of Title IV student financial aid eligibility.

A student seeking to reestablish eligibility of Title IV student financial aid may do so by:

1. Achieving the required GPA or Promotions Committee approval.
2. Appealing the financial aid decision.

*Consequences of Denial of Appeal*

Students who do not maintain satisfactory academic progress lose eligibility for Title IV student financial aid for the entire grading period, as defined by the component's academic division.

## Housing

The Texas A&M Health Science Center does not provide any student housing. There are numerous apartment locators in the Bryan/College Station and Dallas Metroplex areas. You also may obtain off-campus housing information from the Texas A&M University Housing Office at (979) 845-1741.

The HSC-College of Medicine manages 66 apartments for its third- and fourth-year medical students on the grounds of the Olin E. Teague Veterans' Center at Temple. The apartments range in size from efficiencies to large two-bedroom units. For more information, contact the student apartment manager at (254) 773-0513 or the Office of Student Affairs and Admissions. Off-campus private housing also is available.

The Texas A&M University-Kingsville (Texas A&M-Kingsville) campus agrees to provide housing (dormitory) services to those HSC-Irma Lerma Rangel College of Pharmacy students in accordance with Texas A&M-Kingsville housing allocation protocol for those students who wish to reside on campus. Texas A&M-Kingsville housing fees for pharmacy students shall be paid by the student (directly to Texas A&M-Kingsville), and the contract for housing shall be between Texas A&M-Kingsville and the student directly without the involvement of the HSC.

## Basic Statement Governing Student/Staff Relationships

The Texas A&M Health Science Center will endeavor to provide a living and learning environment in which students can meet their academic goals. The HSC has the responsibility of providing students with a clear understanding of its academic requirements, which are found in the HSC Catalog.

The HSC will determine, publish and make known its rules and regulations concerning student conduct. The HSC has the right to determine when its rules are violated and to determine the appropriate course of action. By enrolling in the HSC, students accept the responsibility of complying with the HSC's authority, of respecting the rights of others and of protecting private and public property.

Every student has the right to all the privileges, prestige and honors accruing to a student of the HSC. Students retain the rights guaranteed under the Constitution of the United States, the right to pursue an education and to receive a degree or certificate for the successful completion of its requirements.

Students are expected to conduct themselves in a professional manner, to adhere to the specific applicable HSC (BCD, COM, GSBS, IBT, COP, SRPH) and Texas A&M University System regulations and to state and federal law.

## Identification Badges

The Texas A&M Health Science Center requires all HSC faculty, staff, students and student employees to obtain and display an official identification badge while at any of the HSC facilities. The purpose of the identification badge is to enhance the safety of all personnel through establishing a system that provides a consistent and clear identification of HSC faculty, staff and students. The identification badges will provide a system for authorized and controlled entry into buildings, offices and classrooms; a tool for security; and employee/student identification for transacting business within the HSC.

The HSC identification badge will contain the individual's photo, title (e.g., student), department affiliation and name. The identification badge must be worn in a highly visible manner while on HSC property. The initial badge will be issued at no cost to the recipient (except in the HSC-College of Medicine); replacement badges will cost $10 per badge.

All students attending classes in Bryan/College Station will be required to display the identification badge while on HSC property. Students attending classes at any of the distance education facilities expressly considered a HSC facility (i.e., the HSC-Coastal Bend Health Education Center at Corpus Christi, the HSC-South Texas Center at McAllen, and facilities on the campus of Scott & White at Temple) will also be required to secure and display the HSC identification badge.

Students attending classes in Bryan/College Station will also be strongly encouraged to obtain a Texas A&M University identification badge. This Texas A&M University badge will be necessary to use any Texas A&M resources, such as the bus system, the recreation center, the libraries or the health center.

## Email

Your email address is the official system of communication between the HSC and students. Students will be held responsible for any information or action needed that may be communicated via this means. Check your email often. Please remember to keep your username and password confidential.

# Tuition and Fees

## Tuition and Fees

Fees are approved by The Texas A&M University System Board of Regents within guidelines established by the Texas Legislature. Fees are subject to change by the Board of Regents.

**TEXAS A&M HEALTH SCIENCE CENTER**
**APPROVED FEES FOR FALL 2007**

| | BAYLOR COLLEGE OF DENTISTRY (Fee/Per) | COLLEGE OF MEDICINE (Fee/Per) | GRADUATE SCHOOL OF BIOMEDICAL SCIENCES, SCHOOL OF RURAL PUBLIC HEALTH AND IBT (Fee/Per) | IRMA LERMA RANGEL COLLEGE OF PHARMACY (Fee/Per) |
|---|---|---|---|---|
| **TYPE OF FEE** | | | | |
| **MATRICULATION FEE**<br>Legislative Maximum Allowed - $15<br>Statutory Authority 54.006 (a). | $15/sem | $15/sem | $15/sem | |
| **INSTALLMENT TUITION HANDLING FEE**<br>**INSTALLMENT TUITION DELINQUENCY FEE**<br>Legislative Maximum Allowed - Cost of Service<br>Statutory Authority 54.007(b). | $15/sem | $15/sem | $15/sem | $15/sem |
| **GRADUATE TUITION** | | | | |
| **Graduate Tuition, Designated Tuition, & State Minimum Tuition**<br><br>Legislative Maximum Allowed - At least equal to but not more than twice the following minimum rates: Resident $50 per sch, $120 minimum; Nonresident: $325 per sch, subject to change each January by the Texas Higher Education Coordinating Board. Statutory Authority 54.008.<br>**Designated.** Statutory Authority 54.0513. | *Graduate*<br>$100/res-sch<br>$325/nr-sch<br><br>*Statutory*<br>$50/res-sch<br>$325/nr-sch<br><br>*Designated*<br>$58/res-sch<br>$100/nr-sch | | *Graduate*<br>$50/res-sch<br>$325/nr-sch<br><br>*Statutory*<br>$50/res-sch<br>$325/nr-sch<br><br>*Designated*<br>$75/res-sch | *Graduate*<br>$100/res-sch<br>$650/nr-sch<br><br>*Statutory*<br>$50/res-sch<br>$325/nr-sch<br><br>*Designated*<br>$60/res-sch |
| **UNDERGRADUATE TUITION** | | | | |
| **Statutory & Designated Tuition**<br>***Statutory***<br>General Academic. Legislative Maximum Allowed - Resident - $50 per sch, $120 minimum per semester or 12-week summer term. Nonresident - $325 per sch, subject to change each January by the Texas Higher Education Coordinating Board. Statutory Authority 54.051(c),(d) and 54.0512 of the Texas Education Statutes.<br>***Designated***<br>Statutory Authority 54.0513 | $108/res-sch<br>$425/nr-sch | | *Statutory*<br>$50/res-sch<br>$325/nr-sch<br><br>*Designated*<br>$75/res-sch | |

| PROFESSIONAL DEGREE PROGRAM TUITION | | | | |
|---|---|---|---|---|
| **M.D. DEGREE PROGRAM**<br>***Statutory***<br>Resident - $6,550 per academic year;<br>Nonresident - $19,650.<br>Statutory Authority 54.051(f).<br>***Designated***<br>Statutory Authority 54.0513<br>Legislative Maximum Allowed- $50 per semester credit hours for the academic year. | | *Statutory*<br>$6,550/res-yr.<br>$19,650/nr-yr.<br><br>*Designated*<br>$75/sch | | |
| **D.D.S. DEGREE PROGRAM**<br>***Statutory***<br>Resident - $5,400 per academic year;<br>Nonresident - $16,200.<br>Statutory Authority 54.051(g) and 54.051(h).<br>***Designated***<br>Statutory Authority 54.0513 | *Statutory*<br>$5,400/res-yr.<br>$16,200/nr-yr.<br><br>*Designated*<br>$4,248/yr. | | | |
| **LABORATORY FEES**<br>Legislative allowance: not less than $2 nor more than $30 for one semester or summer term in any one course, not to exceed actual cost of materials.<br>Approval by President.<br>Statutory Authority 54.501. | $30/sem-dental hygiene<br>$30/sem-dental<br>1, 2, 3 & 4 yr. | $2<br>to<br>$30 | $2<br>to<br>$30 | |
| **GENERAL PROPERTY DEPOSITS**<br>Legislative Maximum Allowed - $10 per semester, $30 per semester in the College of Medicine.<br>Statutory Authority 54.502. | $10/student | $10/student | $10/student | |
| **STUDENT SERVICES - COMPULSORY**<br>Statutory Authority 54.503<br>Collected to cover cost of Student Services. Maximum $169.96 per semester. Requires input to President from Student Fee Advisory Committee<br>Statutory Authority 54.5031. | $5.20/sch<br>$93.60/sem max | $13.83/sch<br>$165.96/max<br>$82.98/sum max | $13.83/sch<br>$165.96/max<br>$82.98/sum max | $12/sch<br>$250/max<br>$250/sum max |
| **SHUTTLE BUS FEE-VOLUNTARY** | | $55/sem | $55/sem | |
| **INCIDENTAL FEES**<br>**Statutory Authority 54.504** | | | | |
| **APPLICATION FEE** | $35/applic./nr<br>$25/reapplic./nr | $60/applic. | $50/applic. | $100/applic. |
| **BINDING, COLLATING, MICROFILMING THESES AND DISSERTATIONS** | | | $95/M.S. each<br>$155/Ph.D. each | |
| **CLINIC NAME STAMP/ REPLACEMENT STAMP** | $15 one time | | | |
| **COMPUTER ACCESS/ COMPUTER USE** | $8.50/sch | $20.30/sch-f/s<br>$10.15/sch-sum | $20.30/sch-f/s<br>$10.15/sch-sum | $18.80/sch-f/s<br>$9.40/sch-sum |
| **COURSE FEES (SRPH ONLY)** | | | PHPM 680 - $200<br>PHPM 606 - $100 | |
| **COURSE AUDIT FEE** | $50/course - dental hygiene | As appropriate | As appropriate | |
| **BURSAR SERVICES FEE** | | $2.50/sch | $2.50/sch | $2.50/sch |

| INCIDENTAL FEES (continued)<br>Statutory Authority 54.504 | | | | |
|---|---|---|---|---|
| **DIPLOMA / GRADUATION FEE** | $100 | $75 | $75 | $75 |
| **EQUIPMENT FEE** | | | $200/sem | |
| **FIELD TRIP FEES** | | Cost of Trip | Cost of Trip | |
| **LATE GRADUATION APPL. FEE** | $50/sem | $50/sem | $50/sem | $50 sem |
| **DRUG TESTING FEE** | $50/sem | | | |
| **DUPLICATE DIPLOMA FEE** | $40/each | | | |
| **GRADUATE RECORD EXAMINATION** | | | $6.50/each | |
| **GROSS ANATOMY COURSE FEE** | | $150/yr | | |
| **ID CARD SECURITY SYSTEM-COMPULSORY** | $20/initial<br>$20/replace | $3/sem<br>$12/replace<br>$1.50/5-week sum | $3/sem<br>$12/replace<br>$1.50/5-week sum | $10/sem |
| **INFORMATION TECHNOLOGY FEE** | | | | $200/sem |
| **INSTRUMENT MANAGEMENT FEE** | $120/dental hyg.<br>$150/sem dds | | | |
| **DISTANCE EDUCATION FEE** | | | $125/sem | |
| **INTERNATIONAL STUDENT APPLICATION FEE** | $175/app | | $75/app | |
| **INTERNATIONAL STUDENT FEE** | $86/sem | $90/sem | $90/sem | |
| **KEY DEPOSIT** | | $1/sem | $1/sem | |
| **LATE TUITION PAYMENT FEE** | $25/payment | $50/payment | $50/payment | $50/payment |
| **TECHNOLOGY FEE** | DH-$250/yr<br>DDS-$500/yr | | | |
| **LATE REGISTRATION FEES** | $200 after official reporting date<br>$100 on/after 1st class day | $200 after official reporting date<br>$100 on/after 1st class day<br>$50/late add fee-course added after official rptg. date | $200 after official reporting date<br>$100 on/after 1st class day<br>$50/late add fee-course added after official rptg. date | $200 after official reporting date<br>$100 on/after 1st class day |
| **LIBRARY ACCESS FEE** | $6.50/sem | $23.30/sem | $23.30/sem | $23.30/sem |
| **MICROSCOPE RENTAL** | | $75/year | | |
| **PRACTICUM FEE (SRPH)** | | | $50/sem | |
| **PROFESSIONAL ACTIVITY FEE** | | | | $225/sem |
| **PROFESSIONAL DEVELOPMENT FEE** | | | | $300/sem |
| **REINSTATEMENT FEE** | $50 | $50 | $50 | |
| **RETURNED CHECK FEE** | $25/check | $25/check | $25/check | $25/check |
| **SKULL RENTAL FEE** | $100/one-time dental 1st year | | | |

| INCIDENTAL FEES (continued)<br>Statutory Authority 54.504 | | | | |
|---|---|---|---|---|
| **SUMMER CLINIC FEE** | $315/dental 3&4 | | | |
| **TRANSCRIPT FEE** | $5/transcript<br>$10 ea. faxed | $2 ea./unofficial<br>$7 ea./official<br>$10 ea./faxed | $2 ea./unofficial<br>$7 ea./official<br>$10 ea./faxed | $2 ea./unofficial<br>$7 ea./official<br>$10 ea./faxed |
| **VEHICLE, PARKING, TRAFFIC**<br>Parking Fees.<br>Statutory Authority 54.505. | Students<br>$90/semester<br>$65/summer | $149/9 months | $149/9 months | |
| **GROUP HOSPITAL FEES**<br>Legislative Maximum Allowed - $75 per long semester and $20 per summer session.<br>Statutory Authority 54.521. | $62/sem<br>$18/sum | $66/f/s sem | $66/f/s sem<br>$25/sum | $49/f/s sem<br>$25/sum |
| **STUDENT CENTER COMPLEX FEES**<br>Legislative Maximum Allowed - $100 per long semester; $50 per summer session. Statutory Authority 54.521. | | $40/f/s sem<br>$20/sum | $40/f/s sem<br>$20/sum | $40/f/s sem<br>$20/sum |
| **RECREATIONAL SPORTS FEE**<br>Legislative Maximum Allowed - $100 per long semester or $50/summer. Assessed when facility available for use.<br>Statutory Authority 54.539. | | $98/fall/spring<br>$49/sum | $98/fall/spring<br>$49/sum | Athletics Fee<br>$15/sch<br>$195 max |
| **INTERNATIONAL EDUCATION FEE**<br>Legislative Maximum Allowed - $4 per semester.<br>Statutory Authority 54.5132. | | $4/sem | $4/sem | $1/sem |
| **MEDICAL LIABILITY INSURANCE FEE** | $65/yr D.D.S.<br>$30/yr dental hyg.<br>$100/yr clin graduates | $55/yr | | |
| **TRANSPORTATION FEE** | | $60/f/s sem<br>$30 sum | $60/f/s sem<br>$30 sum | |

## Refund Policy

Tuition and fee adjustments will be made to students' accounts when they officially withdraw. The policy for refund of tuition charges for the Texas A&M Health Science Center conforms to the Higher Education Amendments of 1998 and § 54.006 of the Texas Education Code.

Medical and dental units, as soon as practicable, shall refund the amount of fees and tuition in excess of the minimum tuition collected for courses from which students drop within the first 12 days of a fall or spring semester or within the first four days of a summer term.

An institution may assess a nonrefundable $15 matriculation fee if the student withdraws from the institution before the first day of classes.

A medical or dental unit shall refund to a student withdrawing from the institution or unit an amount equal to the product of the amount of tuition and mandatory fees collected for each course in which the student is enrolled on the date the student withdraws multiplied by the applicable percentage derived from the following tables:

If the student withdraws during a fall or spring semester or comparable trimester:

| | |
|---|---|
| prior to the first class day | 100% |
| during the first five class days | 80% |
| during the second five class days | 70% |
| during the third five class days | 50% |
| during the fourth five class days | 25% |
| after the fourth five class days | None |

If the student withdraws during a summer term:

| | |
|---|---|
| prior to the first class day | 100% |
| during the first, second or third class day | 80% |
| during the fourth, fifth or sixth class day | 50% |
| seventh day of class and thereafter | None |

# Baylor College of Dentistry

# Baylor College of Dentistry

**P.O. Box 660677**
**Dallas, Texas 75266-0677**
**214-828-8100**
**http://bcd.tamhsc.edu**

## Table of Contents

# Administrative Structure

## *Officers of Administration*

| | |
|---|---|
| James S. Cole, D.D.S. | Dean |
| Charles W. Berry, Ph.D. | Associate Dean, Academic Affairs |
| Larry L. Bellinger, Ph.D. | Associate Dean, Research and Graduate Studies |
| Cindy W. Ceen, B.A. | Assistant Dean, Administration |
| Dale A. Christensen, M.B.A. | Executive Director, Facilities Services and Planning |
| Jack L. Long, D.D.S. | Associate Dean, Student Affairs |
| Dean A. Hudson, D.D.S. | Associate Dean, Clinical Affairs |
| Susan Mitchell Jackson, M.A. | Executive Director, Communications and Development |
| Juanna S. Moore, CPA | Associate Dean, Finance |
| Eric S. Solomon, M.A., D.D.S. | Executive Director, Institutional Research |

## *Academic, Student and Alumni Support Services*

| | |
|---|---|
| Moira Allen | Director, Student Affairs |
| Charles J. Arcoria, D.D.S. | Executive Director, Continuing Education and Alumni Affairs |
| Leeanna Bartlett, M.Ed. | Director, Social Services |
| Ernestine Brooks, M.A., D.D.S. | Director, Student Development |
| Regina Courtney | Director, Administrative Computing, Institutional Computing |
| Kay Egbert | Director, Student Aid, Student Affairs |
| Stephen J. Griffin, D.D.S. | Director, Clinics |
| Laverne J. Holyfield, D.D.S. | Director, Faculty Development |
| Barbara H. Miller, D.D.S., M.S. | Executive Director, Recruitment and Admissions |
| Amp W. Miller III, D.D.S. | Director, Curriculum |
| Ann McCann, M.S. | Director, Planning and Assessment |
| Lynne A. Opperman, Ph.D. | Director, Office of Technology Development |
| Janet Reinwald | Director, Media Resources |
| Cindy Scroggins, M.L.S. | Director, Library |
| Claude R. Williams, D.D.S. | Director, Community Outreach Services |
| Sara Wartes | Executive Assistant, Office of the Dean |
| Lanelle Watkins | Executive Assistant, Office of the Dean |

## *Department Chairs*

| | |
|---|---|
| P. Emile Rossouw, M.ChD., Ph.D. | Orthodontics |
| John M.Wright, D.D.S., M.S. | Diagnostic Sciences |
| Rena D'Souza, D.D.S., Ph.D. | Biomedical Sciences |
| Janice P. DeWald, D.D.S., M.S. (director) | Caruth School of Dental Hygiene |
| William W. Hallmon, D.M.D., M.S. | Periodontics |
| Steve Karbowski, D.D.S. | Restorative Sciences |
| Daniel L. Jones, D.D.S., Ph.D. | Public Health Sciences |
| Toru Okabe, Ph.D. | Biomaterials Science |
| N. Sue Seale, D.D.S., M.S.D. | Pediatric Dentistry |
| Mohsen Taleghani, D.M.D. | General Dentistry |
| R. Gilbert Triplett, D.D.S., Ph.D. | Oral and Maxillofacial Surgery |
| Gerald N. Glickman, D.D.S., M.S., M.B.A., J.D. | Endodontics |

## Dean's Biography

James S. Cole, D.D.S.
Dean, Baylor College of Dentistry

Dr. James S. Cole is dean of Texas A&M Health Science Center Baylor College of Dentistry, a position he was appointed to in July 2000 after serving as interim dean of the college since December 1999. Dr. Cole also served as interim president of the HSC from Oct. 1, 2000, to Dec. 31, 2001.

Since 1988, Dr. Cole has served in a variety of administrative roles at the college, including chief operating officer, chief financial officer and vice dean, guiding all administrative, fiscal, legal and corporate matters. In 1990, while serving as vice president and director of Computer Services, Dr. Cole assumed the additional responsibilities as the college's interim president and dean for six months. Later that year, he was promoted to executive vice president/associate dean. When the college merged with the A&M System, Dr. Cole took a leave of absence from HSC-BCD to serve as president and treasurer of the Baylor Oral Health Foundation, returning when he was appointed interim dean. Dr. Cole first joined the college faculty in 1977 as an instructor in restorative sciences, then accepted in 1981 an appointment as director of Computer Services, a responsibility he retained through 1992 along with his additional executive duties. He has since become a professor in restorative sciences and continues to teach part time.

A native of Minneapolis, Minn., Dr. Cole has lived in Texas for more than 50 years. After graduation from Stephen F. Austin State University in 1967, Dr. Cole served in the Navy, reaching the rank of lieutenant before his discharge in 1971. He went on to earn his D.D.S. from Baylor College of Dentistry in 1975, then maintained a private practice before joining the HSC-BCD faculty.

Dr. Cole is a member of the American College of Dentists and the International College of Dentists. He was named 2000 Dentist of the Year by the Dallas County Dental Society for his continuous service to facilitate dental education in Texas and the nation.

# DENTISTRY

## History

In 1905, Baylor College of Dentistry opened its doors to its first 40 students as State Dental College, a private three-year dental school in Dallas. When the college became a part of Baylor University in 1918, it was renamed Baylor University College of Dentistry. The college continued as a unit of Baylor University until Aug. 1, 1971. At that time, it became Baylor College of Dentistry, a private, nonprofit, nonsectarian corporation chartered by the state of Texas to conduct educational programs in dentistry and related fields. On Sept. 1, 1996, BCD became an institution of The Texas A&M University System. The college became a component of the Texas A&M Health Science Center on Jan. 1, 1999.

## Mission Statement

The mission of HSC-Baylor College of Dentistry is to improve the oral health of Texans and shape the future of dentistry by:

- developing exemplary clinicians, educators and scientists.
- caring for the needs of a diverse community.
- serving as a leader in health professions education.
- seeking innovations in science, education and health care delivery.

### *Vision*

The Vision Statement establishes the focus for what the college hopes to accomplish in the next seven years.
Following a century of excellence, HSC-Baylor College of Dentistry will continue to be a leader in dental education by:

- enhancing instruction through state-of-the-art simulation and management of patient information through digital technologies.
- enhancing its national and international reputation for craniofacial and oral biomaterials research.
- continuing its leadership role in assessment, institutional effectiveness and competency-based education.

### *Core Values*

Consideration of the many values by which HSC-Baylor College of Dentistry members conduct their activities in carrying out the college mission led to the identification of five core values as a set of shared principles. We are committed to:

- Integrity - We hold ourselves to the highest standards of honesty, ethics and the law.
- Professionalism - We embody behavior that is respectful, collegial, compassionate, confidential and patient-centered.
- Excellence - We strive to achieve the highest standards of performance.
- Quality - We evaluate and improve our programs and services to be accountable, contemporary and innovative.
- Leadership - We lead our profession, mentor leaders and create leadership opportunities.

### *Goals*

**Goal 1. Education**

HSC-Baylor College of Dentistry is committed to providing educational programs that prepare its students to be dentists, dental hygienists, dental specialists, educators and scientists, while fostering professionalism, critical thinking and commitment to life-long learning.

**Goal 2. Faculty, Staff, Students, Alumni**

HSC-Baylor College of Dentistry is committed to recruiting, retaining, developing and investing in exemplary and diverse faculty, staff and students and to fostering strong alumni relations in an environment that is conducive to personal and professional growth.

**Goal 3. Research**

HSC-Baylor College of Dentistry is committed to expanding the research culture of the college to ensure that its research activities contribute to the understanding of basic biological and pathological processes and are translated into advances in patient care.

**Goal 4. Patient Care**

HSC-Baylor College of Dentistry is committed to providing quality care in an environment that is sensitive to the needs of each patient.

**Goal 5. Outreach**

HSC-Baylor College of Dentistry is committed to providing outreach programs for the benefit of the community and the state.

**Goal 6. Planning and Development**

HSC-Baylor College of Dentistry is committed to creating its future by developing new resources to support the goals of the college, to enhance its reputation and to plan a state-of-the-art dental school.

### *Cultural Competence Education*

Cultural competence education is a growing part of the HSC-Baylor College of Dentistry curriculum. Workshops based on a model from the National Coalition Building Institute and other programs are offered during freshman orientation and throughout the school year for students, staff, faculty and administrators. Skills for communicating effectively with individuals from diverse backgrounds are further developed in preclinical and clinical behavioral science courses.

### *Educational Philosophy of the Pre-doctoral Program*

The pre-doctoral experience at HSC-Baylor College of Dentistry is characterized by an environment, curriculum, faculty and learning process that prepares individuals to promote oral and general health. This educational experience involves the teaching and learning of a combination of scientific and technical

knowledge, clinical judgment and professionalism. The educational process is directed toward the development of broadly competent practitioners and encourages both clinical and basic science research in order to instill a spirit of inquiry in students. The outcome of the college's mission is to educate and train a biologically oriented, technically competent, socially sensitive practitioner of dental medicine who adheres to the highest standards of professional conduct and ethics and who can function effectively as a member of the nation's health care delivery system. The college adheres to a competency-based, comprehensive care philosophy of education and patient treatment. Comprehensive care is defined as a system of clinical instruction and operation that allows the student to provide or be responsible for all aspects of a given patient's treatment needs in a manner that closely resembles the way the student will provide care in private practice after graduation. Educational competencies are included later in the discussion of curriculum.

BCD recognizes the need to support excellence in its educational programs by acquiring and maintaining a highly qualified faculty and students, excellent physical facilities and a competency-based curriculum that is contemporary, comprehensive and efficient.

### *Opportunities in Dentistry*

Dentistry offers many career opportunities. Most graduates of the college choose to engage in private practice as dentists or dental hygienists. Other graduates may pursue their profession in one or more of the following areas:

- Graduate training programs
- Hospital dental programs
- Industrial dental programs
- Public health agencies (local, state or national)
- Federal government agencies (Veterans Affairs, military services, etc.)
- Dental education (as teachers, researchers or administrators)
- Consultantships (to insurance carriers or to other health care professionals)
- Commercial companies (professional products development and manufacture)
- Dental research (as scientists in industry or academia)

## Location

The Texas A&M Health Science Center Baylor College of Dentistry is located in Dallas, Texas. The Dallas/Fort Worth Metroplex is an area noted for the vigor, optimism and friendliness of its population. The ever-changing skyline reflects the continuing growth of the area.

Opportunities for educational, cultural and religious enrichment are numerous. Within a 100-mile radius of Dallas are more than 40 colleges and universities. Dallas has professional theater, opera, symphony and dance companies. Among the many museums and galleries in the area, the Dallas Museum of Art has received international acclaim for both its design and its exhibits.

For sports enthusiasts, Dallas has professional and college football, basketball, baseball, hockey and soccer teams. The Metroplex annually hosts competitions in golf, tennis, bowling and track-and-field that attract many of the world's best athletes. Numerous lakes and parks provide recreational opportunities for boating, fishing, swimming, jogging, biking and horseback riding.

Dallas is served by modern transportation facilities, including several interstate highways, the Amtrak rail system and the Dallas Area Rapid Transit system. The Dallas/Fort Worth International Airport, with many major and feeder airline connections, is one of the busiest air terminals in the nation. Airline connections also can be made at nearby Love Field, 10 minutes from the college.

HSC-BCD is centrally located in the city of Dallas, about one mile east of the downtown business district. This is an area where restored historic homes and fashionable new homes create pleasant neighborhoods. The Texas State Fairgrounds and the downtown arts district, with its world-class concert hall and art museum, help make this part of Dallas an exciting place to live and work. Living accommodations are located as close as one block from the campus.

This area is also the location of Baylor University Medical Center with its six hospitals and more than 26 specialty centers. HSC-BCD is within the medical center complex, although it is a separately operated, autonomous campus of the HSC.

Correspondence may be directed to the following addresses:

Baylor College of Dentistry
Texas A&M Health Science Center
Physical address:
3302 Gaston Ave.
Dallas, Texas 75246
Mailing address:
P.O. Box 660677
Dallas, Texas 75266-0677

Additional information is available on the HSC-BCD website at www.bcd.tamhsc.edu

## Facilities

The physical facilities of HSC-Baylor College of Dentistry provide an environment for learning that meets the special requirements of professional education in the dental and dental hygiene professions. The college facilities include an eight-floor academic building, the Baylor Health Sciences Library, an Oral and Maxillofacial Imaging Center, and a multilevel parking garage and other parking areas for students, staff and faculty. In addition, HSC-BCD has a newly acquired science building that will add 16,000 square feet to the existing campus. Occupation occurred in spring 2005. Later additions to the building will result in a 35,000-square-foot research complex.

The academic building provides approximately 250,000 square feet of modern, comfortable and well-equipped lecture halls, teaching and research laboratories, clinics, faculty offices and specialized areas for patients and students. The building surrounds a skylighted, ground-level atrium for relaxation and conversation. The atrium adjoins a food service area and lounge with conveniently located locker rooms for students.

Three large lecture halls are available for formal class lectures. Each hall is furnished with custom-designed audiovisual equipment and is ramped to improve visibility. Smaller classrooms are used for seminars and small-group instruction.

Pre-clinic and basic science laboratories give students valuable hands-on experience with lecture and textbook concepts. The college dedicated its new 100-unit simulation laboratory in August 2002. Clinic laboratories that are separate from patient clinics give students the space and facilities needed for clinic-related work, such as making of dentures, bridges and crowns. In addition, professionally trained dental technicians and a fully equipped dental laboratory help students with advanced work and give students experience in working with a professional laboratory.

The 10 dental clinics, adjoining patient reception and waiting areas, and the offices and laboratories of clinic departments occupy six floors of the building. The clinic design provides students an environment that resembles a modern private dental office with all the advantages of self-contained equipment and careful attention to patient comfort and privacy. However, the design of cubicle enclosures also permits easy communication between students and clinic instructors.

Most basic science department offices and research laboratories are located together on a single floor to encourage scholarly activity and exchange of information. The research equipment includes both scanning and transmission electron microscopes, a modern research quality optical microscope, a well-equipped facility for research in dental materials science, a walk-in refrigerated laboratory for low-temperature projects, incubators for cultures of tissues and microorganisms and an accredited facility for housing and treating small animals used in teaching and research. Clinical faculty members make use of research facilities in independent studies and as part of teams comprised of both basic science and clinical investigators.

Many of HSC-BCD's administrative offices are located on the fifth floor, including those for the:

- Dean
- Associate Dean, Academic Affairs
- Associate Dean, Student Affairs
- Academic Programs
- Administrative Computing
- Admissions and Academic Records
- Community Outreach Services
- Curriculum Assessment
- Student Aid
- Various academic and administrative support services

The Business and Human Resources offices are located within this area as well. Various support facilities also are on this level, including computer facilities for the college administration. The Office of Media Resources provides instructional design specialists, graphic designers, photographers and artists for the design and production of teaching and publication materials. A fully equipped television studio can transmit live or recorded instruction to every lecture room, or record information in cassette form for self-paced student review.

The Center for TeleHealth, also located on the fifth floor, was established in May 1996 to extend health care, education and research through interactive telecommunications of live and still images, audio and digital data. This initiative includes consultations, diagnosis, treatment planning, health care services and research, as well as professional and public education, information transfer and epidemiological surveillance. The intent is to provide consultations on demand, equitable access to care and education, and to facilitate professional assistance to underserved and remote areas, both nationally and internationally.

The Continuing Education Center is on the sixth floor, where courses are presented throughout the year for the dental profession and auxiliaries interested in updating their knowledge. The 20-chair Acton Dental Clinic and a fully equipped dental laboratory are available for participation courses. A large lecture hall, a smaller classroom, food service facilities, large reception area and administrative offices complete the center's facilities.

HSC-Baylor College of Dentistry's facilities are complemented by arrangements with private dental offices in the North Texas area and various community agencies where students gain specialized experience in short-term extramural rotations. Institutions in the Dallas area that are affiliated in this way with the college include Baylor University Medical Center, Children's Medical Center of Dallas, Denton State School, Parkland Health and Hospital System, Texas Scottish Rite Hospital for Children, the University Affiliated Center and the Veterans Affairs North Texas Health Care System: Dallas Veterans Affairs Medical Center.

### *Library*

The Baylor Health Sciences Library meets the academic and professional information needs of students, faculty and staff by providing ready accessibility to current and comprehensive information sources and services. The library contains approximately 37,000 print volumes and subscribes to more than 2,800 journals, including more than 2,100 full-text online publications. In addition, some 2,000 volumes comprise the Sellers Collection of rare books in medicine, religion and art.

The library provides access to a variety of electronic resources, including Ovid MEDLINE, CINAHL, ERIC, Web of Science and more than 500 electronic textbooks.

### *Instructional Computer Laboratory*

The Instructional Computer Laboratory (ICL) is a PC-based classroom with video projection and multimedia equipment. This facility is operated by the Office of Information Technology for use by HSC-Baylor College of Dentistry students, faculty and staff. The PCs are networked to allow access to electronic information resources at the college library and on the Internet. The laboratory is designed for hands-on, computer-based instruction to small groups of students. When not in use for classes, workshops and training sessions, the ICL is available for self-directed learning using computer-aided instruction and other audiovisual materials. Many of the materials have been developed by HSC-BCD faculty to support the instructional program.

### *Media Resources*

The Office of Media Resources offers a wide range of teaching and research support, including the planning, design and production of educational and audio-visual materials, course manuals, publications, exhibits, photography and computer-assisted instruction programs. Assistance to students and faculty is available for table clinic presentations, research project posters, digital slide presentations and other college-related presentations. Audio-visual equipment is available to check out for school use.

### *Office of Communications and Development*

HSC-Baylor College of Dentistry's Office of Communications and Development provides communications (public relations) and development (fund-raising) services to the administration, faculty, staff and students to advance the teaching, research and outreach missions of HSC-BCD and the overall HSC. The office also provides communications support to the college's alumni services and activities.

## Alumni Association

The HSC-Baylor College of Dentistry Alumni Association is an organization for all dental, dental hygiene and postgraduate alumni and friends of the college. The association's purpose is to unite the alumni and friends of HSC-BCD in an organization that promotes the college and supports the lifelong colleague initiative among all members of the profession. It is supported solely through voluntary contributions.

While contributions of any amount are encouraged, there are five recognized levels of annual financial contributions to the association:

| | |
|---|---|
| Ambassadors Club | $10,000 or more |
| Dean's Club | $1,000 |
| Scholars Club | $500 |
| McCarthy Associates | $250 |
| Century Club | $150 |

The Alumni Association hosts several educational and social activities annually throughout Texas and the Southwest. The association also sponsors the Teacher-of-the-Year Award, Distinguished Alumni Award and Outstanding Young Alumni Awards. In addition, the Alumni Association established and sponsors the annual Student Eat and Learn, a popular seminar that provides students an opportunity to interact with alumni on an informal basis. This program is designed to better prepare students for their careers after graduation and to discuss important topics that are generally not part of the academic curriculum.

HSC-Baylor College of Dentistry alumni have distinguished themselves in community service locations throughout the United States. Many alumni have served in leadership roles in local, state and national professional societies.

## Residency

Each student is responsible for declaring a legal state of residency at the time of application. Any changes in residency status are considered by a committee on an individual basis and are made only once a year, prior to registration for the fall semester. Information and forms are provided by the Office of Academic Records and must be submitted by Aug. 1 of each year. Residency requirements are described in the Texas Education Code. A copy of the Texas Higher Education Coordinating Board rules and regulations on the determination of residency status is available in the Office of Academic Records.

## Matriculation and Registration

All students are required to register on the dates specified in the official school calendar. A matriculation fee of $15 is required of every student upon first admittance to any program of the college. New students who fail to report for registration at the specified time may lose their place in the class unless they have previously received permission for late registration.

Veterans who have obtained a certificate of eligibility should report to the director of student aid for handling of veterans' benefits.

Detailed information about student aid and veterans affairs is available from the Student Aid Office.

## Physician's Statement

Before enrollment, the accepted applicant must return a completed physical examination form furnished by HSC-BCD. Required immunizations are included with the physical examination form.

## Criminal Background Checks

Effective immediately individuals accepted into programs of the college must satisfactorily complete a criminal background check review as a condition of matriculation. These checks disclose all actions, including convictions, arrests, charges, grand jury indictments and deferred adjudications. Enrollment will not be final until the completion of the criminal background check with results deemed favorable. Admission may be rescinded based on a review of the criminal background check. This policy also applies to those students or program participants entering or continuing in programs that do not involve the review of the Admissions Committee or a program director.

Students who refuse to submit to a criminal background check or do not pass the criminal background check review may be refused admission or dismissed from the program.

To access the complete policy concerning CBC, please visit the following website:
http://www.tamhsc.edu/facultystaff/rules/
The pertinent rule is 11.04.99.Z2.01

## Drug Screening

Effective as of the date of this policy, individuals accepted into programs of the college must submit to and satisfactorily complete a drug screening as a condition of admission. This screen must be completed and satisfactory results received by HSC-Baylor College of Dentistry within 30 days after matriculation or before participation in a rotation or patient treatment that requires such a screening, whichever comes first. This policy also applies to those students or program participants entering or continuing in programs that do not involve the review of the Admissions Committee or a program director. Students who refuse to submit to or do not pass the drug screening review may be dismissed from the program.

Drug screening results will be honored by HSC-BCD and all of its affiliates for the duration of the student's enrollment in the program if the participating student has not had a break in enrollment at the college. A break in enrollment is defined as nonattendance of one full semester (fall or spring) or more. The above information must be verifiable through HSC-BCD.

To access the complete policy concerning drug screening please visit the following website:
http://www.tamhsc.edu/facultystaff/rules/
The pertinent rule is 11.04.99.Z1.02

## Expenses

### *Tuition*

The tuition for students in the Texas A&M Health Science Center Baylor College of Dentistry is recommended by the administration and is set by the Texas Legislature. HSC-BCD administration sets fees within guidelines specified by the Legislature. There may be adjustments as economic conditions warrant. The following fees apply for the 2007-2008 academic year.

# Dentistry

## Expenses

| | |
|---|---|
| Resident, per semester 2007-2008 | $4,824/semester |
| Nonresident, per semester 2007-2008 | $10,224/semester |
| Designated tuition | $118/semester hour |
| Summer clinic fee | |
| (D.D.S. third- & fourth-year students) | $315/summer session |
| Individual courses | |
| Undergraduate | |
| Resident | $50/semester hour |
| Nonresident | $325/semester hour |
| Graduate | |
| Resident | $100/semester hour |
| Nonresident | $325/semester hour |
| Audit fee | |
| Dental and graduate | $100/semester hour |
| Dental hygiene | $50/semester hour |
| Clinic name stamp | |
| Dental Hygiene | $15/one-time fee |
| Dental | $15/one-time fee |
| Graduates | $15/one-time fee |

*Combined fees for individual courses and audits will not exceed the cost per semester for full-time enrollment.

### *Tuition Refund Policy*

The admissions deposit is nonrefundable in the event the accepted applicant decides not to attend HSC-BCD. Upon enrollment, the admissions deposit is applied against tuition charges. The policy for refund of tuition charges for the college conforms to the Higher Education Amendments of 1998. Students withdrawing on or before 60 percent of their term of enrollment for which they are currently charged will have their refund calculated by a pro rata method defined by Reauthorization Act formulas. If a student withdraws prior to the first class day, there will be a 100 percent refund. Conversely, if a student withdraws after the 60 percent point of his/her enrollment period, there will be no refund.

For the purpose of this policy, "tuition charges" includes charges for tuition, designated tuition, health clinic, activity and parking fees (parking is the only optional fee). Nonrefundable charges include fees for the following items: application, matriculation, graduation, identification card, lost keys, returned checks, transcripts, late registration and American Student Dental Association dues. Notification of withdrawal must be made in writing to the associate dean for Academic Affairs.

According to federal regulation, refunds of those students who have received financial aid under Title IV and other sources are returned to applicable programs and agencies in the following order:

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Unsubsidized Direct Stafford Loan
4. Subsidized Direct Stafford Loan
5. Federal Perkins Loan
6. Federal PLUS Loan
7. Direct PLUS Loan
8. Federal Pell Grant
9. FSEOG
10. Other Title IV Aid Programs

An appeals process exists for those students who believe that extraordinary circumstances warrant refunds that are exceptions to published policy. Requests for appeals must be made in writing to: Baylor College of Dentistry; Texas A&M Health Science Center; Associate Dean for Student Affairs; P.O. Box 660677; Dallas, Texas 75266-0677.

### *Fees and Deposits*

| | |
|---|---|
| Application Nonresident: Dental and dental hygiene students only | |
| To accompany the application form for admission (not refundable) | $35 |
| Reapplication (not refundable) | $25 |
| Admission Deposit: | |
| Payable upon notification of acceptance as a student (not refundable if student does not enroll) (applied to the tuition) | $200 |
| International Student Fee | $86/semester |
| Computer Use Fee | $8.50/semester hour |
| Library Access Fee | $6.50/semester hour |
| Matriculation | $15 one-time fee per program |
| General Property Deposit | $10 one-time fee |
| Graduation: | |
| Payable at the beginning of the semester preceding graduation | $100 one-time fee |
| Identification Card: | |
| Issued by the Office of Academic Records | |
| Required of all enrolled students | $20 one-time fee |
| Replacement Card | $15 |

| | |
|---|---|
| Group Hospital Fee | $62/semester |
| Group Hospital Fee | $10/summer |
| Student Services | $5.20/semester hour; maximum 18 hrs./semester |
| Parking | $90/semester; $65/summer |
| Duplicate Diploma | $55 summer; $80 fall/spring; $40 per duplicate |
| Lost Keys: | |
| Each replacement | $5 |
| Returned Check: | |
| Assessed for each check returned from the bank | $25 |
| Transcript: | |
| Incomplete copy (before degree) for grade report use, each copy | $5 |
| Complete copy (after degree) first copy free, each subsequent copy | $5 |
| Late Payment Fee | $25 first week; $10 per week until paid |
| Late Registration (after census date of academic term) | $200 |
| Late Add Fee (if results in net addition of hours after census date) | $50/change |
| Reinstatement Fee | $50 |
| Laboratory Fee | $30/semester |
| Instrument Management Fee | D.D.S. $150/semester; D.H. $120/semester |
| Skull Rental Fee (first year, first semester only) | D.D.S. $100 one-time fee |
| Dental Malpractice Insurance Fee | |
| Dental | $65/year |
| Dental Hygiene | $30/year |
| Graduate Students | $110/year |
| Installment Fee | $15/semester |
| Technology Fee | D.D.S. $500/year; D.H. $250/year |

Registration consists of payment of tuition and fees and the completion of specified forms; failure to complete either of these functions on the date designated for a specific class constitutes late registration. Presentation of a check for tuition and fees that does not clear for lack of funds will constitute late registration as well as a returned check fee. An additional late fee of $10 will be charged for each additional week or portion thereof up to the 20th class day.

### *Books, Equipment and Supplies*

Each student is required to purchase textbooks and instruments as indicated by the official school lists. Instruments are secured at the school on the day of registration and become the personal property of the student. Textbook lists are provided to the student. It is the student's responsibility to secure all needed texts. The deletion of any item from individual purchase requires the signature of the chairman of the Textbook Committee or the Instrument Committee. Individual possession of these items affords a better opportunity for the learning process while at the college, and they will serve as the nucleus of a future dental office and library. All instruments and equipment must be maintained in good condition. Lockers are provided to store books and equipment. Insurance is available to cover possible loss of instruments. Technical material and supplies will need to be purchased from time to time for certain courses. This expense cannot be estimated accurately.

The approximate cost of books, instruments and supplies for the complete curriculum beginning fall 2007 is listed below. Scrubs are required but are not a part of the estimated cost. The total estimated cost, less tuition, is:

| | |
|---|---|
| First Year (D1) | $8,568 |
| Second Year (D2) | $11,249 |
| Third Year (D3) | $907 |
| Fourth Year (D4) | $561 |
| Total | $21,285 |

Books, instruments and supply fees are due at the beginning of the fall semester. Tuition and fees are due at the beginning of each semester.

## Financial Assistance

HSC-Baylor College of Dentistry participates in several types of loan and scholarship programs. The college uses the Free Application for Federal Student Aid (FAFSA) for this purpose. Students are encouraged to complete their FAFSA online (www.FAFSA.ed.gov) as soon as possible **after** completing their tax returns in January or February each year. The following policies guide the award of all loans, grants and scholarships:

- All eligible applicants for student loans, scholarships and grants will be considered regardless of age, socioeconomic level, sex, religion, disability or national origin.
- Federal, state, institutional and private donor regulations, guidelines and application procedures will be adhered to at all times when administering various loan and scholarship programs.
- HSC-Baylor College of Dentistry will ensure that only eligible applicants receive student financial aid.
- The Department of Education needs-analysis system will be used for the determination of financial need.
- A parental contribution factor based on family resources will be used for dependent undergraduate students. Parental contribution also will be used for all D.D.S. students who are applying for the Health Professions Student Loan.
- Merit scholarships, awarded based on academic history or a combination of academic history and other specified factors, are available contingent upon funding.
- A listing of loans, scholarships and grants is available upon request from the Financial Aid Office.

Although most student aid is awarded during the spring for the following academic year, this does not preclude a review of individual aid at any time during the year. As circumstances change, efforts will be made to meet those needs.

The priority deadline date for the determination of eligibility for grants and scholarships will be published each year, along with specific application instructions. This date is generally in early to mid-March. Unusual circumstances affecting need may be considered at other periods during enrollment. Students must keep the Student Aid Office informed as to changes in financial need (e.g., student marries, separates, receives outside scholarships).

# Dentistry

## Academic Scholarships

Graduating students who have received loans must have an exit interview during the spring semester. Graduates must inform the lender of address changes during the repayment period of the loan. The graduate is expected to correspond with the lender if irregularities in payments are anticipated. Repayment and deferment opportunities will be made available to the graduate when appropriate.

## Academic Scholarships

HSC-Baylor College of Dentistry awards academic scholarships to entering first-year students of the Doctor of Dental Surgery (D.D.S.) program. These scholarships are open to resident and nonresident students and are based on the previous undergraduate academic record as indicated by GPA's that document the history of accomplishment in all course work considered by the Admissions Committee for acceptance into the college.

Academic scholarships are merit-based; they require no application. All entering students are eligible. Funded by the Baylor Oral Health Foundation, these scholarships attempt to fulfill a commitment of the foundation to decrease the financial burden of attaining the first professional degree.

These scholarships are awarded through the Office of Recruitment and Admissions. Non-resident students receiving these scholarships may qualify to pay resident tuition consistent with Texas statute and Texas Higher Education Coordinating Board Rules, published in their handbook on determination of Texas residency status.

## Graduate General Dentistry Scholarship

This competitive academic scholarship is awarded to entering Advanced Education in General Dentistry (AEGD) graduate students. No application is required in this highly selective program, as all applicants are eligible when considered for the available positions in the program. Successful applicants are offered a position in the class and the award accompanies admissions. The total award for the year is $1,000 and is applied towards tuition and fees.

## Student Health Services

The mission of HSC-Baylor College of Dentistry's Student Health Service is to serve the student body through provision of medical services and promotion of health through preventative care and education.

Good health is important to achieving one's full potential in academic, career and personal goals. HSC-BCD's Student Health Se rvice is available to help maintain and promote optimal health. Personal medical insurance is mandatory.

### *Medical Clinic*

Health care practitioners provide medical care for short-term, acute illnesses and injuries. Referrals to outside physicians are made as necessary.

### *Medical Laboratory*

Routine hematological, chemical and bacteriological diagnostic tests are preformed by Quest diagnostics, the nation's leading provider of diagnostic testing.

### *Preventative Medicine*

All new students are required to submit a completed medical history, including documentation of required immunizations.
- Vaccination boosters are available.
- Tuberculosis screenings are performed annually.
- Occupational Exposure Management includes blood testing, immunization boosters and infectious disease referrals appropriate to the exposure.
- Free influenza vaccinations are available annually.

### *Wellness Education*

Continuous wellness education encourages a healthy lifestyle and disease prevention for the student and the community.

## Housing

Off-campus apartments and other housing facilities are available but are not provided by the college. HSC-BCD does not inspect or approve listings; however, the Office of Student Affairs will offer assistance in locating accommodations.

## Security

Information concerning campus security and crime statistics is available from the Security Office of HSC-Baylor College of Dentistry. The college publishes these statistics on its website at http://bcdhscwebs.tambcd.edu/bcdfacility/SCRTYcrime_stats.html.

The general public, potential students, students, faculty and staff are entitled to request these statistics in paper copy. HSC-BCD is pleased to supply this information upon request.

## Student Organizations

The following groups are recognized as student organizations at HSC-BCD.

### *American Dental Education Association*

The American Dental Education Association is the official body that represents the interests of individuals and institutions engaged in dental and allied dental education. Through councils, committees and sections, each member can participate in the process of dental education. Members receive the association's publications. Three students, two dental and one dental hygiene, are elected to represent HSC-BCD on the Council of Students.

### *American Society of Dentistry for Children*

The American Society of Dentistry for Children (ASDC) is an organization established to promote children's dental health. The national chapter of ASDC targets dental hygienists and general dental practitioners who are interested in meeting the needs of the child population. This is not an organization specifically for pediatric dentists or dental students interested in specializing in pediatric dentistry. The student chapter was established to provide opportunities for dental and dental hygiene students to experience areas involved in pediatric dentistry at off-campus sites. Student members may visit area pediatric dentists' and orthodontists' offices as well as area children's hospitals' dental facilities. They also may participate in dental health promotion lectures at area schools. Additionally, members are asked to participate in functions that may not have a direct dental benefit for children, but have an overall benefit of health or psychological well-being.

### *American Student Dental Association*

HSC-BCD students may become members of the American Student Dental Association and receive the monthly journal and other membership benefits. Student membership should encourage graduates to become active in their local dental societies. One delegate from each dental class is elected to represent HSC-BCD.

### *Asian-American Dental Society*

Dental and dental hygiene students are eligible for membership in the Asian-American Dental Society. Its mission is to provide members with an opportunity to participate and address Asian-American oral health care issues; to stimulate interest and encourage the entry of Asian-Americans into oral health care professions; to promote cultural awareness within the oral health care community and the oral health education of Asian-American communities; to collaborate with other student associations with similar objectives; and to help oral health care students establish relations with other local health professionals.

### *Athletics and Fitness*

HSC-Baylor College of Dentistry sponsors teams in softball, basketball, volleyball, football and soccer leagues. Over the years, many HSC-BCD students have been outstanding athletes, and several league championships have been won. Any interested student is permitted to try out for teams.

HSC-BCD participates in the Texas Dental School Olympics in which students from the three Texas schools compete in various athletic events. Alternate sites of Dallas, Houston and San Antonio are used on an annual basis.

Students who are interested in membership in the Baylor Fitness Center may join for a nominal monthly fee. The fitness center is part of the Tom Landry Center for Sports Medicine and Research on the adjacent Baylor University Medical Center campus.

### *BCD Dental Spouses Association*

Dental, dental hygiene and graduate student spouses are eligible for membership. This association provides members with a support mechanism, gives them the opportunity to work together on projects and promotes fellowship.

### *BCD Women's Club*

The BCD Women's Club is open to anyone affiliated with the college. Its purpose is to render support to the college, to engage in fund-raising for charitable purposes, to distribute such funds in accordance with established criteria of the college, and to provide opportunities to work together as well as promote fellowship. Details about the club and the variety of activities it sponsors are given to new students at registration.

### *Christian Medical and Dental Society*

The Christian Medical and Dental Society (CMDS) is a group of students, staff, faculty and practitioners committed to minister to people and to personal growth. CMDS offers opportunities to grow spiritually through application of biblical principles to the decisions that confront us daily. CMDS extends opportunities for fellowship and growth through short-term mission trips to provide medical and dental care to selected villages in Latin America. CMDS membership at HSC-Baylor College of Dentistry is open to dental professionals and students who are interested in linking their Christian faith with their profession.

### *Fraternities*

Professional fraternities are a part of the college's activities. Four national dental fraternities are represented through local chapters: Lambda Lambda Chapter of Delta Sigma Delta; Delta Psi Chapter of Psi Omega; Alpha Phi Chapter of Xi Psi Phi; and Alpha Chi Chapter of Alpha Omega.

A student accepting fraternity membership automatically assumes additional financial obligations and shall be so notified by the fraternity. These obligations are considered part of the total commitment to the college.

### *Health Science Center President's Student Advisory Board*

The purpose of the board is to provide a direct liaison between the student body and the president, to advise and assist the president on student-related issues, to share ideas and information among the students, and to familiarize students with the other HSC components and geographic locations.

### *Hispanic Dental Association*

All dental and dental hygiene students are eligible for membership in the Hispanic Dental Association. The organization's mission is to provide members an opportunity to participate and address Hispanic oral health care issues, promote the oral health education of the Hispanic community, collaborate with other student associations with similar objectives, and stimulate interest and encourage entry of Hispanics into oral health care professions.

### *International/American Association for Dental Research Student Research Group*

Students may start to work with faculty members on research projects early in their dental careers. Such projects are facilitated through the student research chapter of the American Association for Dental Research. Research is an integral component of quality dental education.

At HSC-Baylor College of Dentistry, postdoctoral students are required to complete a research project as part of their academic experience. Pre-doctoral dental and dental hygiene students are encouraged and given every opportunity to become involved in research. Research fellowships are granted to pre-doctoral dental and dental hygiene students whose written proposals are approved by HSC-BCD's Research Committee. Students have the opportunity to present their research findings at the annual Student Research Day as well as at state, national and international research competitions and professional meetings.

Information is available through the Student Research Group of the American Association for Dental Research.

### *Muslim Dental Association*

The Muslim Dental Association (MDA) is an organization open to all students, faculty, employees and individuals who desire to grow spiritually and professionally, and to overcome trials of life using Quranic teachings. MDA is dedicated to increasing Islamic knowledge and awareness of all individuals affiliated with dentistry, so we can work together to provide a higher standard of care for patients. MDA participates in a variety of events, including an annual health fair, guest lecture series and daily meetings to promote spiritual growth.

### *Society of Federal Dentists*

The Society of Federal Dentists (SFD) is a professional organization composed of dental students with obligations of service to the federal government. The primary purpose of the organization is the educational and professional development and enhancement of its members. The society encourages academic and clinical excellence, leadership, physical fitness and camaraderie.

SFD strives to prepare its members for future duty as active, uniformed dentists by regularly held meetings, symposiums and weekly workouts. Through efforts of cooperation and shared resources, members can make the most of their federal commitments and opportunities.

### *Student American Dental Hygienists' Association*

Dental hygiene students may become members of the Student American Dental Hygienists' Association. The organization's objective is to cultivate, promote and sustain the art and science of dental hygiene; to represent and safeguard the common interest of the members of the dental hygiene profession; and to contribute toward improvement of the health of the public.

### *Student Council*

The Student Council is composed of the respective class presidents, vice presidents and one elected member from each of the dental and dental hygiene classes. The council's purposes and objectives are: to represent the student body to the faculty; to coordinate, evaluate and present suggestions about problems that may arise in the laboratories and clinics; and to propose any change that might result in mutual improvements for HSC-BCD and the students.

### *Student National Dental Association*

The Student National Dental Association is the largest minority student dental organization in the United States. The organization's mission is to provide a support mechanism for minority dental students with an emphasis on: increasing minority enrollment in dental schools; promoting an environment conducive to the success of minority dental students; enlightening its members in the social, moral and ethical obligations of the profession; and assisting in programs within the greater community that impact minorities and the underserved.

### *Texas Association of Women Dentists*

The HSC-BCD Chapter of the Texas Association of Women Dentists (TAWD) is composed of students, both female and male, with an interest in supporting women in dentistry. The purpose of TAWD is to share mutual support, to offer opportunities for personal growth, to provide role models and to offer enrichment of members through association with others in their chosen profession. Student members are encouraged to participate in state level meetings of TAWD and are entitled to all privileges and responsibilities of active membership except those of holding office.

## Policies and Regulations

Policies and regulations are formulated by the Board of Regents and The Texas A&M University System administration respectively. In addition, rules and procedures are developed by the Texas A&M Health Science Center administration to supplement system policies and regulations. The dean, associate dean for Academic Affairs, associate dean for Student Affairs, director of Student Affairs, director of Community Outreach Services and members of the faculty provide counseling and guidance in academic and personal matters. If problems arise, students are urged to seek early assistance.

Note: A&M System and A&M System HSC policies and/or regulations have preeminent authority over the component's rules and/or procedures.

### *Attendance*

Regular attendance in all courses is strongly encouraged. Attendance may be required in specific courses at the discretion of each course director. If so, the attendance policy and the effect of poor attendance on grading must be stated in writing at the beginning of the course. HSC-BCD administration will support the attendance guideline established for each course. This policy toward attendance makes the student responsible for management of the time required to master the information presented in each course.

### *Attire*

HSC-Baylor College of Dentistry's philosophy is that individual dress and grooming directly affects patients, visitors, fellow students, staff and faculty, as well as the entire profession of dentistry. Therefore, faculty, staff and students are expected to be appropriately dressed and groomed. Patients expect to be treated by individuals who present a professional image. Details about student attire regulations are available from the Office of Student Affairs.

### *Conduct*

It is the policy of HSC-Baylor College of Dentistry to provide an atmosphere of trust and respect that is essential to a comfortable and professional work, patient care and academic environment. All students at the college are expected to uphold the highest standards of ethical conduct. Personal integrity, respect, courtesy, good manners and genuine concern for others are integral characteristics of a professional person and should be practiced at all times. Appearance, interactions with faculty and peers, care and handling of patients, and proper care of college property are all important to students' progress.

Specific rules regarding conduct have been established at the college as a code of ethics, addressing the honor system, dress, sexual harassment, substance abuse, and the academic and disciplinary due process. Violation of any provision of federal, state or local laws may be subject to disciplinary action, including expulsion, notwithstanding any action taken by civil authorities because of the violation. Any student may be dismissed, suspended or placed on disciplinary probation for improper conduct, following due process.

### *Harassment and Discrimination*

HSC-Baylor College of Dentistry is committed to providing an educational and work climate that is conducive to the personal and professional development of each individual. To fulfill its multiple missions as an institution of higher learning, the college encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual. HSC-BCD also strives to protect the rights and privileges and to enhance the self-esteem of all its members. Faculty, staff and students should be aware that any form of harassment and any form of illegal discrimination against any individual is inconsistent with the values and ideals of the college. Copies of the System Policies on Harassment may be obtained in the Office of Student Affairs.

Individuals who believe they have experienced harassment or illegal discrimination are encouraged to contact the appropriate office. Students should contact HSC-BCD's Office of Student Affairs.

### *Due Process*

The right for students to be heard in academic and disciplinary matters has been ensured by the guidelines in the HSC-Baylor College of Dentistry's Academic and Disciplinary Due Process for Students. Details about behavior subject to disciplinary action and the due process procedures are available from the Office of Academic Affairs at the college.

### *Alcohol and Illegal Substance Abuse*

HSC-Baylor College of Dentistry has established an alcohol and illegal substance abuse program to increase awareness of the consequences and hazards of alcohol and drug abuse. This program supports Department of Education regulations and The Texas A&M University System policies. One goal of this program is to have an alcohol and drug-free campus to ensure the physical and mental well-being of its students, faculty and staff. Students registering for the first time at HSC-BCD will receive a pamphlet describing the essential elements of this program.

*Alcohol:* Students are prohibited from possession and use of alcoholic beverages on the campus of HSC-BCD. Advertisements of meetings and functions of recognized college organizations will make no direct reference to the specific availability of alcoholic beverages at such meetings or functions.

*Controlled substances, illicit drugs and dangerous drugs:* Faculty, staff and students are prohibited from the manufacture, possession, sale or use of illicit chemicals or drugs, controlled substances or dangerous drugs (not indicated for legitimate medical or research use).

The complete Alcohol and Illegal Substance Abuse Education document may be obtained from the Office of Student Affairs.

### *Employment*

Students are discouraged from holding outside employment as it may be detrimental to the pursuit of their education. All students who are employed must notify the Office of Academic Records at HSC-Baylor College of Dentistry, stating the hours and days of work and the place of employment. In no case may a student accept a position that conflicts with regularly scheduled school hours. When scholastic progress is questionable, students may be asked to discontinue outside work.

### *Transcripts and Records*

Transcripts and other information from a student's academic records will be released by the director of Academic Records only upon written request from the student or other person authorized by law and with payment of the appropriate fee. An exception may be made in response to a subpoena or a court order. HSC-Baylor College of Dentistry is in compliance with the Family Educational Rights and Privacy Act of 1974 as amended. (See statement of students' rights under General Student Information in the Introduction section of this catalog.)

Student records reside in several offices of HSC-BCD, including:

- Office of Academic Affairs
- Office of Recruitment and Admissions
- Business Office
- Office of Clinical Affairs
- College Health Clinic
- Office of Student Affairs
- Office of Student Financial Aid
- Offices of individual academic departments

### *Change of Name*

Students who have a change of name must notify the Office of Academic Records by filing a change-of-name form. Changes of name from birth certificate records require a court order or marriage certificate as documentation. All grade reports, transcripts, diplomas, etc., are issued under the student's legal name as recorded in that office.

## Scholarship

### *Student Grades*

Grade reports are distributed to students at the end of each semester or summer session by the following HSC-Baylor College of Dentistry offices:

**Dental:** Office of Academic Records

**Dental Hygiene:** Office of Academic Records

**Graduate:** Department in which student is enrolled

Please refer to the explanation of the grading system in the General Information section of this catalog.

### *Review of Academic Process*

Academic progress of students is monitored by the Student Promotions Committee. At the end of each semester and at any other time deemed appropriate by the committee, the Student Promotions Committee reviews each student's performance and recommends one of the following actions:

- continue enrollment as a regular student;
- continue enrollment as a student on academic probation;
- continue enrollment as a special student;

- repeat course work in any deficient areas, as appropriate;
- repeat a specific course or a portion of the curriculum, the entire academic year; or
- dismissal.

Additionally, the Student Promotions Committee may delay a decision on repetition of deficient courses until the end of the academic year.

The committee also may require a student to be counseled if patient management or professional conduct issues are identified.

The Student Promotions Committee will consist of eight voting members – four from the clinical sciences, two from the biomedical sciences and one from the dental hygiene faculty – appointed by the Committee on Committees and a chair appointed by the dean. The associate dean for Academic Affairs, associate dean for student and alumni affairs and director of Admissions and Academic Records will serve as advisory members. Voting membership is restricted to faculty who have served full-time at HSC-BCD for at least two years.

Students are eligible for unconditional promotion if they have passed all courses, exhibit satisfactory professional conduct and performance and have earned a GPA as follows:

| | |
|---|---|
| First to Second Year | 2.00 |
| Second to Third Year | 2.00 cumulative |
| Third to Fourth Year | 2.00 cumulative |
| Graduation | 2.00 cumulative |

Students who pass all subjects but who fail to meet the required GPA for unconditional promotion will either be dismissed, given the opportunity to undergo remediation or placed on academic probation if the GPA falls within the ranges listed below at the end of the academic year.

| | |
|---|---|
| First Year | 1.85-1.99 |
| Second Year | 1.85-1.99 cumulative |
| Third Year | 1.85-1.99 cumulative |

With the approval of the Student Promotions Committee, students who meet the required minimum GPA of 1.85, including all grades, may be permitted to repeat a maximum of two courses, with no more than seven semester hours of failure, for each of the first and second years, respectively.

A student who earns a grade of "F" in a course must re-register and repeat that course. A minimum grade of "C" (75) is required to successfully remediate the course. The cumulative GPA will include both the original "F" grade and the grade earned in the repeated course and must be 2.00 or greater for unconditional promotion.

A student who receives a grade of "F" in the second year of dental school will not be allowed to begin clinical patient care until all deficiencies are removed.

### *Academic Probation*

Any student whose GPA for any semester is below 2.00 or whose cumulative GPA is below 2.00 at the end of any semester shall be placed on academic probation subject to the provisions of the following dismissal policies. Academic probation will be listed on the transcript.

### *Academic Dismissal*

Conditions that result in dismissal from HSC-Baylor College of Dentistry:

1. The following conditions will result in dismissal of first-year dental students from HSC-BCD:
   - A cumulative GPA under 1.50 at the end of the fall semester; or
   - A cumulative GPA under 1.85 at the end of the spring semester.
2. The following conditions apply to all dental students at HSC-BCD:
   - A student not removed from academic probation by the end of the semester, excluding summer session, will be dismissed.
   - A student who earns more than seven semester hours of "F" during a single academic year will be dismissed.
   - A student who earns more than 16.5 semester hours of "F" for all classes taken at HSC-BCD will be dismissed.
   - A student who fails more than two courses during a single academic year will be dismissed.

Other conditions that may result in repetition of an academic year or dismissal from HSC-BCD:

- Any student on academic probation may be considered by the Student Promotions Committee for dismissal.
- A student who fails a required course two times may be dismissed.
- A student who fails any course while repeating a year may be dismissed.
- The Student Promotions Committee reserves the right to recommend repetition of the year or dismissal of a student from the college who does not maintain professional conduct, proper patient management and ethical behavior. This action may be taken regardless of grades but only after written notice has been given to the student indicating the area(s) of deficiency with sufficient time to correct the area(s).

Complete details of the academic policies of the school are available from the Office of Academic Affairs.

### *Requirements for Graduation*

A candidate for the D.D.S. degree must have fulfilled the following requirements:

- Demonstrated evidence of satisfactory moral and professional conduct;
- Satisfactorily completed all of the prescribed courses of study;
- Attained the required GPA;
- Passed Parts I and II of the National Board Dental Examination;
- Be certified by the faculty as approved for graduation; and
- Be certified free of debts and obligations to the college.

## Licensure Information

### *National Board Examination*

The National Board Dental Examinations are constructed and administered by the Joint Commission on National Dental Examinations. They provide a good means of assessing the knowledge of examinees, since the same standardized examination is taken by students from every dental school in the United States and certain foreign countries. Almost universally, the results on these examinations are accepted as the written portion of examinations for licenses to practice in the various states.

National Board Examinations are divided into two sections. The Part I section on basic and pre-clinical sciences is administered to students during their second academic year. The Part II section on clinical sciences is administered during the fourth academic year. For the past 10 years, the record of Baylor College of Dentistry students on both Part I and Part II examinations has been excellent.

The performance of the dental hygiene students on the National Board Dental Hygiene Examination has been excellent.

### *Licensure Requirements*

Graduation from an accredited dental school does not automatically grant a graduate the license to practice. Each state has its own dental examining system that is responsible for evaluating candidates for licensure. Written and clinical examinations are usually required. At present, most states accept satisfactory performance on the National Board Dental Examination in partial fulfillment of the requirement for a written examination. The state of Texas participates in the Western Regional Examination Board.

## Awards and Honor Societies

### *BCD Odontological Honor Society*

The BCD Odontological Honor Society was founded in 1959 by a group of dental students. New members are elected to the society from the upper 25 percent of the third-year class. Selections are made by the fourth-year members on the basis of scholastic excellence, character and leadership. The society provides the members with a means to supplement their education beyond the formal dental curriculum. Members enjoy fellowship during monthly dinner meetings where they are able to share ideas and hear a variety of speakers covering many aspects of dentistry and the management of a practice.

### *Dean's Honor List*

Each year, dental and dental hygiene students are recognized for their excellent academic records by having their names placed on the Dean's Honor List. In addition, a special Dean's Cumulative Honor List recognizes fourth-year dental and senior dental hygiene students for all years of their academic performance at HSC-Baylor College of Dentistry. Dental and dental hygiene students included on the Dean's Cumulative Honor List must have achieved a cumulative GPA that ranks in the upper 20 percent of their respective classes and exhibit exemplary professional behavior.

### *Omicron Kappa Upsilon*

Omicron Kappa Upsilon is the national dental honor society founded in 1914 for the purpose of promoting scholarship among dental students. The Omicron Chapter was established at HSC-BCD in 1914. Only those students who rank in the upper 20 percent of the class qualify for consideration. A maximum of 12 percent of each graduating class is eligible for alumni membership. Selections are made after the first semester of the fourth year by teachers who are members of the society. Each newly elected member receives a key, which is symbolic of the society.

### *Scholastic Awards*

The highest scholastic award for dental students is the Gold Medal, which is presented at graduation to the student who has attained the highest cumulative GPA for the four years of study.

The four top-ranking dental students receive certificates in recognition of scholastic achievement. Other awards are presented to students who have demonstrated outstanding proficiency in selected subject areas of the curriculum.

## Curriculum

### *Competencies*

Competencies are the end products of clinical training and experience and represent the ability to perform or provide a particular, but complex, service or task. Students who have achieved competence in all areas should be qualified for the safe, independent practice of dentistry.

The eight major competencies, organized in four domains, define the objectives of the predoctoral program.

I. Professionalism
   - 1.0 Ethics: The new dentist must be able to discern and deal with the ethical and legal issues of dental practice.
   - 2.0 Information Management and Critical Thinking: The new dentist must be able to acquire and integrate information deemed valuable for dental practice and value the role of self-assessment, lifelong learning, and critical thinking in maintaining competency.
   - 3.0 Community Leadership: The new dentist must be able to recognize and address oral health problems at the community level.

II. Patient Assessment and Treatment Planning
   - 4.0 Examination of the Patient: The new dentist must be able to perform a complete patient examination and history that is necessary for the diagnosis of oral conditions and clinical management of the patient.
   - 5.0 Diagnosis: The new dentist must be able to make a diagnosis by evaluation of findings from the patient history, the clinical and radiographic examinations and other diagnostic aids as required.
   - 6.0 Treatment Planning: The new dentist must be able to develop and formulate a properly sequenced, comprehensive treatment plan that addresses the care of the patient, including referral, pre-existing medical conditions or patient priorities that may influence the treatment plan and alternative treatment options.

III. Prevention, Restoration and Maintenance of a Healthy Oral Environment
   - 7.0 Oral Disease Pre vention, Restoration and Oral Health Maintenance: The new dentist must be able to provide care for all patients that emphasizes pre vention of oral diseases, restoration of form, function and esthetics and supports the maintenance of existing oral and systemic health.

IV. Practice Administration
   - 8.0 Office Management: The new dentist must be able to manage a dental practice using contemporary office management procedures.

A complete competency document may be obtained from the Office of Academic Affairs.

Students in the first and second years devote their time primarily to the basic biological and dental sciences. The curriculum during the third and fourth years emphasizes clinical practice supported by didactic instruction. Courses in the curriculum are consistent with guidelines of the Commission on Accreditation of the American Dental Association to provide for cognitive, psychomotor and affective development. The curriculum at HSC-Baylor College of Dentistry is designed to correlate the basic biological sciences with the science and art of dentistry. It is under continuous review and therefore subject to change and improvement without

prior notice, as the need occurs. The faculty and administration are firm in the belief that students should develop their psychomotor abilities on laboratory models before beginning patient care.

### *Five-Year Extended Curriculum*

The Five-Year Extended Curriculum is designed to ease the transition into professional school and provide students with additional time for learning experiences and skills. This program divides the traditional first-year curriculum, which is heavy in biological sciences, into two years.

The Five-Year Extended Curriculum expands the total time in the pre-doctoral program to five years. Participants are considered to be full-time students even though the academic credit hour load is slightly reduced. After completion of the program, students continue in the standard second-year curriculum.

For more information contact the Office of Academic Affairs at HSC-Baylor College of Dentistry.

### *Post-Baccalaureate Program (PBP)*

The Post-Baccalaureate Program is a year-long program that assists students who desire to practice in underserved communities in gaining admission to HSC-Baylor College of Dentistry. The curriculum is rigorous and includes Dental Admission Test (DAT) preparation and upper-division science courses. Program fellows enhance their test-taking skills and develop learning strategies by participation in specially-designed seminars and workshops. Fellows also observe in HSC-BCD and community clinics.

### *Project Dental Awareness (PDA)*

Project Dental Awareness is designed to increase students' awareness of dental health and dental careers. Project activities include onsite visits to elementary schools, where pre-K and first-grade students view a video and second through sixth graders participate in hands-on activities.

### *Summer Teen Enlightenment Program (STEP)*

The Summer Teen Enlightenment Program is a one-week program that provides 10th-graders an opportunity to improve study skills, increase dental career awareness and engage in hands-on dental lab activities.

### *Summer Teen Academic Readiness Program (STAR)*

The Summer Teen Academic Readiness Program is a one-week program that provides 10th- and 11th-graders an opportunity to improve PSAT skills, increase dental career awareness and engage in a pre-clinical dentistry course.

### *Summer Academic Enrichment Program (SAEP)*

The Summer Academic Enrichment Program is a six-week program that provides 12th-graders an opportunity to prepare for the SAT and increase their competitiveness for admission into college. Students spend five weeks at HSC-Baylor College of Dentistry and one week at The University of North Texas. The curriculum consists of core courses and workshops, including SAT Preparation, Introduction to Pre-Clinical Dentistry, Learning Strategies, Research and Cultural Competence Training. Students also participate in clinical rotations and go on field trips to colleges and universities.

### *Summer Predental Enrichment Program*

The Summer Predental Enrichment Program provides college and post-college students an opportunity to strengthen their academic science background, learn more about the field of dental medicine, broaden their interests in biomedical and clinical sciences, learn useful study patterns for professional study, and increase their competitiveness for admission to dental school. The curriculum for the program consists of six core courses. These courses are: Introduction to the Human Body, Introduction to Dental Sciences, Preclinical Dentistry, Learning Strategies, Research and DAT Preparation. In addition, the students participate in workshops and activities such as diversity training, mock and official DATs, mock admissions interviews, extramural rotations at off-campus dental sites, and interactions with dental students, faculty and administrators.

## Patient Treatment

One of the most important aspects of the curriculum is the ability to provide students the opportunity to manage a variety of clinical conditions in each of the clinical disciplines. The Dallas/Fort Worth Metroplex and surrounding communities provide access to an abundance of patients from all socioeconomic levels.

HSC-Baylor College of Dentistry meets the needs of nearly 25,000 patients each year, and more than 130,000 patient visits are recorded annually in the college's 10 clinics and off-site programs. Students manage patients with varied medical histories and infection control status, and includes children, adults, the elderly and those who are mentally or physically disabled. Student experience also is enhanced by state-of-the-art digital records and radiology, as well as off-campus programs in public schools, community agencies and state institutions in the area.

## Community Outreach Activities

HSC-Baylor College of Dentistry provides a broad range of oral health services and education to the people of Texas through the "Community Connections" initiative of the Department of Public Health Sciences. These programs enhance access to care and oral health education for underserved and special patient populations throughout Texas, reaching more than 95,000 people annually. Students, faculty and staff provide the services, including oral screenings, examination, treatment and health education/disease prevention counseling. Students are given the opportunity for experience in a variety of clinical and educational settings. Community Connections programs include:

### *Community Connections*

Community outreach programs are an essential part of the college's strategic plan to accomplish its mission. The "Community Connections" program is coordinated through the Social Services Office in the Department of Public Health Sciences, and provides a number of opportunities for HSC-BCD students to participate in outreach activities.

### *Tooth Talk*

All third-year dental students are required to participate in Tooth Talk, which involves making dental health education presentations to children in various Dallas area classrooms. Oral health education is given to elementary, middle and high school students, as well as career choice and teen parenting presentations for middle school and high school students. When appropriate, Tooth Talk is presented to college and adult audiences.

### *Health Fairs and Student Body Screenings*

As part of their senior clinical experience, students perform dental examinations and oral cancer screenings at two "Community Connections" events, usually community or corporate health fairs or Children's Sealant Day at HSC-BCD. Each year, HSC-BCD joins forces with Communities in Schools to provide dental screenings for entire student bodies of high-risk elementary and middle schools.

## Community Preceptor Program

This is a selective course available to fourth-year dental students, involving 1-2 week externships in dental offices and public health clinics throughout Texas and selected sites in various other states. The majority of senior students elect to participate in the program. Students are given the opportunity for clinical experience in a variety of health care delivery settings and learn about the civic and professional obligations of a health care provider, philosophy and goals for a dental practice, community factors that affect dental care delivery, and business and personnel management.

## Summer Clinic

The teaching clinics operate for a six-week period during the summer to help transition and orient the students into the programs. Summer session is Monday through Friday from 8 a.m. to 4:30 p.m. All clinic rules are maintained, and assignments are mandatory.

## Doctor of Dental Surgery Curriculum

*See course descriptions beginning on page 168.*

### *First Year (D1)*

| | | Clock Hours by Semester | | | | Total | Total |
|---|---|---|---|---|---|---|---|
| | | Fall | | Spring | | Clinic | Sem. |
| Courses | | Lect. | Lab. | Lect. | Lab. | Hours | Hours |
| 6500 | Biochemistry/Nutrition | 44 | - | - | - | - | 2.5 |
| 6520 | Cariology & Prevention | 16 | - | - | - | 3 | 1 |
| 6540 | Dental Anatomy | 32 | - | - | - | - | 2 |
| 6543 | Dental Anatomy-C | - | 96 | - | - | - | 2 |
| 6580 | Dental Materials | - | - | 8 | 24 | - | 1 |
| 6600 | General Histology | 26 | 26 | - | - | - | 3 |
| 6640 | Gross Anatomy | 42 | 126 | - | - | - | 6 |
| 6660 | Growth and Development | 22 | - | - | - | - | 1.5 |
| 6680 | History of Dentistry | 16 | - | - | - | - | 1 |
| 6690 | Human Behavior in Dentistry | - | - | 17 | - | - | 1 |
| 6724 | Intro to Clinical Practice 1-C | - | - | - | - | 16 | 0.5 |
| 6730 | Introductory Ethics and Academic Integrity | 6 | - | - | - | - | 0.5 |
| 6740 | Microbiology | - | - | 51 | 17 | - | 3.5 |
| 6770 | Neuroscience | - | - | 24 | - | - | 1.5 |
| 6800 | Occlusion | - | - | 14 | - | - | 1 |
| 6804 | Occlusion-C | - | - | - | 30 | - | 1 |
| 6820 | Oral Histology | - | - | 18 | 18 | - | 2 |
| 6840 | Operative Dentistry | - | - | 17 | - | - | 1 |
| 6844 | Operative Dentistry-C | - | - | - | 102 | - | 2 |
| 6870 | Physiology | - | - | 76 | 43 | - | 5.5 |
| 6880 | Cell Molecular Biology | 24 | - | - | - | - | 1.5 |

"C" following a course title indicates a clinical or preclinical course.

### *First Year Extended Program (D1-A)*

| | | Clock Hours by Semester | | | | Total | Total |
|---|---|---|---|---|---|---|---|
| | | Fall | | Spring | | Clinic | Sem. |
| Courses | | Lect. | Lab. | Lect. | Lab. | Hours | Hours |
| 6500 | Biochemistry/Nutrition | 44 | - | - | - | - | 2.5 |
| 6520 | Cariology & Prevention | 16 | - | - | - | 3 | 1 |
| 6540 | Dental Anatomy | 32 | - | - | - | - | 2 |
| 6543 | Dental Anatomy-C | - | 96 | - | - | - | 2 |
| 6580 | Dental Materials | - | - | 8 | 24 | - | 1 |
| 6600 | General Histology | 26 | 26 | - | - | - | 3 |
| 6680 | History of Dentistry | 16 | - | - | - | - | 1 |
| 6690 | Human Behavior in Dentistry | - | - | 17 | - | - | 1 |
| 6730 | Introductory Ethics and Academic Integrity | 6 | - | - | - | - | 0.5 |
| 6800 | Occlusion | - | - | 14 | - | - | 1 |
| 6804 | Occlusion-C | - | - | - | 30 | - | 1 |
| 6820 | Oral Histology | - | - | 18 | 18 | - | 2 |
| 6880 | Cell/Molecular Biology | 24 | - | - | - | - | 1.5 |

"C" following a course title indicates a clinical or preclinical course.

## *D1 Second Year Extended Program*

### *First Year (D1-B)*

| | | Clock Hours by Semester | | | | Total | Total |
|---|---|---|---|---|---|---|---|
| | | Fall | | Spring | | Clinic | Sem. |
| Courses | | Lect. | Lab. | Lect. | Lab. | Hours | Hours |
| 6640 | Gross Anatomy | 42 | 126 | - | - | - | 6 |
| 6660 | Growth and Development | 22 | - | - | - | - | 1.5 |
| 6724 | Introduction to Clinical Practice I-C* | - | - | - | - | 16 | 0.5 |
| 6740 | Microbiology | - | - | 51 | 17 | - | 3.5 |
| 6770 | Neuroscience | - | - | 24 | - | - | 1.5 |
| 6840 | Operative Dentistry | - | - | 17 | - | - | 1 |
| 6844 | Operative Dentistry-C | - | - | - | 102 | - | 2 |
| 6870 | Physiology | - | - | 76 | 43 | - | 5.5 |

"C" following a course title indicates a clinical or preclinical course.

### *Second Year (D2)*

| | | Clock Hours by Semester | | | | Total | Total |
|---|---|---|---|---|---|---|---|
| | | Fall | | Spring | | Clinic | Sem. |
| Courses | | Lect. | Lab. | Lect. | Lab. | Hours | Hours |
| 7010 | Dental Auxiliary Utilization | - | - | 9 | - | - | 0.5 |
| 7020 | Endodontics | - | - | 17 | - | - | 1 |
| 7024 | Endodontics-C | - | - | - | 51 | - | 1 |
| 7040 | Fixed Prosthodontics | 16 | - | 34 | - | - | 3 |
| 7044 | Fixed Prosthodontics-C | - | 96 | - | 102 | - | 4 |
| 7060 | General Pathology | 64 | - | - | - | - | 4 |
| 7080 | Introduction to Clinical Practice II | 16 | 16 | - | - | - | 1 |
| 7084 | Introduction to Clinical Practice II-C | - | - | - | - | 78 | 1.5 |
| 7100 | Operative Dentistry | 16 | - | - | - | - | 1 |
| 7104 | Operative Dentistry-C | - | 96 | - | - | - | 2 |
| 7120 | Basic Principles & Techniques of Dentoalveolar Surgery | - | - | 14 | 2 | - | 1 |
| 7140 | Preclinical Diagnostic Sciences I | 16 | - | - | - | - | 1 |
| 7160 | Oral Pathology | - | - | 34 | - | - | 2 |
| 7170 | Oral Radiology | 32 | - | - | - | - | 2 |
| 7173 | Oral Radiography-C | - | - | - | - | 20 | 0.5 |
| 7190 | Preclinical Diagnostic Sciences II | - | - | 17 | - | - | 1 |
| 7210 | Orthodontics | - | - | 17 | - | - | 1 |
| 7214 | Orthodontics-C | - | - | - | 45 | - | 1 |
| 7230 | Local Anesthesia & Nitrous Oxide/Conscious Sedation | - | - | 18 | - | 5 | 1 |
| 7250 | Pediatric Dentistry | - | - | 17 | 34 | - | 2 |
| 7270 | Periodontics | 16 | - | 17 | - | - | 2 |
| 7274 | Periodontics-C | - | 9 | - | 9 | 15 | 1 |
| 7290 | Dental Pharmacology | 32 | - | - | - | - | 2 |
| 7330 | Applied Preventative Dentistry | - | - | 21 | - | - | 1 |
| 7350 | Removable Prosthodontics | 16 | - | 17 | - | - | 2 |
| 7353 | Removable Prosthodontics-C | - | 96 | - | 102 | - | 4 |
| 7400 | National Board Review | 16 | - | - | - | - | 1 |

"C" following a course title indicates a clinical or preclinical course.

# Dentistry

## Doctor of Dental Surgery Curriculum

### *Third Year (D3)*

| Courses | | Clock Hours by Semester: Summer | Fall Lect. | Fall Lab. | Spring Lect. | Spring Lab. | Total Clinic Hours | Total Sem. Hours |
|---|---|---|---|---|---|---|---|---|
| 8000 | Summer Clinic | - | - | - | - | - | * | * |
| 8004 | Clinical Preventative Dentistry-C | - | - | - | - | - | 26 | 0.5 |
| 8020 | Dental Public Health & Biostatistics | - | 16 | - | - | - | - | 1 |
| 8034 | Comprehensive Care-C* | - | - | - | - | - | 210 | 4 |
| 8044 | Dental Auxiliary Utilization-C | - | - | - | - | - | ** | 1 |
| 8060 | Endodontics | - | 16 | - | - | - | - | 1 |
| 8064 | Endodontics-C | - | - | - | - | - | 50 | 1 |
| 8080 | Fixed Prosthodontics | 5 | 16 | - | - | - | - | 1.5 |
| 8084 | Fixed Prosthodontics-C | - | - | - | - | - | 150 | 3 |
| 8140 | Behavioral Dentistry/Journal Club | - | - | - | 17 | - | - | 1 |
| 8160 | Anesthesia in Dentistry | - | 10 | - | - | - | - | 0.5 |
| 8180 | Implant Dentistry | - | - | - | 17 | 3 | - | 1 |
| 8200 | Occlusion | - | - | - | 17 | - | - | 1 |
| 8204 | Occlusion-C | - | - | - | - | 24 | - | 1 |
| 8220 | Operative Dentistry | 6 | 16 | - | - | - | - | 1.5 |
| 8224 | Operative Dentistry-C | - | - | - | - | - | 150 | 3 |
| 8240 | Advanced Principles & Techniques of Dentoalveolar Surgery | - | 16 | - | - | - | - | 1 |
| 8241 | Oral & Maxillofacial Surgery: Chronic Pain & Hospital Dentistry | - | - | - | 17 | 1 | | 1 |
| 8244 | Oral & Maxillofacial Surgery-C | - | - | - | - | - | 55 | 1 |
| 8264 | Oral Diagnosis-C | - | - | - | - | - | 82 | 1.5 |
| 8280 | Clinical Principles of Patient Evaluation | - | 16 | - | 17 | - | - | 2 |
| 8304 | Oral Radiography-C | - | - | - | - | - | 30 | 0.5 |
| 8320 | Orthodontics | - | 16 | - | - | - | - | 1 |
| 8324 | Orthodontics-C | - | - | - | - | - | 25 | 0.5 |
| 8340 | Pediatric Dentistry | - | 16 | - | 8 | - | - | 1.5 |
| 8344 | Pediatric Dentistry-C | - | - | - | - | - | 50 | 1 |
| 8360 | Periodontics | - | - | - | 17 | - | - | 1 |
| 8364 | Periodontics-C | - | - | - | - | - | 110 | 2 |
| 8370 | Professional Ethics | - | 16 | - | - | - | - | 1 |
| 8380 | Medical Pharmacology | - | 24 | - | - | - | - | 1.5 |
| 8400 | Removable Prosthodontics | - | 16 | - | - | - | - | 1 |
| 8404 | Removable Prosthodontics-C | - | - | - | - | - | 150 | 3 |
| 8500 | Office Medical Emergencies | 12 | - | - | - | - | - | 0.5 |
| 8600 | Advanced Removable Prosthodontics | - | - | - | 17 | - | - | 1 |

"C" following a course title indicates a clinical or preclinical course.
A Comprehensive Care program provides seminars incorporating material from all clinical disciplines.
* Mandatory summer clinic - clinic and semester credit hours included in Comprehensive Care-C 8034
** Dental Auxiliary Utilization clinic - clinic hours included in Comprehensive Care-C 8034

### *Fourth Year (D4)*

| Courses | | Clock Hours by Semester: Summer | Fall Lect. | Fall Lab. | Spring Lect. | Spring Lab. | Total Clinic Hours | Total Sem. Hours |
|---|---|---|---|---|---|---|---|---|
| 9000 | Summer Clinic | * | - | - | - | - | * | * |
| 9004 | Clinical Services Assign-C | - | - | - | - | - | 234 | 4.5 |
| 9030 | Diagnosis and Treatment Planning Seminar | 10 | - | - | - | - | - | 0.5 |
| 9040 | Advancements in Techniques and Materials | 6 | 16 | - | - | - | - | 1.5 |
| 9044 | General Dentistry-C* | - | - | - | - | - | 956 | 20 |
| 9050 | Selected Advanced Topics in Oral and Maxillofacial Surgery | - | 8 | 2 | - | - | - | 0.5 |
| 9070 | Orthodontics | - | 13 | - | - | - | - | 1 |
| 9080 | Community Dentistry Externship | - | - | - | - | - | ** | 0.5 |
| 9090 | Pediatric Dentistry | - | 16 | - | - | - | - | 1 |
| 9110 | Applied Pharmacology | - | 16 | - | - | - | - | 1 |
| 9120 | Practice Administration | - | 16 | - | - | - | - | 1 |
| 9140 | Professional Ethics & Dental Jurisprudence | - | 16 | - | - | - | - | 1 |
| 9160 | Senior Seminar | - | - | - | 16 | - | - | 1 |
| 9190 | Advanced Principles of Patient Evaluation | - | 16 | - | - | - | - | 1 |

* All clinical programs except 9004 are included in 9044 General Dentistry.
"C" following a course title indicates a clinical or pre-clinical course.
* Mandatory summer clinic - clinic and semester credit hours included in General Dentistry-C 9044
** Community Dentistry Externship clinical hours included in 9004

# DENTAL HYGIENE

## History

The Caruth School of Dental Hygiene is an integral part of The Texas A&M Health Science Center Baylor College of Dentistry. The dental hygiene school was equipped in 1954 through a generous gift from the Caruth Foundation of Dallas and W. W. Caruth, Jr., in honor of W. W. Caruth, Sr., a pioneer Texas philanthropist.

The first dental hygiene students were accepted in fall 1955. At that time, there was no requirement for previous college experience. In 1964, the Caruth School of Dental Hygiene established prerequisite courses prior to professional study. During the same year, the Bachelor of Science degree was offered in addition to the traditional certificate program. All graduates since 1973 have received the degree of Bachelor of Science in Dental Hygiene. In 1997, the Master of Science degree was added.

## Purpose

The purpose of the Caruth School of Dental Hygiene is to educate preventive oral health professionals, eligible for licensure as dental hygienists, who are capable of providing educational, clinical and therapeutic services that support total health through the promotion of optimal oral health.

## Opportunities

The services of a dental hygienist are offered in private dental practices and clinics, public health agencies, school systems, hospitals, nursing homes and corporate health facilities. Dental hygienists also teach in dental and dental hygiene programs and participate in health research. The baccalaureate degree offered through the Caruth School of Dental Hygiene by HSC-Baylor College of Dentistry satisfies the educational requirement for eligibility for state licensure. Graduates are provided with diverse experiences to prepare for a variety of employment settings and to pursue graduate education. A Master of Science degree in Dental Hygiene is also offered. See Advanced Education in the HSC-BCD section of this catalog.

## Matriculation and Registration

See Matriculation and Registration in the previous dentistry section.

## Physician's Statement

A complete physical examination form and proof of immunizations must be returned prior to enrollment in any classes. Please refer to the section on immunizations in General Student Information in the Introduction section of this catalog.

## Fees and Expenses

The tuition and fees are mandated by the state of Texas. Adjustments may be made as economic conditions warrant.

### *Admission Deposit*

An admission deposit of $200 is required to reserve a place in the program upon notification of acceptance. This deposit will be applied to the first semester tuition but is not refundable.

### *Tuition*

Tuition is due at the beginning of each semester. The purchase of new books and instruments is required by the Texas A&M Health Science Center Baylor College of Dentistry. The estimated cost of the program for the entering class of 2007 follows:

| | Junior Year (DH1) | Senior Year (DH2) |
|---|---|---|
| *Tuition | | |
| In-state | $3,751 | $3,612 |
| Out-of-state | $13,376 | $12,828 |
| Books and Lab Fees | $1,551 | $1,025 |
| Instruments | $1,344 | ---- |
| Uniforms | $275 | ---- |
| Other Fees | $1,545 | $1,652 |
| I.D. Card | $20 | ---- |
| Matriculation and Medical Liability | $45 | $30 |
| Graduation Pin | ---- | $42 |
| Graduation | ---- | $100 |

* Tuition is based on $50 per semester hour for residents and $325 per semester hour for non-residents. Plus, designated tuition is $58 per semester hour to a maximum of 18 hours per semester.

### *Fees And Deposits*

Please see the fees and deposits heading in the previous dentistry section.

### *Tuition Refund Policy*

Tuition refunds are made in accordance with the policy established for the HSC and comply with federal and state guidelines.

# Dental Hygiene

## Student Activities

### *Financial Assistance*

Financial aid is available to all students. Dental hygiene students may be eligible for assistance through Pell Grants, the Stafford Student Loan Program, the Texas Public Education Grant Program and the American Dental Hygienists' Association Scholarship Program.

### *Health Services*

Routine medical services are provided in the college's health clinic. Please see the section on Health Services for HSC-BCD.

### *Campus Housing*

Space is usually available for students who want to live in the dormitory in Wilma Bass Memorial Hall, which is operated by the Baylor University Medical Center. This building offers the advantages of modern facilities and proximity to the school. Off-campus apartments and other housing facilities are available but are not provided by HSC-BCD. The college does not inspect or approve listings; however, HSC-BCD's Office of Student and Alumni Affairs will offer assistance in locating accommodations.

## Student Activities

### *Student Council*

Please see Student Council in the list of organizations under Student Services in the dentistry section.

### *American Dental Hygienists' Association*

All dental hygiene students join the American Dental Hygienists' Association (ADHA) as student members. ADHA is the national professional organization of dental hygienists. Student membership in the organization entitles a student to receive the association's journal, to apply for grants and loans for assistance with educational financing, and to participate in ADHA activities at local, state and national levels.

### *American Dental Education Association*

Student membership in the American Dental Education Association (ADEA) is available to any student enrolled at HSC-Baylor College of Dentistry. The association represents the interests of individuals and institutions engaged in dental and allied dental education. Student members receive ADEA publications and may participate in councils, committees and sections of the association.

## Policies and Regulations

Caruth School of Dental Hygiene adheres to the policies and regulations established by The Texas A&M University System Board of Regents and administration. In addition, rules and procedures are formatted by the administration of the Texas A&M Health Science Center and HSC-Baylor College of Dentistry for the benefit of all concerned. The offices of Academic Planning and Development and Student and Alumni Affairs, the director of the dental hygiene program and faculty members provide academic counseling and guidance. If problems arise, students are urged to seek early assistance. For information concerning attendance, dress code, conduct, due process, employment, change of name and transcripts and records, see the corresponding sections in the HSC-BCD section of the catalog.

## Scholarship

### *Grading System*

Please refer to the explanation of the grading system in the General Information section of this catalog.

### *Review of Academic Progress*

In addition to the information found under Scholarship in the HSC-Baylor College of Dentistry section of the catalog, the following specifically applies to dental hygiene students.

To be eligible for unconditional promotion, a student must have earned a passing grade in all subjects, exhibit satisfactory professional conduct and performance and have earned a GPA as follows:

- 2.00 cumulative each term
- 2.00 cumulative for graduation

A student may be permitted to repeat a maximum of four semester hours of failure, provided that these deficiencies are limited to no more than two courses during an academic year. A minimum grade of "C" (75) is required to remove each failure under these conditions. The cumulative GPA after repeating the courses, which will include the "F" grades, must equal 2.00 for unconditional promotion.

### *Academic Probation*

Any student whose GPA for any semester is below 2.00 or whose cumulative GPA is below 2.00 at the end of any semester shall be placed on academic probation subject to the provisions of the following dismissal policies. Academic Probation will be listed on the transcript.

The following conditions apply to all dental hygiene students at HSC-Baylor College of Dentistry:

- A student not removed from academic probation by the end of the semester, excluding summer session, will be dismissed.
- A student who earns more than four semester hours of "F" during an academic year will be dismissed.
- A student who fails more than two courses during an academic year will be dismissed.
- Other conditions that may result in repetition of an academic year or dismissal from HSC-BCD:
  - Any student on academic probation may be considered by the Student Promotions Committee for dismissal.
  - A student who fails a required course two times will be dismissed.
  - A student who fails any course while repeating a year will be dismissed.
  - A student who fails more than two courses during a single academic year will be dismissed.

- The Student Promotions Committee reserves the right to recommend repetition of the year or dismissal of a student from the college who does not maintain professional conduct, proper patient management and ethical behavior. This action may be taken regardless of grades, but only after written notice has been given to the student indicating the area(s) of deficiency with sufficient time to correct these areas.

### *Requirements For Graduation*

A candidate for the degree of Bachelor of Science in Dental Hygiene must have fulfilled the following requirements:

- Demonstrated evidence of satisfactory moral and professional conduct;
- Satisfactorily completed all of the prescribed courses of study, including prerequisite and dental hygiene courses;
- Attained the required cumulative GPA (2.00);
- Be certified by the faculty as approved for graduation; and
- Be certified free of debts and obligations to HSC-Baylor College of Dentistry.

## Licensure Information

### *National Board Examinations*

The National Board Dental Hygiene Examination is prepared and conducted by the Joint Commission on National Dental Examinations. This comprehensive written examination is administered prior to graduation. The approximate fee for this exam is $165. A passing score is required for state licensure.

Graduation from an accredited dental hygiene program is one of the requirements for state licensure as a dental hygienist. Each state has its own dental examining board that is responsible for evaluating candidates for licensure. Written and clinical examinations are usually required. All states accept satisfactory performance on the National Board Dental Hygiene Examination in partial fulfillment of the requirement for a written examination. The state of Texas participates in the Western Regional Examination Board. The fee for this clinical examination is approximately $900.

## Awards and Honor Societies

### *Scholastic Awards*

The highest scholastic award is the Gold Medallion, which is presented at graduation to the student who has attained the highest cumulative GPA for the two years of study.

The three top-ranking students receive certificates in recognition of scholastic achievement.

The *Phillip Earle Williams Award* is presented annually to the graduating dental hygiene student who, in the opinion of the dental hygiene faculty, has shown the most proficiency as a dental hygiene clinician. This award was made possible by Dr. and Mrs. Fred M. Lange of Dallas, in honor of Dr. Williams.

The *George B. Clendenin Award* is awarded annually to the graduating senior who, in the opinion of the student members of the American Dental Hygienists' Association, embodies the characteristics of a dental hygienist who has been and will be a credit to the profession. This award is made possible through the generosity of Patricia Clendenin Wessendorff, the first director of the Caruth School of Dental Hygiene, in memory of her father, Dr. Clendenin.

### *Sigma Phi Alpha*

This national dental hygiene honor society was founded in 1958. The Beta Chapter was established at HSC-Baylor College of Dentistry the same year. Each year, 10 percent of the graduating class is elected to membership, which is awarded on the basis of scholarship, character and potential qualities for future professional growth and attainment.

## Curriculum

### *Competencies*

Competencies are the end products of clinical training and experience and represent the ability to perform or provide a particular, but complex, service or task. Students who have achieved competence in all areas should be qualified for the practice of dental hygiene. The nine competencies, organized by domain, define the objectives of the dental hygiene program.

I. Professionalism
   1. Ethics: The dental hygienist must be able to discern and manage the ethical issues of dental hygiene in a rapidly changing environment.
   2. Information Management and Critical Thinking: The dental hygienist must be able to acquire and synthesize information in a critical, scientific and effective manner.
   3. Professional Identity: The dental hygienist must be concerned with improving the knowledge, skills and values of the profession.

II. Health Promotion and Disease Prevention
   4. Self-Care Instruction: The dental hygienist must be able to provide planned educational services using appropriate interpersonal communication skills and educational strategies to promote optimal health.
   5. Community Involvement: The dental hygienist must be able to initiate and assume responsibility for health promotion and disease prevention activities for diverse populations.

III. Patient Care
   6. Assessment: The dental hygienist must be able to systematically collect, analyze and accurately record baseline data on the general, oral and psychosocial health status of patients using methods consistent with medico-legal principles.
   7. Planning: The dental hygienist must be able to discuss with the patient the condition of the oral cavity, actual and potential problems identified, etiological and contributing factors; and recommended and alternative treatments available.
   8. Implementation: The dental hygienist must be able to provide treatment that includes preventive and therapeutic procedures to promote and maintain oral health and assist the patient in the achievement of oral health goals.
   9. Evaluation: The dental hygienist must be able to evaluate the effectiveness of planned clinical and educational services and modify as necessary.

The curriculum includes biomedical, dental and dental hygiene sciences, supported by didactic, laboratory and clinical instruction and practice. Courses in the curriculum are consistent with the guidelines of the Commission on Dental Accreditation to provide for cognitive, psychomotor and affective growth of the

# Dental Hygiene

## Curriculum

student. The curriculum of the Caruth School of Dental Hygiene is designed to correlate the basic biological sciences with the science and art of dental hygiene and is under continuous review. The curriculum is subject to modification as the need arises, in terms of achieving and improving the stated program goals.

### *Summer Session*

Full-time attendance in the summer term between the junior and senior years is required.

### *Modified Program*

A modified program is available for a limited number of students who are unable to attend full time due to family responsibilities or a need to work part-time. The junior year of the curriculum is divided over a two-year period. The first part concentrates on the biomedical sciences, while the second focuses on the dental and clinical sciences. The senior year is completed as a full-time student.

Applicants to the modified program must have completed a minimum of 45 hours of prerequisite courses, including all biology, chemistry and English composition courses. A plan of study to complete the remaining prerequisites must be approved by the Admissions Committee. Application procedures are the same for the modified program as for the full-time program.

*See course descriptions beginning on page 172.*

### *Junior Year (DH1)*

| Course Number | Credit and Title | Clock Hours Per Week Award | Lect. | Lab. | Clinic |
|---|---|---|---|---|---|
| Fall Semester | | | | | |
| 3110 | Introduction to Dentistry | 1 | 1 | - | - |
| 3120 | Dental Anatomy | 2 | 2 | 0.4 | - |
| 3160 | Preclinical Dental Hygiene | 6 | 4 | 0.5 | 7 |
| 3220 | Oral Radiology | + | 2 | * | - |
| 3250 | Biomedical Sciences I | 5 | 4 | 2 | - |
| 3425 | Health Promotion and Disease Prevention | 2.5 | 2.5 | - | - |
| Spring Semester | | | | | |
| 3020 | Theory of Dental Hygiene Practice I | 2 | 2 | - | - |
| 3220 | Oral Radiology | 2 | - | - | 1 |
| 3340 | Biomedical Sciences II | 4 | 3 | 2 | - |
| 3310 | Health Education and Behavioral Science | 1 | 1 | - | - |
| 3410 | Introduction to Pathology | 1 | 1 | - | - |
| 3325 | Microbiology | 2.5 | 2 | 1 | - |
| 3530 | Applied Dental Materials | 3 | 2 | 2.5 | - |
| 3830 | Clinical Dental Hygiene I | 3 | - | - | 1 |
| | Total | 35 | | | |

* Scheduled by course director

\+ Continues following term

### *Senior Year (DH2)*

| Course Number | Credit and Title | Clock Hours Per Week Award | Lect. | Lab. | Clinic |
|---|---|---|---|---|---|
| Summer Session | | | | | |
| 4110 | Medical Emergencies | + | 2 | - | - |
| 4220 | Comprehensive Care Seminar | + | * | - | - |
| 4310 | Oral Radiography | + | - | - | * |
| 4510 | Pediatric Dentistry | 1 | 3 | - | - |
| 4820 | Clinical Dental Hygiene II | 2 | - | - | 18 |
| Fall Semester | | | | | |
| 4015 | Pharmacology | 1.5 | 1.5 | - | - |
| 4025 | Oral Pathology | 2.5 | 2.5 | - | - |
| 4110 | Medical Emergencies | 1 | - | * | - |
| 4140 | Clinical Dental Hygiene III | 4 | - | - | 15 |
| 4210 | Professional Ethics | 1 | 1 | - | - |
| 4220 | Comprehensive Care Seminar | + | * | - | - |
| 4310 | Oral Radiography (continued) | + | - | - | * |
| 4410 | Gerontology | 1 | 1 | - | - |
| 4530 | Public and Community Health | + | 1 | - | - |
| 4610 | Periodontics | 1 | 1 | - | - |
| 4620 | Theory of Dental Hygiene Practice II | 2 | 2 | - | - |
| 4715 | Research Methods | 1.5 | 1.5 | - | - |

| | | | | | |
|---|---|---|---|---|---|
| Spring Semester | | | | | |
| 4010 | National Board Review | 1 | 1 | - | - |
| 4220 | Comprehensive Care Seminar | 2 | * | - | - |
| 4240 | Clinical Dental Hygiene IV | 4 | - | - | 15 |
| 4310 | Oral Radiography (continued) | 1 | - | - | * |
| 4320 | Perspectives in Dental Hygiene | 2 | 2 | - | - |
| 4530 | Public and Community Health | 3 | * | * | 3 (field) |
| 4710 | Applied Research Methods | 1 | * | - | - |
| 4810 | Local Anesthesia and Nitrous Oxide/Oxygen Sedation | 1 | 1 | - | - |
| | **Total** | **33.5** | | | |

* Scheduled by course director

\+ Continues following term

# GRADUATE STUDIES

(by departments)

The mission of the graduate education programs at The Texas A&M Health Science Center Baylor College of Dentistry is to provide an educational experience that emphasizes the development of a strong basic science background coupled with advanced diagnostic and clinical competence; to develop a highly skilled specialist with the analytical, clinical and management abilities necessary to provide optimum oral health care; and to produce a graduate who will have the ability to critically evaluate research literature, as well as have the inquiring attitude necessary to pursue advancement in the practice, research and/or teaching of specialized oral health care.

Students enrolled in the graduate education programs may qualify for and be awarded a certificate of advanced training in a clinical field; a Master of Science degree with a concentration in biomaterials science, biomedical sciences, dental hygiene, health professions education or oral biology; a Doctor of Philosophy in biomedical sciences; or a Doctor of Medicine degree. The Graduate Education Council (GEC) maintains traditional concepts in graduate education by providing broad, multidisciplinary monitoring of the programs. All members of the graduate faculty have fulfilled the qualifications adopted by the GEC to ensure scholarly competence. Rules affecting entrance requirements, graduate curricula and requirements leading to graduate credits, certification and degrees are formulated by the council.

The certificate of advanced training and the M.S. degree are awarded by HSC-BCD. The Ph.D. and master's degrees in Biomedical Sciences are awarded by the HSC-Graduate School of Biomedical Sciences, another HSC component. The M.D. degree is awarded by Texas Tech University (Lubbock). The rules and procedures of the graduate and postgraduate programs are published in this catalog.

## Graduate and Postgraduate Programs

### *Certificate*

The certificate programs consist of a sequence of advanced lecture courses, correlative clinical instruction, seminars, cognate courses, core curriculum of concentrated study and electives for the dentist seeking specialty training and board eligibility requirements. These programs are designed to permit a greater concentration in the area of clinical experience than those leading to a degree.

The Advanced Education in General Dentistry Program is one year in length.

The Dental Public Health Residency is one year in length. A part-time, two-year (on- or off-site) program is available to individuals with public health experience who are working in a public health environment.

Other certificate programs require a minimum of two to four calendar years and satisfactory completion of the minimum semester hours listed for each individual program. The programs are approved by the Texas Education Agency, and Veterans Administration benefits may be used by those students who are eligible.

Affiliated hospitals include Baylor University Medical Center, Children's Medical Center of Dallas, Denton State School, Humana Hospital Medical City Dallas, Parkland Health and Hospital System, Texas Scottish Rite Hospital for Children, the University of Texas Southwestern Medical Center and the Veterans Affairs medical centers in Dallas and Temple.

The dental specialty areas offering the certificate include: advanced education in general dentistry, endodontics, oral and maxillofacial pathology, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontics, dental public health and prosthodontics.

### *M.D./Certificate in Oral and Maxillofacial Surgery*

The Oral and Maxillofacial Surgery M.D./Certificate Program is a fully integrated program with the resident attending medical school, with advanced standing admission, at Texas Tech University. Surgical internship and OMS training are completed at Baylor University Medical Center and HSC-Baylor College of Dentistry.

### *M.S. in Biomaterials Science*

The objective of the M.S. Program in Biomaterials Science is to provide advanced training to two types of students: (1) postgraduate dentists and (2) students with a B.S. degree in engineering or the physical sciences.

Students with a dental degree will benefit from the small class size and individually tailored curriculum, which enable those without any engineering background to learn materials science in great technical depth more easily than in a large engineering college.

For students with engineering backgrounds, the program opens the door to the health sciences, which have a high level of steady research funding. They will become familiar with the biomaterials literature, make contacts at professional society meetings and learn how to successfully apply for research funding in the dental and medical areas.

Students who complete this program may continue to our Ph.D. in Biomedical Sciences program with a concentration in biomaterials science. The Ph.D. program must be applied for separately, and completion of the M.S. program does not guarantee admission. All course work from the M.S. degree may be applied to the Ph.D. program.

### *M.S. in Biomedical Sciences*

The M.S. Program in Biomedical Sciences, which is awarded by the HSC-Graduate School of Biomedical Sciences, is oriented toward two types of students: (1) graduates of dental programs, students enrolled in a specialty clinical program and current dental students; and (2) non-dental students with baccalaureate degrees in the sciences. Objectives are to provide training in modern biomedical sciences and research methods and to equip students to critically analyze research and clinical literature. For dental graduates and current dental students, this training will prepare them for participation on clinical dental faculties. For students with a bachelor's degree only, this training will enhance opportunities for careers in science or for further education. Time required for completion of the degree varies, depending on full- or part-time participation and the applicant's prior training. The M.S. in Biomedical Sciences is offered in the department of biomedical sciences with multiple areas of concentration. The M.S. in Biomedical Sciences will be pursued concurrently with clinical training as part of a D.D.S./M.S. or clinical specialty M.S. program.

### *M.S. in Dental Hygiene*

The M.S. Program in Dental Hygiene is designed to prepare dental hygienists with a baccalaureate degree for leadership roles in education or oral health administration in order to meet the need for educators in dental hygiene programs and managers/administrators in institutional health care settings. A minimum of two calendar years (37 semester hours) is required.

### *M.S. in Health Professions Education*

The M.S. Program in Health Professions Education is designed to prepare dentists for a career in dental education. A minimum of two calendar years is required. The mentor of the thesis research project must be a member of the program faculty. The M.S. degree in Health Professions Education is offered through the Department of Public Health Sciences.

### *M.S. in Oral Biology*

Programs leading to the M.S. in Oral Biology are designed to extend the dentist's competence in both general and special areas of clinical practice, as well as develop research and/or teaching capabilities. A minimum of 26 to 48 months is required and emphasis is placed on advanced theory and practice in clinical disciplines. The dental specialty areas offering this program include endodontics, orthodontics, pediatric dentistry, periodontics and prosthodontics.

### *Ph.D. in Biomedical Sciences*

The Ph.D. Program in Biomedical Sciences is available for graduate students with an interest in academic research careers in the health sciences. It is administered by the Department of Biomedical Sciences through the HSC-Graduate School of Biomedical Sciences. Students may take graduate-level courses in other graduate specialty areas of HSC-Baylor College of Dentistry and at other Dallas-area institutions of higher education, e.g., The University of Texas Southwestern Graduate School of Biomedical Sciences and The University of Texas at Dallas. A minimum of three calendar years (with dissertation) is required. The Ph.D. in Biomedical Sciences may be pursued concurrently with clinical training as part of a D.D.S./Ph.D. or clinical speciality Ph.D. program.

## Fees and Expenses

| | |
|---|---|
| Application Fee (nonrefundable) | $35 |
| Application Renewal Fee (nonrefundable) | $25 |
| Deposit (nonrefundable) | varies by program |
| (Required for all students who are accepted into the program; applies toward first semester tuition.) | |
| International Student Fee (per semester) | $35 |
| Tuition (per semester hour): | |
| In-state | $100 |
| Out-of-state | $325 |
| Designated Tuition (per semester hour) | $118 |
| Computer Use Fee (per semester hour) | $8.50 |
| Library Access Fee (per semester hour) | $6.50 |
| Health Fee (per semester) | $62 |
| Parking Fee (per semester) | $65-$90 |
| Matriculation Fee | $15 |
| Audit Fee (per course hour) | $100 |
| Late Payment Fee | $25 |
| Late Registration (after census date of academic term) | $200 |
| Late Add Fee (if results in net addition of hours after census date) | $50 per change |
| Reinstatement Fee | $50 |
| Graduation Fee | $100 one time fee |
| Dental Malpractice Insurance Fee (per year) | $110 |
| Technology Fee | $500 per year (clinical graduate students only) |
| Drug Testing Fee | $45 one time fee |

*Fee Adjustments for Courses Added and Dropped:* A student may drop courses during the first four days of a semester. Students also may drop classes with special permission of the associate dean for Research and Graduate Studies between the fifth and ninth class days. Full refunds will be given for courses dropped within these periods. Refunds will not be issued for classes dropped after the ninth class day. As of the first day of the semester, students may not drop all of their courses through the drop/add process, but instead must go to the Office of the Associate Dean for Research and Graduate Studies to officially withdraw. A student may add courses during the first five days of a semester.

### *Tuition Refund Policy*

Tuition refunds are made in accordance with the policy established for HSC-Baylor College of Dentistry and complies with federal and state guidelines.

### *Financial Assistance*

**Assistantships/Stipends:** A limited number of teaching and research assistantships are available for qualified students. Stipends vary with the nature of service and the amount of time required. Request information from the dental specialty area; dental hygiene graduate students should contact the graduate program director.

**Fellowships:** Some fellowships are available. Information concerning stipends/allowances may be obtained from the graduate program director.

**Financial Aid:** Financial aid is available to U.S. citizens and Green Card holders. F1 or F2 and J1 or J2 visa students are not eligible for financial aid. Additional information and applications for financial aid are available from the Student Aid Office at HSC-Baylor College of Dentistry.

## Grading System

| Letter Grade | Numerical Range | Grade Points |
|---|---|---|
| A | 93-100 | 4.0 |
| B+ | 90-92 | 3.5 |
| B | 84-89 | 3.0 |
| C+ | 81-83 | 2.5 |
| C | 75-80 | 2.0 |
| D | 70-74 | 1.0 |
| F | 0-69 | 0.0 |

### *Academic Progress Policies*

No student has a constitutional right to attend HSC-Baylor College of Dentistry, irrespective of academic performance. Failure to achieve and maintain a prescribed scholastic requirement is a justifiable cause for dismissal.

The academic review process at HSC-Baylor College of Dentistry involves faculty evaluation of both cognitive and non-cognitive performance in specific courses and assignment of grades. Non-cognitive performance includes, but is not limited to, technical and interpersonal skills, attitudes and professional character. To appeal a course grade, a student may present, in writing, to the associate dean for Research and Graduate Studies, a request for review of a final course grade if a conference with the faculty and the chair of the course dental specialty area does not resolve the question. The associate dean will consider the appeal and may refer it to the Graduate Education Council.

The Graduate Education Council reviews the progress of the student in his/her advanced education program. The council will decide if satisfactory progress is being made, whether remedial work is needed or whether the student should be dismissed. Before a final decision is reached about either remedial work or dismissal, the student may request to appear before the council. The student may appeal the council's decision to the dean. The appeal must be in writing and specifically state the reason for the appeal and what action by the dean is sought. The decision of the dean is final.

Passing grades for graduate and postgraduate students are "A" (93-100), "B" (84-92) and "C" (75-83). Graduate and postgraduate students are expected to maintain a cumulative GPA of 3.0 ("B") or greater. Failure to do so, or receipt of a grade in any course of "D" or "F," is sufficient cause for dismissal. The grade of "I" (incomplete) may be given only when the completed portion of work in the course is of passing quality. Students may not register for a course in which they have a grade of "I" other than Research for the Masters Thesis (5V98), Thesis (5V99), Research for Practicum Project (5V88), Practicum Project (DH 5V89), or Special Problems (5V41, 5V42, 5V43, 5V44). Students who receive one or more "I" grades during a semester may have their schedule for the following semester reduced by the number of hours of "I" grades received.

Students who are admitted to a graduate or postgraduate program on academic probation must maintain a "B" average during the first 10 semester hours of graduate work in courses numbered 5000 or greater. Students are automatically removed from academic probation upon completion of the first 10 semester hours of graduate-level course work if a "B" average is achieved. Any unconditionally admitted students who fail to maintain a "B" average (with all grades in the range of "A" to "C" during any semester of the graduate course of study) will be placed on academic probation for the next eight semester hours of residence course work, or until all residence work is completed, whichever occurs first. During the probationary period, students must restore their cumulative grade point average to 3.0 (B).

Graduate students who are enrolled in a certificate or degree program having a course curriculum itemized in the HSC-Baylor College of Dentistry catalog must follow that degree plan. The degree plan in the college catalog at the time of the student's matriculation represents the plan to be followed. If there is a need to deviate from that curriculum, the change and the reasons for it must be submitted by the program director to the Office of Research and Graduate Studies for approval prior to any deviation.

For students admitted under other than normal conditions (e.g., credit transferred from other institutions), a degree plan must be submitted to the Office of Research and Graudate Studies for approval before the student registers for the first time. For students in graduate programs that do not have an itemized list of prescribed courses in the college catalog, the following applies. After a student has met with his/her graduate program director and settled on a tentative list of initial courses, that list must be forwarded to the Office of Research and Graduate Studies. When a mentor has been selected (no later than the end of the first semester in residence for M.S. candidates), a degree plan must be submitted to the office for approval.

It is understood that degree plans occasionally will change as research interests and/or mentors change. At those points in time, revised degree plans must be submitted to the Office of Research and Graduate Studies for approval. Students in biomaterials science must follow a time frame similar to that used by biomedical sciences for submission and approval of degree plans.

Mentors serving on thesis or dissertation committees must be regular members of the HSC-Baylor College of Dentistry and/or HSC-Graduate School of Biomedical Sciences graduate faculty. An adjunct graduate faculty member may serve as a co-mentor with a regular graduate faculty member.

**M.S. Program:** The actual time required to complete the M.S. program will vary depending on the degree plan chosen. Normally it will consist of a two- to three-year program. A one-year extension request may be made to the associate dean for Research and Graduate Studies if extenuating circumstances exist. Students enrolled on a part-time basis will be allowed to extend time to complete their degree plan. An estimate of the extended time frame for completion should be made at the start of the student's study and must be approved by the associate dean for Research and Graduate Studies.

**Ph.D. Program:** All requirements for the Ph.D. degree must be completed within a period of 10 consecutive calendar years. Graduate credit for course work more than 10 calendar years old at the time of the final examination may not be used to satisfy degree requirements.

## Curriculum

*See course descriptions beginning on page 174.*

*Core Curriculum (for clinical specialties)*

The core curriculum is a demanding academic requirement consisting of intensive study in the basic and related sciences. M.S. candidates are required to take eight of the available courses, and certificate students must take six. These requirements do not pertain to the master's degrees in dental hygiene and health professions education. M.S. candidates in biomaterials science are required to take at least three core courses.

Core Studies

| | | |
|---|---|---|
| BMS | 5269 | Advanced Growth and Development |
| BMS | 5V73 | Advanced Human Craniofacial Development and Growth |
| OP | 5V21 | Advanced Oral Pathology |
| BMS | 5312 | Applied Medical Physiology |
| BMS | 5V40 | Cellular and Molecular Biology of Oral and Craniofacial Tissues I |
| BMS | 5V42 | Cellular and Molecular Biology of Oral and Craniofacial Tissues II |
| OMS | 5214 | Clinical Pharmacology |
| OMS | 5218 | Conscious Sedation |
| BMS | 5V72 | Craniofacial Anomalies |
| BMS | 5V04 | Head and Neck Anatomy |
| BMS | 5251 | Immunology |
| OMS | 5221 | Internal Medicine |
| BMS | 5350 | Oral Microbiology |
| OD | 5250 | Oral Radiology |
| OMS | 5233 | Physical Diagnosis |
| AGD | 5205 | Practice Management |
| BMS | 5221 | Research Design and Methodology |
| BMS | 5222 | Applied Biostatistics |
| HPE | 5225 | Teaching Skills |

Core Studies present information that is beyond that available in the traditional college disciplines. Since they are of value to students from every dental specialty area, they are included in the core curriculum. The instructors for these courses may be faculty members of HSC-BCD's teaching departments or guest lecturers with expertise in a specific area.

# CLINICAL AND BASIC SCIENCE PROGRAMS

## Advanced Education in General Dentistry

| | |
|---|---|
| Chair: | Mohsen Taleghani, D.M.D., Professor |
| Program Director: | Charles W. Wakefield, D.D.S., Professor |
| Assistant Director: | Herman Dumbrigue, D.D.M., Associate Professor |

Graduate Program: One year duration
Certificate in Advanced General Dentistry

### *Program Objectives*

The overall objectives of the program are in accordance with the standards described by the Commission on Dental Accreditation, which state that the AEGD residency will prepare the graduate to:

a. Act as a primary care provider for individuals and groups of patients. This includes providing emergency and multidisciplinary comprehensive oral health care; providing patient-focused care that is coordinated by the general practitioner; directing health promotion and disease prevention activities; and using advanced dental treatment modalities.
b. Plan and provide multidisciplinary oral health care for a wide variety of patients, including patients with special needs. Develop advanced levels of patient assessment, diagnosis and treatment planning, employing development of patient rapport and the process of informed consent.
c. Manage the delivery of oral health care by applying concepts of patient and practice management and quality improvement that are responsive to a dynamic health care environment.
d. Function effectively and efficiently in multiple health care environments within interdisciplinary health care teams.
e. Apply scientific principles to learning and oral health care. This includes using critical thinking, evidence or outcomes-based clinical decision-making and technology-based information retrieval systems.

### *One Year Curriculum**

| *Summer* | | *SCH* |
|---|---|---|
| AGD 5219 | Treatment Planning Conferences | 1.5 |
| AGD 5220 | Current Literature Reviews | 1.5 |
| AGD 5221 | Clinical Pathology | 1.5 |
| AGD 5000 | Clinical Dentistry | 0 |
| | **Total** | **4.5** |

*Fall*

| | | |
|---|---|---|
| AGD 5219 | Treatment Planning Conferences | 1.5 |
| AGD 5220 | Current Literature Reviews | 1.5 |
| AGD 5221 | Clinical Pathology | 1.5 |
| AGD 5205 | Practice Management | 1.5 |
| OMS 5233 | Physical Diagnosis | 1.0 |
| AGD 5000 | Clinical Dentistry | 0 |
| | **Total** | 7 |

*Spring*

| | | |
|---|---|---|
| AGD 5219 | Treatment Planning Conferences | 1.5 |
| AGD 5220 | Current Literature Reviews | 1.5 |
| AGD 5221 | Clinical Pathology | 1.5 |
| AGD 5205 | Practice Management | 1.5 |
| OMS 5221 | Internal Medicine | 2.0 |
| AGD 5000 | Clinical Dentistry | 0 |
| | **Total** | **8** |

| | |
|---|---|
| **Total** | **466** |

*Courses may continue more than one semester.

## Biomaterials Science

| | |
|---|---|
| Regents Professor: | Toru Okabe, Ph.D., *Chair* |
| Associate Professor: | Jason A. Griggs, Ph.D., *Program Director* |
| Assistant Professors: | Zhuo Cai, B.D.S., Ph.D. |
| | Mari Koike, D.D.S., Ph.D. |
| | Ikuya Watanabe, D.D.S., Ph.D. |

### *Master of Science (M.S.) in Biomaterials Science*

30 semester hours minimum
24 months minimum residence
Thesis
Starting date: Varies

*Program Objectives*

The objective of the M.S. Program in Biomaterials Science is to provide advanced training to two types of students: (1) postgraduate dentists and (2) students with a B.S. degree in engineering or the physical sciences.

Students with a dental degree will benefit from the small class size and individually tailored curriculum, which enable those without any engineering background to learn materials science in great technical depth more easily than in a large engineering college.

For students with engineering backgrounds, the program opens the door to the health sciences, which have a high level of steady research funding. They will become familiar with the biomaterials literature, make contacts at professional society meetings, and learn how to successfully apply for research funding in the dental and medical areas.

Students who complete this program may continue to our Ph.D. in Biomedical Sciences program with a concentration in biomaterials science. The Ph.D. program must be applied for separately, and completion of the M.S. program does not guarantee admission. All course work from the M.S. degree may be applied to the Ph.D. program.

*Required Courses*

Students entering the M.S. Program in Biomaterials Science who have completed courses in the engineering sciences may be exempt from a substantial portion of the core curriculum depending on their specific background. Advanced standing may be given for up to 10 of the 30 credit hours required for the degree.

| Course | Title | Sem. Hours |
|---|---|---|
| BMS 5221 | Research Design and Methodology | 2 |
| BMS 5222 | Applied Biostatistics | 1.5 |
| DM 5260 | Mathematics for Materials Study | 2 |
| DM 5161 | Introduction to Dental Applications | 1 |
| DM 5262 | Fundamentals of Materials Science | 2 |
| DM 5201 | Science of Materials – Metals | 2 |
| DM 5202 | Science of Materials – Polymers | 2 |
| DM 5203 | Science of Materials – Ceramics | 2 |
| DM 5224 | Materials Thermodynamics | 2 |
| | **Total** | **16.5** |

## Graduate Program in Biomedical Sciences

| | |
|---|---|
| Program Director: | Paul C. Dechow, Ph.D. |
| Professors: | I. Al-Hashimi (Periodontics), L. Bellinger*, C. Berry*, P. Buschang (Orthodontics), D. Carlson*, P. Dechow*, R. D'Souza (Chair, Biomedical Sciences), J. Feng*, G.Glickman (Chair, Endodontics), R. Finnell*, R. Hinton*, W. Nagy (Prosthodontics), T. Okabe (Chair, Biomaterials Science), K. Svoboda*, G.Triplett (Chair, Oral and Maxillofacial Surgery), J. Wright (Chair, Oral Diagnosis) |
| Associate Professors: | A. Honeyman*, B. Hutchins*, H. Kessler (Oral Diagnosis), P. Kramer*, L. Mitchell* (IBT), L. Opperman*, R. Puttaiah (Oral Diagnosis), A.Sharma*, R.Taylor (Orthodontics), F. Williams*, B. Wong* |
| Assistant Professors: | Z. Cai (Biomaterials Science), L. Cheng (Oral Diagnosis), J. Griggs (Biomaterials Science), P. Ezzo*, J. He (Endodontics), H. Kapadia*, M. Nouri-Shirazi*, C. Qin*, J. Reuben*, R. Spears*, G. Throckmorton (U.T. Southwestern Medical School) |
| Adjunct Professors: | E. Ellis (U.T. Southwestern Medical School), M. Samchukov (Texas Scottish Rite Hospital) |
| Adjunct Associate Professors: | J. Newman* |
| Adjunct Assistant Professors: | M. Makarov (Texas Scottish Rite Hospital for Children) |

*Indicates member of the Department of Biomedical Sciences at HSC-Baylor College of Dentistry.

### *Master of Science in Biomedical Sciences*

30 semester hours minimum (advanced placement possible for students with a D.D.S.)
Master's Thesis
Starting date: Fall semester desirable

*Program Objectives*

The M.S. Graduate Program in Biomedical Sciences is oriented toward graduates of dental programs and students enrolled in a specialty clinical program at HSC-Baylor College of Dentistry. The graduate program also is well suited for dental specialists from countries other than the United States who desire to obtain or improve their background in dental research but do not have the time to pursue a Ph.D. degree. Current dental students at HSC-Baylor College of Dentistry and non-dental students with a baccalaureate degree in the biological sciences also are eligible to apply for the M.S. Program in Biomedical Sciences.

For current dental students and for students with a D.D.S. degree or equivalent, whether or not they are enrolled concomitantly in a clinical specialty program, the program's primary objectives are to:

- Provide training in basic biomedical sciences and modern research methods;
- Equip students with the basic information and tools for critical analysis of the literature necessary to be life-long learners in the oral health sciences; and
- Prepare students for participation on clinical dental faculties.

An additional benefit of the M.S. Graduate Program in Biomedical Sciences is that predoctoral students and students in the dental specialty programs at HSC-Baylor College of Dentistry will become more competitive for admission to training programs in dental clinical specialties and Ph.D. programs.

For most graduate clinical programs at HSC-Baylor College of Dentistry, there is significant overlap in course work with the M.S. degree in the graduate program in biomedical sciences. Thus, the M.S. in the graduate program in biomedical sciences may serve as an alternative to the M.S. in oral biology (the usual degree for most graduate specialty students). The M.S. in biomedical sciences is especially appropriate for those clinical students with stronger academic motivation or who may wish to pursue a combined career of clinical practice and teaching in a clinical department.

Current dental students at HSC-Baylor College of Dentistry are also eligible for the M.S. program. These students work with advisers in the graduate program to implement specially designed M.S. programs. The goal is to provide research training that will provide an excellent background for subsequent advanced research training in a Ph.D. program or fellowship, and clinical specialty training.

On occasion, students with a bachelor's degree only are accepted into the program. For them, the primary objective of the M.S. program is to provide training in basic biomedical sciences and modern research methods. This training will enhance opportunities for careers as educators in secondary schools and junior colleges, and as technicians and research associates in modern biological laboratories. The master's in biomedical sciences also is appropriate for students who wish to pursue research and enhance their educational experience in further preparation for admission to dental and medical schools and advanced graduate (Ph.D.) programs.

The M.S. Graduate Program in Biomedical Sciences offers concentrations in the following fields of study central to the oral health sciences:

- Anatomy
- Molecular and Cellular Biology
- Neuroscience
- Microbiology/Immunology
- Physiology/Pharmacology

### *Doctorate (Ph.D.) in Biomedical Sciences*

96-semester hours minimum (advanced placement possible for students with a D.D.S.)
Doctoral dissertation
Starting date: Fall semester desirable

*Program Objectives*

The Ph.D. Graduate Program in Biomedical Sciences is available for advanced students who have either a baccalaureate degree with a science concentration or a D.D.S./D.M.D. degree and who are interested in academic and research careers in the oral health sciences. Preference will be given to students who also have a master's degree or certificate in a clinical specialty, or who are currently enrolled in such a program or the D.D.S. program at HSC-Baylor College of Dentistry. An option to pursue a combined D.D.S./Ph.D. degree is available.

Work leading to the Doctor of Philosophy degree is designed to give the candidate a thorough and comprehensive knowledge of a professional field and training in methods of research. The final basis for granting the degree is the candidate's grasp of the subject matter of a broad field of study and a demonstrated ability to do independent research. In addition, the candidate must acquire the ability to express thought clearly in both oral and written language.

The Ph.D. program provides a multidisciplinary research and educational training experience for outstanding dentists and dental specialists who seek careers as educators and researchers in the oral health sciences. A special emphasis of the program is the joint training of those who wish to pursue dental specialty and

Ph.D. training simultaneously. The specific objectives of the Ph.D. Graduate Program in Biomedical Sciences are to:

- Train advanced students in scientific methods and techniques necessary to conduct modern biological and clinical research;
- Produce significant research accomplishments during the course of training;
- Train advanced students to communicate academic knowledge and research findings to classroom and professional audiences; and
- Prepare the next generation of researchers and educators to join faculties of basic sciences and clinical specialty departments in major research universities.

The concentration available in the Ph.D. in the Graduate Program in Biomedical Sciences depends entirely on the availability of resources and suitable numbers of research faculty as mentors. The current primary foci of the program are in the areas of craniofacial biology, stomatology and biomaterials. The program can also provide advanced training in clinical and translational research methods.

### *Postdoctoral Training*

The research and training environment in the graduate program in biomedical sciences provides excellent resources for those seeking postdoctoral educational experiences. Trainees are able to take advantage of the overall research environment, research programs in specific laboratories of interest and ongoing lecture, seminar and discussion series.

The goals of the postdoctoral education are similar to those described above in the description of the Ph.D. program but can be more circumscribed, depending on the interests of the trainee. Ideal candidates for postdoctoral education are students who have completed the D.D.S., clinical specialty degrees and/or Ph.D. degrees. Students with Ph.D. degrees may seek additional training in specific research methodologies or a general exposure to research and training opportunities in research areas related to dentistry. Students with the D.D.S. or clinical specialty degrees may seek a general exposure to a research environment in modern biomedical sciences without the attending rigor of the Ph.D. program. A key element of postdoctoral training is flexibility in meeting the needs of the trainee. This program accommodates those with a broad range of needs and possible time commitments for advanced academic and research training.

## Dental Hygiene

| | |
|---|---|
| Chair: | Janice P. DeWald, Professor |
| Graduate Program Director: | Marylou E. Gutmann, Professor |
| Associate Professor: | A. McCann, P. Campbell |
| Clinical Associate Professor: | K. Muzzin |
| Assistant Professor: | L. Harper-Mallonee, J. Scofield |

Graduate Program (M.S. with Thesis; Non-thesis option for administrative track)
37 semester hours
Starting date: Summer

### *Program Plan*

The M.S. Program in Dental Hygiene at HSC-Baylor College of Dentistry allows graduate students to pursue a choice of two distinct fields of study depending on their educational/career goals.

### *Administrative Track*

Students enrolled in the administrative/managerial track will take courses that expand on the assessment, planning, implementation and evaluation skills obtained during their undergraduate experience and apply them in institutional settings, such as hospitals and nursing homes. This course of study will prepare graduates for employment in administrative positions while advancing their clinical and research skills. A thesis/non-thesis option is available to the administrative track graduate student.

### *Education Track*

The dental hygiene education track will focus on educational theory and practice in a college environment. This course of study will prepare graduates for employment in a dental hygiene educational setting with the background to contribute to an institution's teaching, research and service mission. A thesis is required of the education-track graduate student.

### *Length of Study*

In most cases, the minimum length of study to fulfill requirements for the M.S. degree in dental hygiene is two years. Part-time participation in the program is possible with approval of the dental hygiene graduate program director. The program must be completed within five years of the start date.

### *Credit Requirements*

Requirements for the degree consist of a total of 37 semester hours made up of required courses, a selection of elective courses and completion of a master's thesis or project (see non-thesis option for administrative track).

### *Curriculum*

*First Year*

| **Education Track** | | | **Administrative Track** | | |
|---|---|---|---|---|---|
| **Summer Session** | | | | | |
| DH | 5100 | Advanced DH Clinical Skills (1) | DH | 5100 | Advanced DH Clinical Skills (1) |
| HPE | 5225 | Teaching Skills for Health Professions Educators (1) | | | Elective Option |
| | | Elective Option(s) (3) | | | Elective Option(s) (3) |

| | | | | | |
|---|---|---|---|---|---|
| **Fall Semester** | | | | | |
| BMS | 5221 | Research Design & Methodology (2) | BMS | 5221 | Research Design & Methodology (2) |
| DH | 5200 | Educational Research (2) | DH | 5200 | Educational Research (2) |
| DH | 5130 | Clinical Dental Hygiene Teaching Practicum (1) | | | Elective Option |
| DH | 5301 | Didactic Teaching Strategies (2) | DH | 5301 | Didactic Teaching Strategies (2) |
| DH | 5201 | Teaching Strategies: DH Ed I (2) | DH | 5201 | Teaching Strategies: DH Ed I (2) |
| | | Off-campus Elective Option(s) (3) | | | Off-campus Elective Option(s) (3) |
| **Spring Semester** | | | | | |
| DH | 5202 | Teaching Strategies: DH Ed II (2) | DH | 5202 | Teaching Strategies: DH Ed II (2) |
| DH | 5112 | Faculty Responsibilities and Issues in Higher Education (1) | DH | 5208 | Hospital Admin. Practicum I (2) |
| BMS | 5222 | Applied Biostatistics (2) | BMS | 5222 | Applied Biostatistics (2) |
| DH | 5130 | Clinical Dental Hygiene Teaching Practicum (1) | | | |
| DH | 5210 | Special Care Patient Seminar (2) | DH | 5210 | Special Care Patient Seminar (2) |
| DH | 5V98 | Research for Thesis (1-3) | DH | 5V88 | Research for Practicum (1-3) OR |
| | | | DH | 5V98 | Research for Thesis (1-3) |
| | | Off-campus Elective Options(s) (3) | | | Off-campus Elective Option(s) (3) |

*Second Year*

| | | | | | |
|---|---|---|---|---|---|
| **Summer Session** | | | | | |
| | | | DH | 5118 | Hospital Admin. Practicum II (1) |
| DH | 5V98 | Research for Thesis (1-3) | DH | 5V88 | Research for Practicum (3) OR |
| | | | DH | 5V98 | Research for Thesis (1-3) |
| DH | 5211 | Clinical Case Study (2) | DH | 5211 | Clinical Case Study (2) |
| | | Off-campus Elective Option(s) (3) | | | Off-campus Elective Option(s) (3) |
| **Fall Semester** | | | | | |
| DH | 5V98 | Research for Thesis (1-3) | DH | 5V98 | Research for Thesis (1-3) OR |
| | | | DH | 5V88 | Research for Practicum (1-3) |
| DH | 5314 | Classroom Teaching Practicum (1) | DH | 5219 | Hospital Admin. Practicum III (2) |
| | | 1 or 2 Off-campus Elective Options(s) (3 or 6) | | | 1 or 2 Off-campus Elective Option(s) (3 or 6) |
| **Spring Semester** | | | | | |
| DH | 5V99 | Thesis (1-3) | DH | 5V99 | Thesis (1-3) OR |
| | | | DH | 5V89 | Practicum Project (1-3) |
| | | | | | Off-campus Elective Option if 2 not taken in Fall semester (3) |

## *Electives*

Administrative track students must take a minimum of three courses from the following list from the Department of Health Care Administration at Texas Woman's University. (See course descriptions in TWU's online catalog.)

| | | |
|---|---|---|
| HCA | 5003 | Management of Health Services Organizations |
| HCA | 5023 | Health and the Health Care System |
| HCA | 5033 | Health Services Human Resources Management |
| HCA | 5043 | Legal Foundations of Health Care Administration |
| HCA | 5053 | Quantitative Methods in Health Care Administration |
| HCA | 5063 | Financial Management for Health Care Administration |
| HCA | 5073 | Health Care Strategic Planning and Marketing |

Education track students must take a minimum of three elective courses from the following list:

Texas A&M University–Commerce, Commerce campus and/or via distance learning in Mesquite; not all courses available at both campuses. (See course descriptions in the Texas A&M University–Commerce online catalog.)

| | | |
|---|---|---|
| PSY | 625 | Cognition and Instruction I |
| PSY | 626 | Cognition and Instruction II |
| ETec | 561 | Learning and Technology |
| ETec | 578 | Instructional Design and Development |
| PSY | 500 | Cognition, Learning and Development |
| PSY | 620 | Human Learning and Cognition |
| HiEd | 542 | Analysis of Teaching in Higher Education |
| HiEd | 543 | Issues in Adult and Continuing Education |
| HiEd | 621 | Effective Teaching and Learning in Higher Education |
| HiEd | 655 | Issues in Higher Education |
| HiEd | 656 | Higher Education and the Law |
| HiEd | 658 | Administration in Higher Education |

University of North Texas (See course descriptions in UNT's online catalog.)

| | | |
|---|---|---|
| EDER | 5050 | Educational Research and Evaluation |
| EDER | 5210 | Educational Statistics |
| EPSY | 5220 | The Evaluation of Education Programs |
| EPSY | 5230 | Cognitive and Performance Evaluation |

| | | |
|---|---|---|
| ESPY | 5240 | Survey Research Methods in Education |
| ESPY | 5350 | Educational Evaluation and Assessment |
| EDHE | 6640 | The Adult Learner and Adult Learning |
| EDHE | 6070 | Teaching and Learning in the Community College |
| EDHE | 5100 | Effective College Teaching and Learning |
| EDHE | 5710 | Trends and Issues in Adult and Continuing Education |
| CECS | 5020 | Computer Education Tools |
| ATTD | 5120 | Demonstrating Effective Presentation Skills |
| ATTD | 5530 | Curriculum Development in Applied Technology, Training and Development |
| EDAD | 5300 | Introduction to Educational Administration |

Texas Woman's University (See course descriptions in TWU's online catalog.)

| | | |
|---|---|---|
| ELDR | 5143 | Theories of Learning and Educational Measurement |
| ELDR | 5203 | Research in Education |
| ELDR | 5713 | Trends and Issues in Adult Education |
| ELDR | 5823 | Adult Learning and Development |
| HS | 5103 | Principles and Methods of Teaching Health Professionals |
| HS | 5113 | Curriculum Development for Health Professionals |
| HS | 5383 | Program Development and Coordination |

In addition, students must take one graduate level statistics course, either at HSC-Baylor College of Dentistry or at the following campus:

| | | | |
|---|---|---|---|
| EDER | 5210 | Educational Statistics | (University of North Texas) |

### *Degree Plan*

Students must choose the track of study they wish to pursue at the time of application. Students accepted into the program must meet with the graduate director during the first semester of study to develop a degree plan of required courses and electives. By the end of the third semester, students must turn in their thesis/non-thesis topic to the program director with a brief discussion of this topic. At that time, a conference will be scheduled to discuss the thesis/non-thesis options and potential committee members and mentor.

### *Thesis and Non-thesis Options*

*Thesis*

A thesis is required for the education track and is an option for the administrative track. The student, in consultation with his/her mentor and thesis committee, will develop a thesis proposal. The thesis proposal will generally follow the standard format for graduate research proposals at HSC-Baylor College of Dentistry. The thesis should deal with a topic related to the major field of study, embody the results of original individual research, demonstrate an understanding of the literature on the subject and constitute a contribution to knowledge. The thesis will be formally presented to the faculty.

*Non-thesis*

The non-thesis option is available to the administrative track graduate student and will constitute a major project in an area of interest. The student will assess the need for, plan, implement and evaluate a major project pertinent to the area of health care administration, such as management of institutions, finances, human resources, etc. A proposal will be developed in consultation with the student's mentor and committee who must approve the project. The completed project will be formally presented in written and oral form to the faculty.

## Dental Public Health

| | |
|---|---|
| Chair: | Daniel L. Jones |
| Program Director: | Jay D. Shulman |

### *Program Objectives*

The program objectives are to:

- Provide residents with the opportunity to plan develop and complete a program that satisfies the criteria established by the American Board of Dental Public Health. This program revolves around the 10 core competencies of dental public health:
  1. Planning oral health programs for populations;
  2. Selecting interventions and strategies for the prevention of oral diseases and promotion of oral health;
  3. Implementation and management of oral health programs for populations;
  4. Incorporation of ethical standards with cultural and social sensitivity in oral health programs;
  5. Evaluation and monitoring of oral health programs for population dental care delivery systems;
  6. Design and use of surveillance systems to monitor oral health;
  7. Communication and collaboration with groups and individuals on oral health issues;
  8. Advocacy for, implementation and evaluation of public health policy, legislation and regulations to protect and promote the public's oral health
  9. Critique and synthesis of scientific literature; and
  10. Design and conducting of population-based studies to answer oral and public health questions.
- Expose residents to experiences that allow the application of the theory and principles of public health practice to actual situations that develop in a community.
- Ensure that residents acquire experience with a variety of programs and methods utilized in dental public health.
- Upon completion of the program, residents should be able to demonstrate competency in the skills and knowledge that are essential for dentists who practice public health as their specialty.

## Endodontics

| | |
|---|---|
| Chair & Graduate Program Director: | Gerald N. Glickman, Professosr |
| Associate Professor: | J. Regan |
| Assistant Professors: | J. He, J. Schweitzer, R. White |
| Clinical Associate Professor: | B. Johnson, H. Rakusin |
| Clinical Assistant Professors: | J. Aurbach, C. Barrington, S. Bruce, A. Fleury, W. Pope, G. Spearman, W. Wildey |

Graduate Program (Certificate Program)
27 months
Starting date: July

Graduate Program (M.S. in Oral Biology with Thesis + Certificate)
36 months
Starting date: July

Graduate Program (M.S. in Health Professions Education with Thesis + Certificate)
*Information available upon request*
36 months
Starting date: July

Graduate Program (Ph.D. + Certificate)
*Information available upon request*
60 months
Starting date: July

### *Curriculum - Certificate/M.S. in Oral Biology*

*First Year*

| | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| **First Semester (Summer)** | | | | |
| OMS | 5214 | Pharmacology | 28 | 1.5 |
| BMS | 5V04 | Head and Neck Anatomy | 7 | 1.5 |
| BMS | 5312 | Physiology | 34 | 2 |
| END | 5111 | Current Literature Review | 14 | 1 |
| END | 5121 | Endodontic Treatment Planning | 14 | 1 |
| END | 5141 | Special Problems in Endodontics | 7-35 | 1 |
| | | **Total** | **104-132** | **8** |
| **Second Semester (Fall)** | | | | |
| BMS | 5221 | Research Design and Methodology | 18 | 2 |
| OMS | 5218 | Conscious Sedation | 22 | 1 |
| OMS | 5233 | Physical Diagnosis | 16 | 1 |
| BMS | 5251 | Immunology | 34 | 1 |
| END | 5111 | Current Literature Review | 34 | 1 |
| END | 5121 | Endodontics Treatment Planning | 34 | 1 |
| END | 5141 | Special Problems in Endodontics | 17-85 | 1 |
| END | 5222 | Clincial Endodontics | 84 | 2 |
| | | **Total** | **259-327** | **10** |
| **Third Semester (Spring)** | | | | |
| OD | 5250 | Oral Radiology | 17 | 1 |
| OP | 5V21 | Advanced Oral Pathology | 34 | 2 |
| BMS | 5350 | Oral Microbiology | 34 | 2 |
| BMS | 5222 | Applied Biostatistics | 52 | 2 |
| OMS | 5221 | Internal Medicine | 34 | 1 |
| END | 5111 | Current Literature Review | 34 | 1 |
| END | 5121 | Endodontic Treatment Planning | 34 | 1 |
| END | 5141 | Special Problems in Endodontics | 17-85 | 1 |
| BMS | 5217 | Microscopy, Imaging and Associated Techniques | 51 | 2 |
| | | **Total** | **307-375** | **13** |
| **Fourth Semester (Summer)** | | | | |
| END | 5111 | Current Literature Review | 14 | 1 |
| END | 5121 | Endodontic Treatment Planning | 14 | 1 |
| END | 5141 | Special Problems in Endodontics | 7-35 | 1 |
| END | 5222 | Clinical Endodontics | 84-126 | 2 |
| END | 5225 | Teaching Skills | 14 | 1 |
| | | **Total** | **133-161** | **6** |

| | | | | |
|---|---|---|---|---|
| **Fifth Semester (Fall)** | | | | |
| END | 5111 | Current Literature Review | 34 | 1 |
| END | 5121 | Endodontic Treatment Planning | 34 | 1 |
| END | 5141 | Special Problems in Endodontics | 17-85 | 1 |
| END | 5222 | Clinical Endodontics | 204-306 | 2 |
| | | **Total** | **289-459** | **5** |
| **Sixth Semester (Spring)** | | | | |
| *BMS | 5263 | Sensory Neurobiology & Pain | 34 | 1 |
| BMS | 5V40 | Cellular & Molecular Biology | 34 | 1 |
| BMS | 5V42 | Cellular & Molecular Biology | 34 | 1 |
| END | 5111 | Current Literature Review | 34 | 1 |
| END | 5121 | Endodontics Treatment Planning | 34 | 1 |
| END | 5142 | Advanced Special Problems in Endodontics | 17-85 | 1 |
| END | 5222 | Clinical Endodontics | 204-306 | 2 |
| | | **Total** | **391-561** | **8** |
| *Offered every other year | | | | |
| **Seventh Semester (Summer)** | | | | |
| END | 5111 | Current Literature Review | 14 | 1 |
| END | 5121 | Endodontics Treatment Planning | 14 | 1 |
| END | 5142 | Advanced Special Problems in Endodontics | 7-35 | 1 |
| END | 5V98 | Research | 14-70 | 1-5 |
| END | 5223 | Advanced Clinical Endodontics | 84-126 | 2 |
| | | **Total** | **133-259** | **6-10** |
| **Eighth Semester (Fall)** | | | | |
| AGD | 5205 | Practice Management | 34 | 1.5 |
| END | 5111 | Current Literature Review | 34 | 1 |
| END | 5121 | Endodontics Treatment Planning | 34 | 1 |
| END | 5142 | Advanced Special Problems in Endodontics | 17-85 | 1 |
| END | 5V99 | Thesis | 34-170 | 1-5 |
| END | 5V98 | Research | 34-51 | 1-5 |
| END | 5223 | Advanced Clinical Endodontics | 204-306 | 2 |
| | | **Total** | **391-714** | **8.5-16.5** |
| **Ninth Semester (Spring)** | | | | |
| END | 5111 | Current Literature Review | 34 | 1 |
| END | 5121 | Endodontics Treatment Planning | 34 | 1 |
| END | 5V99 | Thesis | 34-170 | 1-5 |
| END | 5V98 | Research | 34-170 | 1-5 |
| END | 5142 | Advanced Special Problems in Endodontics | 17-85 | 1 |
| END | 5223 | Advanced Clinical Endodontics | 204-306 | 2 |
| | | **Total** | **357-799** | **7-15** |

## Health Professions Education

Program Director: Ernestine S. Brooks, Associate Professor
Professors: D. Jones, J. DeWald, M. Gutmann
Associate Professors: B. DeSpain Eden, D. Harman, A. McCann, J. Shulman, P. Campbell

Graduate Program (M.S. with thesis)
32 semester hours minimum
24 months minimum
Starting date: Summer session desirable

The M.S. Program in Health Professions Education is designed to prepare dentists for a career in dental education. A minimum of two calendar years (32 semester hours with thesis) is required. The M.S. degree in Health Professions Education is offered through the Department of Public Health Sciences.

### *Program Objectives*

Program objectives for students are to:

- Develop foundational knowledge and skills for conducting research,
- Develop teaching skills and construct effective learning environments, and
- Become well-versed in higher education issues.

# Clinical and Basic Science Programs

## Oral and Maxillofacial Pathology

### *Curriculum*

*First Year*

| | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| **First Session (Summer)** | | | | |
| HPE | 5225 | Teaching Skills for Health Professions Educators | 16 | 1 |
| XXX | XXX | Education Elective | 51 | 3 |
| HPE | 5V25 | Research Practicum | 28 | 0.5 |
| HPE | 5V26 | Literature Review Seminar | 14 | 0.5 |
| HPE | 5V13 | Teaching Internship | 21 | 0.5 |
| | | **Total** | **130** | **5.5** |
| **Second Semester (Fall)** | | | | |
| BMS | 5221 | Research Design and Methodology | 34 | 2 |
| DH | 5200 | Educational Research | 34 | 2 |
| HPE | 5V26 | Literature Review Seminar | 34 | 1 |
| HPE | 5V27 | Teaching Practicum | 34 | 2 |
| HPE | 5V13 | Teaching Internship | 51 | 1 |
| XXX | XXX | Education Elective | 51 | 3 |
| | | **Total** | **238** | **11** |
| **Third Semester (Spring)** | | | | |
| BMS | 5222 | Applied Biostatistics | 27 | 2 |
| DH | 5112 | Intro to Faculty Responsibilities and Issues in Higher Education | 18 | 1 |
| HPE | 5V26 | Literature Review Seminar | 36 | 1 |
| HPE | 5V27 | Teaching Practicum | 18 | 1 |
| HPE | 5V13 | Teaching Internship | 54 | 1 |
| HPE | 5343 | Educational Assessment | 36 | 2 |
| XXX | XXX | Education Elective | 54 | 3 |
| | | **Total** | **243** | **11** |

*Second Year*

| | | | | |
|---|---|---|---|---|
| **Fourth Semester (Summer)** | | | | |
| HPE | 5V98 | Research for Thesis | 56 | 1 |
| | | **Total** | **56** | **1** |
| **Fifth Semester (Winter)** | | | | |
| HPE | 5V98 | Research for Thesis | 112 | 2 |
| | | **Total** | **112** | **2** |
| **Sixth Semester (Spring)** | | | | |
| HPE | 5V99 | Thesis | 112 | 2 |
| | | **Total** | **112** | **2** |

## Oral and Maxillofacial Pathology

Chair: John M. Wright, Professor
Program Director: Harvey P. Kessler, Associate Professor
Assistant Professors: Y-S. Cheng, A. Naidu

Graduate Program (M.S. with thesis)
In conjunction with Department of Biomedical Sciences
30 semester hours minimum
36 months minimum
Starting date: July

Graduate Program (Ph.D. with dissertation)
In conjunction with Department of Biomedical Sciences
78 semester hours minimum
60 months minimum
Starting date: July

Postgraduate Program (Certificate)
30 semester hours minimum
36 months minimum
Starting date: July

### *Program Goals*

Program goals are to provide the student and produce a graduate:

- With the skills and knowledge for a productive, competent and compassionate practice of oral and maxillofacial pathology;
- With the foundational knowledge necessary for scientific inquiry, critical thinking and problem-solving;
- With an understanding of the scientific method and the technological advances that are available for scientific inquiry; and
- Who has the confidence, independence and motivation for life-long learning and the skills to communicate that knowledge.

## *Curriculum*

### *First Year*

| | | | Clock Hours | Semester Hours |
|---|---|---|---|---|
| **Summer Term** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 35 | 0-2 |
| PER | 5V10 | Clinical Stomatology I | 28 | 0-1 |
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 140 | 0-1 |
| | | **Total** | **203** | **0-4** |
| **First Semester (Fall)** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 85 | 0-2 |
| BMS | 5221 | Research Design and Methodology | 34 | 2 |
| PER | 5V10 | Clinical Stomatology I | 68 | 0-1 |
| BMS | 5190 | Seminar: Current Issues in Biomedical Science* | (17) | (1) |
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 340 | 0-2 |
| BMS | 5251 | Immunology | 17 | 1 |
| | | **Total** | **544 (561*)** | **3-8 (4-9*)** |
| **Second Semester (Spring)** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 85 | 0-2 |
| BMS | 5V10 | Clinical Stomatology I | 68 | 1 |
| BMS | 5222 | Applied Biostatistics | 22 | 2 |
| BMS | 5190 | Seminar: Current Issues in Biomedical Science* | (17) | (1) |
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 250 | 0-2 |
| OP | 5V21 | Advanced Oral Pathology | 34 | 2 |
| OP | 5V22 | Advanced Oral Pathology Laboratory | 17 | 1 |
| OP | 5305 | General Pathology | 33 | 0 |
| OP | 5113 | Current Issues in Oral and Maxillofacial Pathology | 34 | 0-1 |
| | | **Total** | **543 (560*)** | **5-11 (6-12*)** |

### *Second Year*

| | | | | |
|---|---|---|---|---|
| In any semester, one or more biomedical science elective(s) | | | | 2+ |
| **Summer Term** | | | | |
| OP | 5V01 | Anatomic Pathology and Autopsy<br>Baylor University Medical Center | 280 | 1-5 |
| | | **Total** | **280** | **1-5** |
| **Third Semester (Fall)** | | | | |
| OP | 5V01 | Anatomic Pathology and Autopsy<br>Clinical Pathology<br>Baylor University Medical Center | 760 | 3-9 |
| OP | 5303 | General Pathology | 33 | 0 |
| | | **Total** | **793** | **3-9** |
| **Fourth Semester (Spring)** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 85 | 0-3 |
| BMS | 5V40/5V42 | Cellular and Molecular Biology of Oral and Craniofacial Tissues I & II | 34 | 2 |
| PER | 5V11 | Clinical Stomatology II | 68 | 0-1 |
| | | Oral Diagnosis Clinic | 44 | 0 |
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 170 | 0-2 |
| BMS | 5126 | Responsible Conduct in Biomedical Sciences* | (17) | (0.5) |
| BMS | 5V98 | Research for Thesis* | (68) | (1) |
| OP | 5113 | Current Issues in Oral and Maxillofacial Patholody | 34 | 0-1 |
| | | **Total** | **435 (520*)** | **2.5-8.5 (3.5-10.5*)** |

### *Third Year*

| | | | | |
|---|---|---|---|---|
| **Summer Term** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 35 | 1-2 |
| PER | 5V12 | Advanced Clinical Stomatology | 28 | 1 |
| HPE | 5225 | Teaching Skills | 14 | 1 |
| BMS | 5V98 | Research for Thesis* | (28) | (1) |
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 70 | 0-1 |
| | | **Total** | **147 (175*)** | **0-5 (3-6*)** |
| **Fifth Semester (Fall)** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 85 | 0-2 |
| PER | 5V12 | Advanced Clinical Stomatology | 68 | 1 |
| BMS | 5V98 | Research for Thesis* | (100) | (2) |
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 170 | 0-4 |
| | | **Total** | **323 (423*)** | **0-7 (4-9)** |
| **Sixth Semester (Spring)** | | | | |
| OP | 5V00 | Oral and Maxillofacial Pathology Seminar | 85 | 0-2 |
| PER | 5V12 | Advanced Clinical Stomatology | 68 | 0-1 |
| BMS | 5V98 | Research for Thesis* | (100) | (2) |

| | | | | |
|---|---|---|---|---|
| OP | 5V05 | Oral and Maxillofacial Pathology Service | 170 | 0-4 |
| OP | 5113 | Current Issues in Oral and Maxillofacial Pathology | 34 | 0-1 |
| | | **Total** | **357 (457*)** | **0-8 (4-10*)** |

* M.S. degree candidates

## Oral and Maxillofacial Surgery

| | |
|---|---|
| Chair: | R. Gilbert Triplett, Regents Professor |
| Program Director: | Sterling R. Schow, Professor |
| Professor: | S. Parel, R. Alexander |
| Assistant Professors: | U. Frohberg, D. Grogan |

### *Postgraduate Program (Certificate and M.D. or Ph.D.).*

Programs may be combined and completed within the specified time period.
72 months minimum for certificate and M.D. or Ph.D.
Starting date: July 1 – 48 months minimum for certificate program only (Federal Services)

### *Program Objectives*

The program objectives are to:

- Impart to the resident a clinical and academic background that meets or exceeds the requirements and essentials of an accredited residency program in oral and maxillofacial surgery;
- Provide a program that will prepare the resident for eventual successful completion of the certification examination of the American Board of Oral and Maxillofacial Surgery;
- Develop in the student the surgical expertise, diagnostic acumen and patient management skills that will enable him/her to pursue either an academic career, research career and/or practice in this specialty;
- Foster in the student an attitude of critical inquiry and intellectual self-renewal throughout his/her professional career and to stimulate the desire to deliver ethical, compassionate and effective health care services to the public; and
- Stimulate in the student an orderly intellectual curiosity through the teaching of research methodology, the design and conduct of meaningful research and the defense of a master's thesis.

### *Curriculum*

The residency program in oral and maxillofacial surgery is a combined program leading to a certificate in oral and maxillofacial surgery and either an M.D. or Ph.D. degree. The minimum duration of study is 72 months.

In the Oral and Maxillofacial Surgery and M.D. program, the resident begins training with attendance at Texas Tech University Medical School in Lubbock as a full-time medical student with advanced standing in the second-year medical class. Six months of the medical school program are spent on the oral and maxillofacial surgery service. After completion of medical school, the resident returns to Dallas to complete a one-year general surgery internship at Baylor University Medical Center. The remaining 24 months of the program are spent on the Oral and Maxillofacial Surgery Service at HSC-Baylor College of Dentistry and Baylor University Medical Center.

The Oral and Maxillofacial Surgery and Ph.D. program in craniofacial biology is a sequential program with the Ph.D. first, followed by the oral and maxillofacial surgery residency. The Ph.D. program is jointly conducted through HSC-Baylor College of Dentistry. This course of study requires basic- and advanced-level courses and research leading to preparation and defense of the Ph.D. dissertation. The program design requires completion of the Ph.D. degree prior to the clinical training portion of the oral and maxillofacial residency.

### *OMS Four-year certificate program*

The 48-month, certificate-only program in oral and maxillofacial surgery is a fully accredited residency made available primarily for U.S. Federal Service trainees. The first 12 months of the program include time on the parent service, but mostly, a series of resident-level rotations on the general surgery, medicine and anesthesia services at Baylor University Medical Center. The final three years of the program are primarily spent on the OMS service, with intermittent rotations of one month each to the oral pathology, head and neck surgery and oculoplastic surgery services. The certificate of training completion and eligibility for taking the American Board of Oral and Maxillofacial certification examination is awarded after completion of all training programs – 72-month certificate/M.D., 72-month certificate/Ph.D. and 48-month certificate.

*M.D./Certificate Curriculum*

| | |
|---|---|
| First Year | Advance placement (year two in accredited medical school) |
| Second Year | Year three in accredited medical school |
| Third Year | Year four in accredited medical school - M.D. degree awarded (six months OMFS) |
| Fourth Year | General surgery internship (2,700 clock hours) - Baylor University Medical Center (six months OMFS) |
| Fifth Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Sixth Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) - Certificate awarded |

*Ph.D./Certificate Curriculum*

| | |
|---|---|
| First Year | Ph.D. courses/research (32 semester hours; see Biomedical Sciences) |
| Second Year | Ph.D. courses/research (32 semester hours; see Biomedical Sciences) |
| Third Year | Ph.D. courses/research (32 semester hours; see Biomedical Sciences) |
| Fourth Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Fifth Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Sixth Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Seventh Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |

*Certificate Program Curriculum*

| | |
|---|---|
| First Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Second Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Third Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |
| Fourth Year | Oral and maxillofacial surgery rotations, clinics, seminars (2,700 clock hours) |

## Orthodontics

| | |
|---|---|
| Chair: | Emile Rossouw, Professor |
| Program Director: | Richard F. Ceen, Professor |
| Clinic Director | Phillip M. Campbell, Assistant Professor & Gaylord Endowed Chair in Orthodontics |
| Research Program Director: | Peter H. Buschang, Professor |
| Undergraduate Program Director | Reginald Taylor, Associate Professor |
| Professor: | D. Carlson |
| Clinical Professors: | C. Alexander, R. Alexander, E. Genecov, T. Matthews |
| Clinical Associate Professors: | Attaway, Crosby |
| Clinical Assistant Professors: | Adams, J Moody Alexander, Boley, Brady, Collins, Geller, J Genecov, Holt, Murphey, Polson, Stephens, Supakit, Tadlock, Valant, White |

Various adjunct professors enhance the didactic and clinical program

Graduate Program (M.S. with Thesis):
- 68.5 semester hours minimum
- 26 months minimum (certificate/M.S.)
- 72 months(certificate/Ph.D.)

The program seeks and encourages applicants for the Ph.D. degree and/or academic career interest.

### *Program Objectives*

The program objectives are:
- To comprehensively prepare residents to be competent and proficient specialists in the practice of orthodontics and dentofacial orthopedics;
- To train residents who will pursue certification by the American Board of Orthodontics;
- To develop familiarity with the scientific method through advanced level instruction in biomedical sciences, critical review of the literature and a well-defined research experience leading to a Master of Science degree; and
- To train graduates to pursue skills of life-long professional learning, become involved in organized dentistry and contribute responsibly to their communities.

### *Curriculum*

*First Year*

| **Summer Session** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| BMS | 5V04 | Head and Neck Anatomy* | 22 | 1.5 |
| ORT | 5109 | Orthognathic Surgery Conference I | 2 | 0 |
| ORT | 5115 | Clinical Specialty Seminars I | 30 | 0.5 |
| ORT | 5202 | Radiology and Cephalometrics | 14 | 1 |
| ORT | 5532 | Orthodontic Techniques | 158 | 2.5 |
| | | **Total** | **226** | **5.5** |
| **Second Semester (Fall)** | | | | |
| BMS | 5221 | Research Design & Methodology | 32 | 2.0 |
| BMS | 5V69 | Growth and Mechanisms of Development* | 17 | 0.5 |
| BMS | 5V73 | Advanced Human Cranio Development & Cranio Anom | 17 | 1.0 |
| ORT | 5042 | TMD Clinic | 0 | 0 |
| ORT | 5103 | Biomechanics I | 17 | 1 |
| ORT | 5107 | Material Science in Orthodontics | 12 | 0.5 |
| ORT | 5108 | Advanced Cephalometrics | 17 | 1 |
| ORT | 5109 | Orthognathic Surgery Conference I | 29 | 0.5 |
| ORT | 5115 | Clinical Specialty Seminars I | 191 | 3 |
| ORT | 5533 | Clinical Orthodontics I | 375 | 4.5 |
| | | **Total** | **707** | **14.0** |
| **Third Semester (Spring)** | | | | |
| BMS | 5V75 | Physical Growth & Maturation | 18 | 0.5 |
| BMS | 5222 | Applied Biostatistics | 36 | 2 |
| OP | 5V21 | Advanced Oral Pathology* | 36 | 2 |
| ORT | 5031 | Orthodontic-Periodontic Seminar | 18 | 0.5 |
| ORT | 5042 | TMD Clinic | 0 | 0 |
| ORT | 5109 | Orthognathic Surgery Conference I | 33 | 0.5 |
| ORT | 5115 | Clinical Specialty Seminary I | 189 | 3 |

| | | | | |
|---|---|---|---|---|
| ORT | 5143 | Principles of Scientific Methodology | 9 | 0.5 |
| ORT | 5144 | Scientific Writing: Thesis Protocol | 9 | 0.5 |
| ORT | 5230 | Craniofacial Growth and Development | 27 | 1.5 |
| ORT | 5533 | Clinical Orthodontics I | 390 | 5 |
| | | **Total** | **765** | **16** |
| *Second Year* | | | | |
| **Summer Session** | | | | |
| ORT | 5042 | TMD Clinic | 0 | 0 |
| ORT | 5050 | Craniofacial Anomalies Clinic | 8 | 0.5 |
| ORT | 5110 | Orthognathic Surgery Conference II | 2 | 0 |
| ORT | 5125 | Clinical Specialty Seminar II | 76 | 1.5 |
| ORT | 5145 | Scientific Writing: Grant Proposal | 7 | 0.5 |
| ORT | 5148 | Independent Research | 40 | 0.5 |
| ORT | 5534 | Clinical Orthodontics II | 143 | 2 |
| | | **Total** | **276** | **5.0** |
| **Fifth Semester (Fall)** | | | | |
| ORT | 5200 | Introduction to Orthodontics | 12 | 1 |
| ORT | 5042 | TMD Clinic | 0 | 0 |
| ORT | 5050 | Craniofacial Anomalies Clinic | 8 | 0 |
| ORT | 5110 | Orthognathic Surgery Conference II | 29 | 0.5 |
| ORT | 5125 | Clinical Specialty Seminar II | 126 | 2 |
| ORT | 5129 | Practice Administration | 8 | 0 |
| ORT | 5146 | Scientific Writing: Thesis | 12 | 0.5 |
| ORT | 5248 | Independent Research | 158 | 2.5 |
| ORT | 5534 | Clinical Orthodontics II | 375 | 4.5 |
| | | **Total** | **728** | **11** |
| **Sixth Semester (Spring)** | | | | |
| ORT | 5042 | TMD Clinic | 0 | 0 |
| ORT | 5050 | Craniofacial Anomalies Clinic | 8 | 0 |
| ORT | 5110 | Orthognathic Surgery Conference II | 33 | 0.5 |
| ORT | 5125 | Clinical Specialty Seminar II | 201 | 3.5 |
| ORT | 5248 | Independent Research | 116 | 2 |
| ORT | 5534 | Clinical Orthodontics II | 390 | 5 |
| ORT | 5200 | Intro to Ortho II | 12 | 1 |
| | | **Total** | **760** | **12** |
| *Third Year* | | | | |
| **Summer Session** | | | | |
| ORT | 5042 | TMD Clinic | 0 | 0 |
| ORT | 5050 | Craniofacial Anomalies Clinic | 2 | 0 |
| ORT | 5110 | Orthognathic Surgery Conference II | 2 | 0 |
| ORT | 5126 | Clinical Specialty Seminars III | 54 | 1 |
| ORT | 5147 | Scientific Writing: The Journal Article | 7 | 0.5 |
| ORT | 5199 | Thesis | 0 | 1 |
| ORT | 5249 | Independent Research | 73 | 1 |
| ORT | 5534 | Clinical Orthodontics II | 146 | 2 |
| | | **Total** | **284** | **5.5** |

## Pediatric Dentistry

Chair: N. Sue Seale, Regents Professor
Program Director: Alton G. McWhorter, Professor
Professor: C. Wilson, C. Kerins
Assistant Professors: M. Alvarez, D. Hale, E. Watanabe
Assistant Clinical Professors: M. Davis,G. Huff, K. Lin, K. Pace, R. Patel, T. Rauch, A. Reddy

Graduate Program (Certificate; M.S. with thesis optional)
48.5 hours minimum
24-27 months
In special circumstances, because of the nature and length of a research project, the program can be extended an additional nine months.

### *Program Objectives*

The program objectives are to:

- Produce a graduate who is confident and competent in all aspects of clinical pediatric dentistry, including state-of-the-art techniques of patient management and preventive, restorative, interceptive orthodontic, emergency care, practice management and communication skills;

- Produce a graduate who will be well-versed in all aspects of hospital and institutional dentistry, including team management of medically, emotionally, mentally and/or physically compromised patients; and
- Produce a graduate who will have the ability to critically evaluate research literature and have the inquiring attitude necessary to pursue advancement in the practice, research and teaching of pediatric dentistry.

### *Curriculum*

*First Year*

| **Summer Session** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| HPE | 5225 | Teaching Skills | 17 | 1 |
| PD | 5V11 | Pediatric Dentistry I | 68 | 3 |
| PD | 5V21 | Hospital Dentistry I | 25 | 2 |
| | | **Total** | **110** | **6** |
| **Fall Semester** | | | | |
| BMS | 5221 | Research Design and Methodology | 34 | 2 |
| BMS | 5V69 | Growth and Mechanism of Development | 17 | 1 |
| BMS | 5V73 | Advanced Human Craniofacial Development and Craniofacial Anomalies | 17 | 1 |
| PD | 5V12 | Pediatric Dentistry II | 51 | 3 |
| PD | 5V22 | Hospital Dentistry II | 34 | 2 |
| | | **Total** | **153** | **9** |
| **Spring Semester** | | | | |
| BMS | 5222 | Applied Biostatistics | 34 | 2 |
| BMS | 5V75 | Physical Growth and Maturation | 17 | 0.5 |
| PD | 5V13 | Pediatric Dentistry III | 59 | 3 |
| PD | 5V23 | Hospital Dentistry III | 51 | 3 |
| | | **Total** | **161** | **8.5** |

*Second Year*

| **Summer Session** | | | | |
|---|---|---|---|---|
| PD | 5V14 | Pediatric Dentistry IV | 51 | 3 |
| PD | 5V24 | Hospital Dentistry IV | 51 | 3 |
| | | **Total** | **102** | **6** |
| **Fall Semester** | | | | |
| PD | 5V15 | Pediatric Dentistry V | 0 | 0 |
| PD | 5V25 | Hospital Dentistry V | 153 | 7 |
| BMS | 5251 | Immunology | 22 | 2 |
| | | **Total** | **175** | **9** |
| **Spring Semester** | | | | |
| OD | 5250 | Oral Radiology | 17 | 1 |
| PD | 5V16 | Pediatric Dentistry VI | 102 | 6 |
| PD | 5V26 | Hospital Dentistry VI | 34 | 2 |
| | | **Total** | **153** | **9** |

## Periodontics

| | |
|---|---|
| Chair: | William W. Hallmon, Regents Professor |
| Program Director: | David G. Kerns, Associate Professor |
| Stomatology Director: | Terry D. Rees, Professor |
| Professors: | I. Al-Hashimi, F. Rivera-Hidalgo, S. Harrel |
| Clinical Professor: | M. Ramsay |
| Associate Professors: | J. Cho, T. Stanford |
| Clinical Associate Professors: | Barnes, Bookatz, Griffiths, Plemons, Rossman, Ward |
| Assistant Professors: | Cueva, Abraham, Beach |
| Clinical Assistant Professors: | Boltchi, Crump, Lee, Foyle, Hsu, Meyrat, Orth, Ezzo |
| Visiting Clinical Professors: | Lamey, Menter |
| Visiting Associate Clinical Professors: | Burkhart, Buser, McQuade, Mealey, Wilson |
| Visiting Assistant Clinical Professors: | Lorenzana, Simmons |

Graduate Program (M.S. with thesis)
83 semester hours minimum
35 months minimum
Starting date: Last Monday in June

### *Program Objectives*

The program objectives are to:

- Thoroughly prepare the student for the clinical practice of periodontics and for the American Board of Periodontology Certification Examination;
- Provide the student with information in the basic sciences as a foundation for understanding the literature and adapting future advances in periodontology into clinical practice;
- Provide the student with basic training in teaching and research so that these fields will be an option;
- Provide the student with diagnostic and management skills in stomatology;

# Clinical and Basic Science Programs

## Periodontics

- Prepare the student to work closely with general dentists and other dental specialties to the end that patients receive optimal care; and
- Motivate the student to continue scholarly pursuits after graduation by following the literature, attending continuing education courses and attending professional meetings.

### *Curriculum*

*First Year*

| **Summer Session** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| PER | 5V10 | Clinical Stomatology I | 32 | 0 |
| PER | 5004 | Clinical Periodontics | 112 | 0 |
| PER | 5201 | Periodontics Lecture Series I | 22 | 1.5 |
| PER | 5164 | Occlusion: Principles/Therapy | 12 | 0 |
| PER | 5224 | Periodontal Literature Review | 16 | 1 |
| PER | 5435 | Periodontal Histopathology | 24 | 2 |
| OMS | 5214 | Clinical Pharmacology | 22 | 1.5 |
| BMS | 5V04 | Head and Neck Anatomy | 22 | 1.5 |
| | | **Total** | **262** | **7.5** |
| **Fall Semester** | | | | |
| PER | 5V10 | Clinical Stomatology I | 68 | 0 |
| PER | 5004 | Clinical Periodontics | 272 | 0 |
| PER | 5031 | Journal Club | 34 | 0 |
| PER | 5201 | Periodontics Lecture Series I | 34 | 2 |
| PER | 5164 | Occlusion: Principles/Therapy | 12 | 1.5 |
| PER | 5140 | Case Presentation/Treatment Planning | 16 | 1 |
| PER | 5224 | Periodontal Literature Review I | 34 | 2 |
| PER | 5213 | Dental Implants Concepts and Treatment | 22 | 1.5 |
| PER | 5V98 | Research for Master's Thesis | 34 | 2 |
| PER | 5115 | Periodontal Plastic Surgery | 20 | 0.5 |
| BMS | 5222 | Applied Biostatistics | 34 | 2 |
| OMS | 5218 | Conscious Sedation | 22 | 1 |
| OMS | 5233 | Physical Diagnosis | 16 | 1 |
| | | **Total** | **618** | **14.5** |
| **Spring Semester** | | | | |
| PER | 5V10 | Clinical Stomatology I | 72 | 0 |
| PER | 5005 | Clinical Periodontics | 288 | 0 |
| PER | 5031 | Journal Club | 36 | 0 |
| PER | 5201 | Periodontics Lecture Series I | 36 | 2 |
| PER | 5140 | Case Presentation/Treatment Planning | 22 | 1 |
| PER | 5224 | Periodontal Literature Review I | 36 | 2 |
| PER | 5V98 | Research for Master's Thesis | 18 | 1 |
| PER | 5045 | Related Disciplines Seminar | 36 | 0 |
| PER | 5030 | Dermatology Seminar (every third year) | 8 | 0 |
| BMS | 5222 | Applied Biostatistics | 36 | 2 |
| BMS | 5350 | Oral Microbiology | 36 | 2 |
| OP | 5V21 | Advanced Oral Pathology/Lab | 54 | 3 |
| OMS | 5221 | Internal Medicine | 17 | 1 |
| | | **Total** | **695** | **14** |

Total credit hours for year 1 - 35.5
Total clock hours for year 1 - 1,575

*Second Year*

| **Summer Session** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| PER | 5V11 | Clinical Stomatology II | 32 | 0 |
| PER | 5005 | Advanced Clinical Periodontics | 48 | 0 |
| PER | 5227 | Periodontics Literature Review | 16 | 1 |
| PER | 5211 | Practice Teaching | 56 | 2 |
| PER | 5432 | Clinical Anesthesia for the Periodontist | 160 | 3 |
| BMS | 5312 | Applied Medical Physiology | 34 | 2 |
| | | **Total** | **346** | **8** |
| **Fall Semester** | | | | |
| PER | 5V11 | Clinical Stomatology II | 68 | 0 |
| PER | 5005 | Advanced Clinical Periodontics | 272 | 0 |
| PER | 5031 | Journal Club | 34 | 0 |
| PER | 5207 | Periodontics Lecture Series II | 34 | 2 |
| PER | 5140 | Case Presentation/Treatment Planning | 16 | 1 |
| PER | 5211 | Practice Teaching | 119 | 2 |
| PER | 5227 | Periodontics Literature Review II | 34 | 2 |
| PER | 5V98 | Research for Masters Thesis | 34 | 2 |
| BMS | 5251 | Immunology | 16 | 1 |
| | | **Total** | **627** | **10** |

| | | | | |
|---|---|---|---|---|
| **Spring Semester** | | | | |
| PER | 5V11 | Clinical Stomatology II | 72 | 0 |
| PER | 5005 | Advanced Clinical Periodontics | 288 | 0 |
| PER | 5031 | Journal Club | 36 | 0 |
| PER | 5211 | Practice Teaching | 126 | 2 |
| PER | 5140 | Case Presentation/Treatment Planning | 18 | 1 |
| PER | 5227 | Periodontal Literature Review II | 36 | 2 |
| PER | 5114 | Advanced Dental Implants | 36 | 1.5 |
| PER | 5035 | Ortho/Perio Seminar | 24 | 0 |
| PER | 5066 | Mock Board Examination I | 16 | 0.5 |
| PER | 5V98 | Research for Master's Thesis | 36 | 2 |
| | | **Total** | **688** | **9** |

Total credit hours for year 2 - 27
Total clock hours for year 2 - 1,661

*Third Year*

| **Summer Session** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| PER | 5V12 | Advanced Clinical Stomatology | 32 | 0 |
| PER | 5006 | Advanced Clinical Periodontics II | 128 | 0 |
| PER | 5228 | Periodontal Literature Review III | 16 | 1 |
| PER | 5221 | Practice Teaching | 56 | 2 |
| PER | 5V98 | Research for Master's Thesis | 22 | 2 |
| | | **Total** | **254** | **5** |
| **Fall Semester** | | | | |
| PER | 5065 | VA Hospital Rotation (one day/week for eight-week block) | 64 | 0 |
| PER | 5V12 | Advanced Clinical Stomatology | 68 | 0 |
| PER | 5006 | Advanced Clinical Periodontics II | 272 | 0 |
| PER | 5031 | Journal Club | 34 | 0 |
| PER | 5140 | Case Presentation/Treatment Planning | 17 | 1 |
| PER | 5228 | Periodontal Literature Review III | 34 | 2 |
| PER | 5V98 | Research for Master's Thesis | 60 | 3 |
| PER | 5221 | Practice Teaching | 92 | 2 |
| | | **Total** | **641** | **8** |
| **Spring Semester** | | | | |
| PER | 5V12 | Advanced Clinical Stomatology | 36 | 0 |
| PER | 5006 | Advanced Clinical Periodontics II | 288 | 0 |
| PER | 5031 | Journal Club | 36 | 0 |
| PER | 5211 | Practice Teaching | 72 | 2 |
| PER | 5145 | Case Presentation/Treatment Planning | 18 | 1 |
| PER | 5228 | Periodontal Literature Review III | 36 | 2 |
| PER | 5V99 | Thesis Preparation | 60 | 2 |
| PER | 5067 | Mock Board Examination II | 16 | 0.5 |
| | | **Total** | **562** | **7.5** |

Total credit hours for year 3 - 20.5
Total clock hours for year 3 - 1,457

**Total credit hours for residency (three years) - 83**
**Total clock hours for residency (three years) - 4,693**

## Prosthodontics

Program Director: William W. Nagy, Professor
Professors: A. Bolouri, A. Miller, W. Nagy, S. Parel, R. Woody
Clinical Associate Professors: J. Goodman, F. Higginbottom
Clinical Assistant Professors: T. Bauman, B. Ding, E. Quinones, A. Colon

Graduate Program (M.S. with thesis):
- 81 semester hours minimum
- 36 months minimum
- Starting date: July

Postgraduate Program (Certificate)
- Runs concurrently with master's program
- 80.5 semester hours minimum
- 35 months minimum
- Starting date: July

# Clinical and Basic Science Programs

## Prosthodontics

### *Program Objectives*

The program objectives are to:

- Produce a graduate who is competent and proficient in all aspects of clinical/laboratory prosthodontics and has the didactical knowledge on which to base treatment;
- Produce a graduate who will have the foundation for scientific inquiry, critical thinking and problem solving;
- Prepare the graduate for successful certification by the American Board of Prosthodontics;
- Prepare and motivate the graduate for a lifetime of scholarly pursuit and active involvement in the specialty and profession; and
- Provide a program environment that is patient-centered, serves the students, faculty and staff, and contributes to the advancement of knowledge.

### *Curriculum*

*First Year*

| **Summer** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| PRO | 5019 | Journal Club | 16 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 8 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 16 | 0.5 |
| PRO | 5210 | Introduction to Prosthodontic Concepts & Techniques | 218 | 2.5 |
| BMS | 5V04 | Head & Neck Anatomy | 22 | 1.5 |
| OMS | 5214 | Clinical Pharmacology | 22 | 1.5 |
| | | **Total Summer Clock/Credit Hours** | **302** | **6** |
| **Fall Semester** | | | | |
| PRO | 5019 | Journal Club | 36 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 18 | 0 |
| PRO | 5022 | Interdisciplinary Conferences | 24 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 36 | 1 |
| PRO | 5122 | Advanced Prosthodontic Concepts & Techniques | 36 | 1 |
| PRO | 5126 | Related Disciplines Seminar | 36 | 1 |
| PRO | 5226 | Occlusal Concepts & Techniques | 36 | 1.5 |
| PRO | 5259 | Implant Concepts & Techniques | 36 | 1.5 |
| PRO | 5301 | Clinical Prosthodontics | 350 | 3 |
| BMS | 5221 | Research Design & Methodology | 34 | 2 |
| BMS | 5V73 | Advanced Human Craniofacial Development & Growth | 22 | 1 |
| OMS | 5233 | Physical Diagnosis | 34 | 1 |
| | | **Total Fall Clock/Credit Hours** | **698** | **13** |
| **Spring Semester** | | | | |
| PRO | 5001 | Mock Board Examination I | 12 | 0 |
| PRO | 5019 | Journal Club | 36 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 18 | 0 |
| PRO | 5022 | Interdisciplinary Conferences | 24 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 36 | 1 |
| PRO | 5126 | Related Disciplines Seminar | 36 | 1 |
| PRO | 5122 | Advanced Prosthodontic Concepts & Techniques | 36 | 1 |
| PRO | 5226 | Occlusal Concepts & Techniques | 36 | 1.5 |
| PRO | 5301 | Clinical Prosthodontics | 350 | 3 |
| BMS | 5222 | Applied Biostatistics | 36 | 2 |
| BMS | 5350 | Oral Microbiology | 36 | 2 |
| OD | 5250 | Oral Radiology | 18 | 1 |
| OMS | 5221 | Internal Medicine | 17 | 1 |
| OP | 5V21 | Advanced Oral Pathology | 36 | 2 |
| | | **Total Semester Clock/Credit Hours** | **727** | **15.5** |
| **First Year Totals** | | | **1,727** | **34.5** |

*Second Year*

| **Summer** | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| PRO | 5019 | Journal Club | 16 | 0 |
| PRO | 5020 | Treatment Planning and Clinical Review | 8 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 16 | 0.5 |
| PRO | 5402 | Advanced Clinical Prosthodontics I | 216 | 2.5 |
| PRO | 5V98 | Thesis Research | 64 | 1 |
| | | **Total Summer Clock/Credit Hours** | **320** | **4** |
| **Fall Semester** | | | | |
| PRO | 5019 | Journal Club | 36 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 18 | 0 |
| PRO | 5022 | Interdisciplinary Conferences | 24 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 36 | 1 |

| | | | | |
|---|---|---|---|---|
| PRO | 5127 | Advanced TMD & Occlusal Concepts & Treatment | 36 | 1.5 |
| PRO | 5250 | Geriatric Prosthodontics | 18 | 1 |
| PRO | 5402 | Advanced Clinical Prosthodontics I | 462 | 4 |
| PRO | 5V98 | Thesis Research | 72 | 1 |
| OMS | 5218 | Conscious Sedation | 22 | 1 |
| | | **Total Semester Clock/Credit Hours** | **724** | **9.5** |
| **Spring Semester** | | | | |
| PRO | 5002 | Mock Board Examination II | 12 | 0 |
| PRO | 5019 | Journal Club | 36 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 18 | 0 |
| PRO | 5022 | Interdisciplinary Conferences | 24 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 36 | 1 |
| PRO | 5126 | Related Disciplines Seminar | 36 | 1 |
| PRO | 5136 | Maxillofacial Prosthodontic Concepts & Treatment | 18 | 1 |
| PRO | 5160 | Advanced Implant Concepts & Treatment | 36 | 1.5 |
| PRO | 5402 | Advanced Clinical Prosthodontics I | 420 | 4 |
| PRO | 5V98 | Thesis Research | 72 | 1 |
| | | **Total Semester Clock/Credit Hours** | **708** | **9.5** |
| **Second Year Totals** | | | **1,752** | **23** |

*Third Year*

| | | | Clock Hours | Credit Hours |
|---|---|---|---|---|
| **Summer** | | | | |
| PRO | 5019 | Journal Club | 16 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 8 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 16 | 0.5 |
| PRO | 5503 | Advanced Clinical Prosthodontics II | 200 | 2.5 |
| PRO | 5V98 | Thesis Research | 64 | 1 |
| HPE | 5225 | Teaching Skills | 16 | 1 |
| | | **Total Summer Clock/Credit Hours** | **320** | **5** |
| **Fall Semester** | | | | |
| PRO | 5019 | Journal Club | 36 | 0 |
| PRO | 5020 | Treatment Planning and Clinical Review | 18 | 0 |
| PRO | 5022 | Interdisciplinary Conferences | 24 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 36 | 1 |
| PRO | 5130 | Clinical Teaching | 54 | 1 |
| PRO | 5503 | Advanced Clinical Prosthodontics II | 480 | 5 |
| PRO | 5V99 | Thesis Preparation | 72 | 1 |
| AGD | 5205 | Practice Management | 14 | 1.5 |
| | | **Total Semester Clock/Credit Hours** | **734** | **9.5** |
| **Spring Semester** | | | | |
| PRO | 5003 | Mock Board Examination III | 12 | 0 |
| PRO | 5019 | Journal Club | 36 | 0 |
| PRO | 5020 | Treatment Planning & Clinical Review | 18 | 0 |
| PRO | 5022 | Interdisciplinary Conferences | 24 | 0 |
| PRO | 5118 | Prosthodontic Topic Literature Review | 36 | 1 |
| PRO | 5126 | Related Disciplines Seminar | 36 | 1 |
| PRO | 5503 | Advanced Clinical Prosthodontics II | 472 | 5 |
| PRO | 5V99 | Thesis Preparation | 72 | 2 |
| | | **Total Semester Clock/Credit Hours** | **706** | **9** |
| **Third Year Totals** | | | **1,760** | **23.5** |

Summary

| | |
|---|---|
| First year: | 34.5 semester hours |
| Second year: | 23.0 semester hours |
| Third year: | 23.5 semester hours |
| **Total:** | **81.0 semester hours** |

# CONTINUING EDUCATION

Contemporary health professions are marked by constant technological changes, innovations in health care delivery, new clinical procedures and an ever-increasing social awareness. Such changes have accentuated the need for the professional to remain abreast of new developments by accepting the fundamental and lifelong responsibility for continuous study.

As a part of its obligation to the practicing profession, the Texas A&M Health Science Center Baylor College of Dentistry vigorously supports continuing dental education and offers a full range of programs. Lectures, seminars and electronic distance learning about topics of current interest to dentists and dental auxiliaries are taught by HSC-BCD faculty and other respected professionals.

Courses offered at the college cover all perspectives of the dental profession, the clinical fields, practice management, medical emergencies, dental hygiene and basic sciences.

The entire sixth floor of HSC-BCD is designed for courses in continuing education. These facilities include a dental laboratory with 48 stations and a 20-chair clinic for use in participation courses. These facilities adjoin two lecture rooms, which are equipped with state-of-the-art audiovisual equipment for enhancement of presentations. Each course offered includes continental breakfast and lunch, plus morning and afternoon breaks – all served from the food service areas that are part of the efficiency-oriented facility.

The schedule offers more than 400 credit hours of continuing education per year. Approximately 25 percent of those hours are participation, and nearly one-half of all courses are directed at the entire dental team. It is a goal of the department not only to educate the doctor but also to provide for education of the team.

To accommodate those registrants in locations inconvenient to the Dallas/Fort Worth Metroplex area, HSC-BCD offers some courses each year off-campus. The Office of Continuing Education is also actively involved in the preparation and delivery of distance-learning projects to all areas of the state via various methods, including electronic networking and the Internet.

In addition, the department maintains a rich informational and educational site on the World Wide Web as an integral part of the HSC-BCD website. The website can be reached at http://www.bcd.tamhsc.edu/cedental/ .

For information or the annual Continuing Education catalog, write to:

Charles J. Arcoria, D.D.S., M.B.A.
Executive Director of Continuing Education
Baylor College of Dentistry
Texas A&M Health Science Center
P.O. Box 660677
Dallas, Texas 75266-0677

or call
(214) 828-8238
(800) 856-8238.

# College of Medicine

# College of Medicine

147 Joe H. Reynolds Medical Building
College Station, Texas 77843-1114
979-845-3431
Fax: 979-847-8663
http://medicine.tamhsc.edu

## Table of Contents

## Administrative Structure

| | |
|---|---|
| Christopher C. Colenda, M.D., M.P.H. | Dean of Medicine |
| Donald E. Wesson, M.D. | Vice Dean - Temple Campus |
| R. Kelly Hester, Ph.D. | Associate Dean for Academic Affairs |
| Douglas P. Venuti | Senior Executive Associate Dean for Finance and Administration |
| Kathleen M. Fallon, M.D. | Associate Dean for Student Affairs and Admissions |
| Van G. Wilson, Ph.D. | Associate Dean for Research and Graduate Studies |
| Edward J. Sherwood, M.D. | Associate Dean for Veterans Affairs |
| Jose A. Pliego, M.D. | Assistant Dean for Academic Affairs |
| Gary C. McCord, M.D. | Assistant Dean for Student Affairs |
| Filomeno G. Maldonado | Assistant Dean for Admissions |
| Jules B. Puschett, M.D. | Senior Executive Associate Dean for Program Development |
| Ed W. Childs, M.D. | Assistant Dean for Faculty Development |
| Juan F. Castro, M.D., M.B.A. | Associate Dean for Coastal Bend Affairs |

## Department Heads

| | |
|---|---|
| Timothy M. Bittenbinder, M.D. | Anesthesiology |
| C. Keith Stone, M.D. | Emergency Medicine |
| Glen R. Couchman, M.D. | Family and Community Medicine |
| William H. Griffith, Ph.D. | Neurosciences and Experimental Therapeutics |
| Charles W. Sanders, M.D. | Humanities in Medicine |
| Charles Foulks, M.D. (Interim) | Internal Medicine |
| J. Martin Scholtz, Ph.D. | Molecular and Cellular Medicine |
| John M. Quarles, Ph.D. | Microbial and Molecular Pathogenesis |
| Harris J. Granger, Ph.D. | Systems Biology and Translational Medicine |
| Dudley P. Baker, M.D. | Obstetrics and Gynecology |
| John F. Greene, Jr., M.D. | Pathology and Laboratory Medicine |
| Don P. Wilson, M.D. | Pediatrics |
| Kathryn J. Kotrla, M.D. | Psychiatry and Behavioral Science |
| L. Gill Naul, M.D. | Radiology |
| W. Roy Smythe, M.D. | Surgery |
| Arthur E. Johnson, Ph.D. | Wehner-Welch Chair |
| Kenneth M. Baker, M.D. | Frank W. Mayborn Chair |

# Dean's Biography

Christopher C. Colenda, M.D., M.P.H.
The Jean and Thomas McMullin Dean of Medicine

*Christopher Colenda, M.D., M.P.H.,* serves as the fifth dean of the Texas A&M Health Science Center College of Medicine. As dean, Dr. Colenda is the chief administrative and academic officer of the college. He is responsible for the organization, operation, development, and evaluation of instruction and research programs, as well as leading the faculty and administration for all academic programs of the college.

Prior to coming to the HSC-College of Medicine, Dr. Colenda served as professor and chairman of the Department of Psychiatry at the College of Human Medicine and associate dean for Programs and Projects at Michigan State University (MSU) in East Lansing, Mich. Previous appointments at MSU's College of Human Medicine include acting dean of the college and interim associate dean for Graduate Medical Education and Community Affairs. Preceding his service at MSU, Dr. Colenda was a faculty member and administrator at Wake Forest University School of Medicine and the Medical College of Virginia of Virginia Commonwealth University.

A geriatric psychiatrist by training, he is currently a member of the National Board of Medical Examiners, the Liaison Committee on Medical Education, and the psychiatry director for the American Board of Psychiatry and Neurology. Dr. Colenda served as the president of the American Association for Geriatric Psychiatry in 2006 and has served as chair of the American Psychiatric Association's Council on Aging.

Dr. Colenda's awards and accolades are numerous. Some of his past recognitions include the Outstanding Faculty Award from the College of Human Medicine at Michigan State University in 2004, a Special Commendation from the Council of Aging of the American Psychiatric Association in 2000 and election as an Alumnus Member of Alpha Omega Alpha - Medical College of Virginia in 1999. Dr. Colenda was also elected to the American College of Psychiatrists in 1998 and listed among the Best Doctors in America in both 1994 and 1998, Best Doctors in Midwest in 1998, and Best Doctors in Southeast in 1995.

In 1982, Dr. Colenda received an M.P.H. in Health Services Administration from Johns Hopkins University, his M.D. from the Medical College of Virginia in 1977, and a B.A. in Chemistry in 1974 from Wittenberg University. His training in psychiatry was completed at the University of Virginia Hospitals and at Emory University, where he served as chief resident and fellow.

## History

The Texas Legislature authorized establishment of the Texas A&M University College of Medicine in 1971. Funds were appropriated in 1973 jointly by the Legislature and the federal government under the Teague-Cranston Bill – the Veterans Administration Medical School Assistance and Health Manpower Training Act. The organization and procedures that govern the Texas A&M Health Science Center College of Medicine conform with the laws of the state of Texas, the objectives, rules and regulations for The Texas A&M University System, and the bylaws of the college.

The first students at the HSC-College of Medicine, 32 in all, matriculated in 1977. In 1981, the HSC-COM was fully accredited by the Liaison Committee on Medical Education, the national accrediting body for medical schools, to grant the Doctor of Medicine degree. In 1985, the Coordinating Board of the Texas College and University System approved HSC-COM programs for the degrees of Master of Science and Doctor of Philosophy in Medical Sciences. In January 1999, the college became a component of the newly created HSC.

The HSC-COM has established a record for excellence in both medical education and research. The college remains committed to providing an environment that promotes integrity, compassion and excellence in its future physicians and scientists. An emphasis on broad-based instruction in the medical sciences produces individuals with the knowledge, expertise and vision to meet the challenges facing modern medicine.

## Mission Statement

The Texas A&M Health Science Center College of Medicine is dedicated to the education of humane and highly skilled physicians and to the development of knowledge in the biomedical and clinical sciences. To achieve its mission, the HSC-COM utilizes the varied resources of The Texas A&M University System, Scott & White Memorial Hospital and Clinic, Central Texas Veterans Health Care System, Carl R. Darnall Army Medical Center, Driscoll Children's Hospital, CHRISTUS Spohn Health System, John Peter Smith Hospital, Brazos Family Medicine Residency and physicians in private practice. In order to improve the quality and efficacy of health and medical care through its programs of medical education and research, the HSC-COM will continue:

- To maintain a small, high-quality medical education program, which graduates physicians prepared to enter graduate study in any medical specialty, including primary care. The medical education program includes a strong emphasis on the humanistic and ethical aspects of medicine.
- To develop programs of research in selected areas of biomedical and clinical science; and to join in collaborative programs with other elements of The Texas A&M University System through which the knowledge and skills of many disciplines can be utilized to improve the health and medical care of specific segments of the population.
- To educate a small number of biomedical scientists to conduct research in areas that will form the foundation for advances in the prevention, diagnosis and treatment of disease.
- To mirror the growing diversity of the American population and to understand the multiple and varied needs of its patients.

## Institutional Objectives

The Texas A&M Health Science Center College of Medicine utilizes approximately 700 basic and clinical science faculty in instructional programs in College Station, Temple and Corpus Christi.

Medical students are offered a wide range of clinical experiences through formal clerkships at Scott & White Memorial Hospital and Clinic, a large multi-specialty practice that includes a health maintenance organization and the Central Texas Veterans Health Care System hospitals in Temple; Driscoll Children's Hospital and CHRISTUS Spohn Health System in Corpus Christi; Carl R. Darnall Army Medical Center at Fort Hood; Brazos Family Medicine Residency in Bryan; or with private practitioners in Bryan-College Station and elsewhere in Texas. The variety of clinical experiences enables each student to identify his or her career focus or specialty area in medicine. The faculty members of the HSC-COM believe that the four years leading to the M.D. degree are only the beginning of a life-long process of medical education. They strive to provide students with the necessary background to pursue any field of specialization they may subsequently choose.

In order to take full advantage of the rich collaborative possibilities for research and education, the HSC-COM has engaged in a deliberate effort to focus technological capabilities from the entire university on interdisciplinary programs for the enhancement of human health. It has formed a number of institutes to conduct research applicable to diverse disciplines within the university.

Medical education, of course, involves much more than the transfer of scientific information and techniques of patient care. A physician must cultivate a thoughtful moral and ethical outlook. Faculty members expect students to have high ethical standards, and they stand ready to lend assistance through whatever periods of personal uncertainty students may encounter. Personal counseling and formal classes in ethics and humanities are provided to reinforce the fundamental influence of committed role models. HSC-COM students can expect to associate closely with faculty members in all phases of the curriculum because the college maintains a small class size and a favorable faculty-to-student ratio.

With special guidance from faculty advisers, students may modify their educational programs to conform to personal interests and goals. Individualized programs may include student-initiated electives, participation in the M.D./Ph.D. program in medical sciences, as well as the opportunity to enroll in master's or doctoral level programs elsewhere in the university. These options permit the exceptional student to combine a background in medicine with other bodies of knowledge not commonly joined. A student at the HSC-COM is in a position to benefit greatly from the wide spectrum of educational opportunities available by participating in a program that can selectively use the special strengths of a health science center, a major university, an exemplary multi-specialty group medical practice, individual practitioners of medicine, the medical programs of the federal departments of Veterans Affairs and Defense, and local private or public health care agencies.

## Location

The Texas A&M Health Science Center College of Medicine is housed in the Joe H. Reynolds Medical Building, which was first occupied in 1983, and in the Medical Sciences Library, which opened its doors in 1985. Both of these buildings are located on the west campus of Texas A&M University in College Station.

The clinical campus facilities include Scott & White Memorial Hospital and Clinic and Central Texas Veterans Health Care System in Temple, Carl R. Darnall Army Medical Center at Fort Hood, Driscoll Children's Hospital and CHRISTUS Spohn Health System in Corpus Christi, and the Brazos Family Medicine Residency in Bryan-College Station.

### *College Station*

The cities of Bryan-College Station have attained a combined total population of about 125,000. Bryan-College Station is located in East-Central Texas in Brazos County between the Brazos and Navasota rivers on the edge of the Gulf Coastal Plain. Education is the largest industry in Bryan-College Station. The Texas

A&M University System employs about 25,000 people in Brazos County. Other major employers include the City of College Station, the City of Bryan, Agency Management Services and Sanderson Farms.

Shopping in Bryan-College Station is available in a great variety of retail outlets. Both Bryan and College Station have shopping malls. Post Oak Mall in College Station is the largest in the area. In addition, there are numerous small shopping centers throughout both cities and stores in downtown Bryan.

Cultural activities in Bryan-College Station are organized by both Texas A&M University and the Brazos Arts Council. The Opera and Performing Arts Society at Texas A&M imports onto campus many types of entertainment, from light and grand opera to ballet and symphonies. A local theater group, a community orchestra and community singers, an art league, and a nature museum also offer entertainment and educational programs. The Great Issues program at Texas A&M sponsors lectures by nationally known speakers. The Town Hall Series brings both popular and classical artists and entertainers to perform on campus.

Many recreational opportunities are available to participants of all ages. The two cities maintain 40 parks, six swimming pools, four golf courses and numerous tennis courts. There are a number of private and university recreational facilities. In addition, College Station is the home of the George Bush Presidential Library and Museum.

### *Temple*

Temple, one of the largest cities in Bell County, is located near the geographic and population center of Texas. Temple itself has a population of about 55,000. Bell County includes Killeen, Temple and Belton, as well as Lake Belton and the Stillhouse Hollow Reservoir. Medicine is the largest industry in Temple. Four local hospitals, Scott & White Memorial Hospital and Clinic, Scott & White Santa Fe Center, Central Texas Veterans Health Care System, and King's Daughters Hospital provide more than 1,500 beds and employ more than 7,000 people. Other major employers in Temple include PARTIV Corporation, McLane Company Southwest, Wilsonart International, Artco-Bell, Nextel Corporation and the Santa Fe Railroad.

Temple has a pleasant small-town atmosphere in a region with Sun Belt-style growth. Public cultural facilities include the Temple Civic Theater, Azalee Marshall Cultural Activities Center, Frank W. Mayborn Civic and Convention Center, and Temple Public Library. Numerous churches, parks, lakes, adult education at Temple Junior College, and the Central Texas Orchestral Society and the Temple Symphony Orchestra offer Temple residents many cultural and educational opportunities.

### *Corpus Christi*

Corpus Christi is the eighth largest Texas city with a 2000 metro census of 380,783. It is the largest city on the Texas Coast and the sixth largest port in the nation. The seven-county Bay Area population is more than 500,000. Located on the Gulf of Mexico, about halfway between Houston and the U.S.-Mexico border, Corpus Christi shares the same latitude as Tampa, Fla. Nestled on a bay and surrounded by islands and hundreds of miles of beaches, Corpus Christi is a popular spot for family vacations and provides endless recreational opportunities.

Key industries include petrochemical, tourism, health care, retail, education, shipping, agriculture and the military. Since its incorporation in 1852, Corpus Christi has grown into a regional hub for marketing, processing, packaging and distributing agricultural commodities for a 12-county trade area.

## Facilities

### *The College Station Campus*

The Joe H. Reynolds Medical Building, located on the west side of the Texas A&M University campus, houses the teaching and research facilities for the basic science departments. The Texas A&M Health Science Center College of Medicine administrative offices, institutes and departmental offices for Neuroscience and Experimental Therapeutics, Family and Community Medicine (College Station campus), Humanities in Medicine, Molecular and Cellular Medicine, Microbial and Molecular Pathogenesis, and Systems Biology and Translational Medicine are at this location.

### *The Clinical Campus*

The clinical campus of the HSC-COM consists of Scott & White Memorial Hospital and Clinic, Central Texas Veterans Health Care System and Carl R. Darnall Army Medical Center – all in the Temple-Killeen area – as well as Driscoll Children's Hospital and CHRISTUS Spohn Health System in Corpus Christi, and the Brazos Family Medical Residency in Bryan-College Station.

*Scott & White Memorial Hospital and Clinic* traces its origin to a partnership formed in 1897 between two young frontier doctors, Arthur C. Scott, M.D. and Raleigh R. White, M.D., joint chief surgeons of the Santa Fe Railroad Hospital in Temple. Scott & White Hospital was first accredited by the American Medical Association for graduate training of physicians in 1920. It moved to its present 340-acre hilltop site just south of downtown Temple in 1963. Scott & White became associated with the Texas A&M University College of Medicine in 1974.

Scott & White Memorial Hospital and Scott, Sherwood and Brindley Foundation is a not-for-profit integrated health care delivery system that encompasses all major medical specialties and operates approximately 600 beds. The Scott & White Clinic staff – all faculty members in the HSC-COM – is composed of approximately 500 physicians and nonphysician scientists who practice in virtually every recognized medical specialty. Scott & White is a tertiary care center that serves central Texas. In addition, patients are referred to Scott & White from throughout Texas, the Southwest and Mexico.

Scott & White maintains regional clinics in Bellmead, Belton, Cedar Park, College Station, Gatesville, Georgetown, Goldthwaite, Hewitt, Killeen, McGregor, Moody, Taylor and Waco. Scott & White Clinic in College Station, which opened in 1986, is staffed by more than 70 physicians in 23 medical specialties

In addition to the regional clinics and the main Temple facility, the Scott & White health system also includes three dialysis centers and a satellite cancer treatment facility.

The Scott & White Health Plan (HMO) provides coverage for more than 186,000 people in a 34-county service area. Today, the Scott & White health system serves approximately 350,000 patients with more than 1.4 million office visits, almost 21,000 hospital discharges and almost 55,000 emergency department visits per year. Scott & White has more than 6,100 support personnel at the main campus and regional clinics.

HSC-COM offices for the departments of Anesthesiology, Emergency Medicine, Internal Medicine, Obstetrics and Gynecology, Pediatrics, Pathology and Laboratory Medicine, Radiology, and Surgery are housed at Scott & White Hospital and Clinic. The Department of Family and Community Medicine's office is located in a separate clinic at the Santa Fe Center in Temple. The office for the Department of Psychiatry is housed at the Olin E. Teague Veterans Center hospital. In conjunction with the Scott & White School of Nursing at the University of Mary Hardin Baylor and with other local registered and licensed vocational nursing programs, 170 nursing students rotate through the hospital annually.

*The Central Texas Veterans Health Care System* (CTVHCS) is one of the largest VA medical consortiums in the United States, with approximately 2,700 staff and a budget of almost $250 million. In fiscal year 2001, CTVHCS had nearly 600,000 outpatient visits and saw more than 6,000 admissions to acute care.

CTVHCS has one of the newest VA medical/surgical hospitals in the country (Olin E. Teague Veterans Center in Temple), a large psychiatric hospital in

## Facilities

Waco, several VA nursing home facilities, and outpatient clinics in Palestine, Brownwood, Marlin and Bryan-College Station. Additional outpatient clinics are planned for the Cedar Park and Marble Falls areas in the future.

The Teague Center has been a principal teaching campus for the HSC-COM since the inception of the college. Third- and fourth-year medical students participate in clinical training in the areas of general surgery, orthopedics, internal medicine, urology, ophthalmology, anesthesiology, plastic surgery, pulmonology, hematology, oncology, cardiovascular disease, pathology, gastroenterology, psychiatry, family practice and fellowships in selected areas.

The Teague Center originally opened in 1942 as McCloskey General Army Hospital. Control of this facility was transferred to the Veterans Administration in 1946 for use as a medical and surgical hospital. However, today there is little left of the original facilities as new buildings have taken their place over the years. In 1998, a new 300-bed, $50 million VA hospital opened on the grounds of the center, which provides state-of-the art medical/surgical care. The Teague Center is the specialty care hub of CTVHCS, with all tertiary care and specialty services provided either in-house or on contract.

The CTVHCS research program is entering a phase of rapid growth. The Neuropsychiatry Research Program, which is studying schizophrenia, post-traumatic stress disorder and Alzheimer's disease, has grown from no funding in 1992 to more than $2.2 million and three new investigators, through a combination of NIMH, Texas A&M and VA Cooperative Study funding. A new initiative to study cognitive effects of new schizophrenia therapies has begun, and a new clinical research unit at Waco recently opened. Start-up funding of $88,000 has been received from the VA Regional Office for a molecular biology-based cancer detection study.

Additionally, a dedication occurred in 2003 at the Teague Center for a new $11.5 million Cardiovascular Research Institute that will one day be a world-class research facility. This institute already has approximately 20 researchers on board. It is a joint venture between the VA, the HSC, and Scott & White Memorial Hospital.

*Carl R. Darnall Army Medical Center* at Fort Hood (between the cities of Killeen and Copperas Cove) opened in April 1965. It was the first of three permanent Army hospitals of the 200-300 bed size to open. Constructed in the latest military design of that time, the original building cost $6,151,700 and was furnished with a $6 million inventory of equipment. The building consisted of a basement and five floors with 250,000 square feet of space.

By 1978, the Fort Hood population entitled to medical care (soldiers, their family members and retirees) had soared to 130,000. To meet the increasing needs for medical care, a massive renovation and addition project was designed. The construction project began April 3,1979, and when completed in 1984, the $50 million renovation doubled the original size and brought the hospital into compliance with the National Fire Protection Association, Occupational Safety and Health Act, and Joint Commission on Accreditation of Hospital standards. Today, with an additional two-story wrap-around, Darnall encompasses more than 500,000 square feet.

Within a 40-mile radius, Darnall now serves approximately 145,000 military beneficiaries. Through the military health care plan called TRICARE, about 100,000 are enrolled in Darnall's system of Family Care Clinics. Clinics are located on Fort Hood and in the surrounding communities of Killeen and Copperas Cove.

Darnall was built to have a bed capacity of 264, and the hospital can expand to 359 beds during contingencies. It is currently staffed for 132 beds: seven labor and delivery beds, 24 obstetrical beds, 18 bassinettes, 12 neonatal intensive care units, 12 pediatric beds, 24 medical/surgical beds, 25 24-hour observation beds and 10 psychiatric beds. The hospital staff is composed of 604 military personnel, 829 civilians and 408 health care contractors. Its operating budget for fiscal year 2001 was $138 million. The hospital's area of responsibility extends to 175 counties north of Austin, serving a population of 344,000. Nearly half of those patients live within 40 miles of the hospital. There are approximately 2,127 clinic visits per day and 133 emergency room visits. Darnall delivers approximately eight babies per day and fills nearly 5,000 prescriptions every day.

*Driscoll Children's Hospital*, serving Corpus Christi and South Texas since 1953, is a 200-bed, tertiary care, regional referral center offering comprehensive medical and surgical services to meet the unique needs of children. In 1997, the hospital admitted more than 6,000 children to its 40-bed neonatal intensive care unit, its 20-bed pediatric intensive care unit and its 128-bed acute care unit. The hospital's emergency transport system utilizes fixed-wing aircraft, helicopters and ground transport vehicles to bring critically ill children to the hospital's ICUs and emergency room. Last year, more than 140,000 outpatient children visited the hospital's emergency room, specialty care clinics, rehabilitation center, rural outreach clinics, and Women, Infants and Children (WIC) program. The hospital's eight fully equipped operating rooms performed 5,900 surgical procedures.

Driscoll Children's Heart Center offers the most sophisticated pediatric cardiac diagnostic (including digitalized imaging systems) and surgical treatment services and facilities in Texas by maintaining more than 20 outreach clinics throughout South Texas. In addition, four hospital multi-specialty satellite clinics are located in McAllen, Harlingen, Laredo and Victoria, bringing Driscoll's specialists closer to patients throughout South Texas. Driscoll Children's Hospital currently has 42 pediatric residents, medical students and 10 different allied health programs.

*CHRISTUS Spohn Health System* is a faith-based, not-for-profit health care system dedicated to advancing the health of the community by providing excellent care, quality services and state-of-the-art technology. CHRISTUS Spohn is the region's largest not-for-profit hospital system in South Texas, providing health care to more than 600,000 residents in the 13 counties served.

CHRISTUS is the region's largest charity care provider and not-for-profit health care system consisting of six hospital campuses - CHRISTUS Spohn Hospital Corpus Christi (Shoreline, Memorial and South), CHRISTUS Spohn Hospital Alice, CHRISTUS Spohn Hospital Beeville and CHRISTUS Spohn Hospital Kleberg (Kingsville). The health system is consistently ranked as a leading health system in the area and has received national recognition for several pioneering programs, including cardiac care, clinical excellence and oncology.

The Corpus Christi Family Practice Residency Program is located at CHRISTUS Spohn Hospital Corpus Christi-Memorial and will be a clinical training site for HSC-COM students beginning in 2009. Faculty for the program includes 15 physicians in family practice, internal medicine, pediatrics and obstetrics/gynecology who teach, advise and mentor students and residents, molding them into physicians who are prepared to meet the challenges of practicing in a comprehensive family medicine setting.

The *Brazos Family Medicine Residency (BFMR)* is a community-based program partnering with the HSC-COM, St. Joseph Regional Health Center, College Station Medical Center, the Brazos-Robertson Counties Medical Society, the Brazos Valley Chapter of the TAFP, the Brazos County Health Department, and the Scott & White Clinic in College Station. The residency program serves as a community resource by supporting research, providing continuing medical education for physicians and serving the health care needs of the Brazos Valley.

The BFMR is located in Bryan-College Station and uses the facilities and professionals of the Brazos Valley for a broad learning experience. The training program is the result of decades of dreaming on the part of local family physicians who knew that the communities offered diverse patients, commitment to excellence in education and health care, and an historic commitment to the precepts of family medicine.

As the only residency program in the Brazos Valley, students and residents benefit from teaching by full-time faculty, local volunteer faculty, family physicians, primary care physicians and physicians from virtually every subspecialty. Both local hospitals, College Station Medical Center and St. Joseph Regional Health Center, provide numerous educational opportunities.

### *Other Facilities*

The HSC-COM also is affiliated with the following clinical institutions in Texas: the A.P. Beutel Health Center at Texas A&M University, College Station Medical Center, Grimes St. Joseph Health Center in Navasota, Madison St. Joseph Health Center in Madisonville, Planned Parenthood of Brazos County in College Station, St. Joseph's Regional Health Center and Trinity Medical Center in Brenham.

# Expenses

## *Expenses for Medical Students*

The expenses listed in this section are estimates and are subject to change. The expenses listed below are calculated for a typical medical student enrolled in the standard Texas A&M Health Science Center College of Medicine program for academic year 2006-07. Expenses for subsequent years may be different. Non-resident tuition is three times the resident tuition. Payments for tuition and fees are due during the registration periods scheduled before the beginning of each term. Cashier's checks, personal checks and money orders payable to the Texas A&M Health Science Center are acceptable. All checks and money orders are accepted subject to final payment. The estimated expenses for HSC-COM students are as follows:

## *Estimated Academic Costs*

| | Annual Total |
|---|---|
| *Tuition (statutory amount regardless of course load) | |
| Resident | $ 7,750 |
| Fees | 1,262 |
| Books and Supplies | 2,200 |
| Estimated Room and Board | 12,160 |
| | |
| Estimated annual costs for State Residents in years 1 to 4: | |
| First year | $ 25,604 |
| Second year | 23,761 |
| Third year | 27,547 |
| Fourth year | 27,710 |

## *Withdrawal from the College of Medicine*

Once payment for tuition and fees has been accepted by the HSC-COM, a student is considered officially enrolled unless the student is otherwise restricted from enrolling. Stopping payment on a check for fees or allowing the check to be returned unpaid by the bank for any reason does not constitute official withdrawal. Failure to follow procedures for withdrawing from HSC-COM may result in financial penalties and delays with future enrollment. Once a student registers, he/she is responsible for the total fees assessed regardless of whether an installment option is used. Refund percentages are applied to total fees assessed and not the amount paid. This means that students who withdraw before paying all installments may, in the event of withdrawal, receive a bill with a balance due rather than a refund.

## *Unpaid Checks*

If a check accepted by the HSC-COM is returned unpaid by the bank on which it is drawn, the person presenting it will be required to pay a penalty of $25. If the check and penalty are not cleared within 15 days from the date of the first notice, the student may be dropped from the rolls of the college. In addition, the check will be turned over to the county attorney for prosecution.

Students dropped from the rolls of the HSC-COM for failure to redeem an unpaid check or checks within the prescribed grace period are eligible for reinstatement only upon redemption of such check or checks, plus penalties, and the payment of a reinstatement fee of $50.

If a tuition and fee check is returned unpaid, the time allowed to clear the check will be specified in the return check notice. Failure to clear returned fee checks by the due date given will result in cancellation of the student's registration.

# Health Insurance

All students enrolled in the HSC-College of Medicine are required to have personal health insurance that meets certain minimum requirements. See the HSC-College of Medicine Student Handbook or contact the Office of Student Affairs and Admissions for details.

# Psychological Counseling

The HSC-College of Medicine offers confidential personal counseling to medical students for a limited period at no cost to the student. Students who select counselors other than those provided by the HSC-COM must pay for counseling themselves. Students whose problems require prolonged or more in-depth psychotherapies, or who have psychiatric emergencies requiring immediate stabilization, must bear any cost of their therapies that is not covered by their insurance policies.

Students who have any questions about where to go for help or who need assistance in arranging counseling should contact the Office of Student Affairs and Admissions.

# Academic Counseling

Counseling for academic concerns is available from a number of sources. Department heads, assistant and associate deans and faculty advisers are available for consultation concerning academic difficulties and are prepared to offer assistance to students when required. During the third and fourth years on the Temple campus, students select a faculty adviser with whom they can meet and discuss choices of electives, residency training and other career decisions.

# Tutoring

Tutoring is available at the HSC-College of Medicine from professors and from qualified students who work as tutors.

## Disadvantaged Student Support

The HSC-College of Medicine makes a vigorous effort to maximize opportunities for disadvantaged students. The college offers summer programs for disadvantaged high school and college students. It also provides tutorial support and counseling for medical students. Its curriculum is designed to provide a multicultural educational experience and to enhance learning on both the human and the academic levels. The HSC-COM encourages inquiries and applications from any prospective applicant.

## Housing

On the College Station campus, medical students and graduate students are responsible for their own living arrangements. An ample selection of off-campus housing is available in Bryan-College Station, and many off-campus apartments are served by the campus shuttle bus system. Off-campus private housing also is available in Temple.

## Student Organizations

*Texas Aggie Medical Student Association* is a recognized student organization that serves as an umbrella for student organizations serving the interests of the medical students of the HSC-College of Medicine. All medical students are members of the association. Activities include class social activities, volunteer work, meetings pertaining to students' future medical interests, and participation in local health fairs, fun runs and intramural activities.

*Texas Medical Association*, a member association of the American Medical Association, is a professional organization providing medical students opportunities to learn how organized medicine serves the professional medical community.

*American Medical Student Association (AMSA)* is a national organization created by students for students. Its purpose is to build relationships between medical students across the nation, as well as within each chapter, and to promote awareness of issues affecting medicine and medical students. Each year, AMSA promotes a national initiative focused on an aspect of community service. Goals as a local chapter include membership recruitment, participation in regional and national conventions, the national initiative, as well as local community service projects.

*Student National Medical Association* (SNMA) promotes the dissemination of information relative to minority issues in the field of medical education, as well as increases the levels of minority student recruitment, admissions and retention in schools training health professionals.

*Women in Medicine / American Medical Women's Association* (WIM) addresses the special issues and problems of women in medicine and provides a forum for the interaction of women medical and graduate students, faculty and community health professionals. It encourages women and minorities to enter the medical field and promotes faculty and physicians as mentors and role models. WIM also seeks to increase coverage of women's health issues in medical education and to educate women to become full participants in their own health care.

*Christian Medical Association* is a nondenominational Bible study group of medical students, faculty and staff members. The society meets weekly and often features guest speakers.

*Organization of Student Representatives* (OSR) was created to incorporate medical students into the activities and governance of the Association of American Medical Colleges (AAMC). While all students are actually members of OSR, only one official and one alternate representative may be elected from each school. Representatives are asked to attend regional and national AAMC meetings.

*Student Advocacy Committee* provides confidential assistance and referral for professional help to students who are abusing alcohol or drugs, or experiencing psychiatric-emotional problems. At the beginning of the fall semester, one male and one female are selected by the first-year class. Representatives serve their class during all four years at the HSC-College of Medicine.

### *Other Clubs and Interest Groups*

Many clubs are designed to promote interest and understanding of the various specialties in medicine, including the Emergency Medicine Interest Group, the Family Medicine Interest Group, the Internal Medicine Interest Group, the Obstetrics and Gynecology Interest Group, the Pediatrics Society, the Psychiatry Interest Group and the Emergency Medicine & Surgery Interest Group. Other student groups, such as the Global Health Interest Group and EMPOWER, promote global health matters and provide information about social issues.

## Policies and Regulations

### *Student Handbook*

The Texas A&M Health Science Center College of Medicine Student Handbook is located on the HSC-COM website under the Office of Student Affairs. This handbook is the official statement of rules and regulations that govern student conduct and student activities at the HSC-COM. Copies also are available in the Office of Student Affairs and Admissions and Learning Resources Unit.

## Professionalism

Students entering a formal medical education program are expected to uphold and adhere to the ethical and behavioral standards of the profession of medicine. The development and maintenance of a professional attitude is an ongoing responsibility of each student. Evaluation of professional behavior is an integral part of the curriculum, and it will be a factor in assigning grades and determining promotion, retention or dismissal.

## Requirements for Graduation

The Texas A&M Health Science Center College of Medicine offers the Doctor of Medicine degree. The HSC-Graduate School of Biomedical Sciences offers the Master of Science and Doctor of Philosophy degrees.

### *The Doctor of Medicine Degree*

The Doctor of Medicine degree is awarded, at the completion of the four-year program, to those students who have attained a grade of at least 70 percent ("C") or a pass in the courses and clerkships in the medical curriculum, and who have satisfactorily demonstrated to the faculty the personal and professional qualities essential to the practice of medicine.

HSC-COM students who qualify for the M.D. degree and who attain a GPA of 3.5 or above in their professional medical curricula are awarded a degree "With Honors." Students who enter the curriculum with advanced standing are not eligible to be named honor graduates.

Commencement for HSC-COM students who have earned the M.D. degree takes place at the end of the spring semester. The Helen Salyer Anderson Award, the most prestigious award given by the HSC-COM, is presented at commencement to the outstanding graduate.

### *The Doctor of Philosophy Degree*

A graduate program in basic medical sciences, leading to the degrees of Master of Science and Doctor of Philosophy, was instituted at the HSC-COM in 1985. A special feature of the program is an emphasis on broad-based instruction in medical sciences. Faculty members in the HSC-COM and HSC-GSBS believe that the highest quality teaching and research in medical sciences is achieved in programs that provide a strong, conceptual framework derived from a firm foundation of formal course work.

Traditionally, degrees in basic medical sciences have been awarded in clearly subdivided disciplines such as anatomy, biochemistry, microbiology, pathology, pharmacology and physiology. However, the boundaries separating these disciplines have become less distinct because of the necessity for interdisciplinary collaboration in biomedical research. Although medical schools increasingly require their faculty members and medical researchers to have a broad education in medical sciences, most graduate programs continue to use traditional curricula restricted to fairly narrow departmental lines. The Graduate Program in Medical Sciences at the HSC is designed to remedy this deficiency by bridging traditional disciplines through both course work and research.

The Ph.D. program requires a combination of formal course work and research and dissertation work. To ensure the multidisciplinary nature of the program, each student is required to complete courses from at least four discipline areas.

The core courses requirement is flexible, in that courses taken elsewhere that are equivalent to core courses in concept can be substituted for the core program. Students with advanced standing in core course disciplines may have the requirement waived and proceed directly to a more advanced course sequence.

Upon application to the program, each student declares an area of research interest from the basic disciplines of anatomy, biochemistry and medical genetics, microbiology and immunology, pathology, pharmacology, and toxicology or physiology, or the interdisciplines of biochemistry and structural biology, cardiovascular and integrative biology, cell and molecular biology, microbial and molecular pathogenesis, neurosciences, and pharmaceutical sciences and therapeutics. The graduate adviser for that discipline/interdisciplinary area designs, with the student, a course of study that generally requires four to five years to complete.

The HSC-COM calendar is independent from other university schedules, although most graduate courses are on the university semester system. The college's academic year is divided into one long term (36 weeks) and a summer session that is usually used for research.

For more information, contact the HSC-COM Office of Graduate Studies.

### *Examinations*

Master of Science: The student must pass a final examination by dates announced each semester or summer session in the HSC Academic Calendar. To be eligible to take the final examination, a student's official GPA must be at least 3.000 for all courses eligible to be applied to a graduate degree, and there must be no unabsolved grades of "D," "F" or "U" for any course listed on the degree plan. To absolve a deficient grade, the student must have repeated the course and achieved a grade of "C" or better. An approved thesis proposal must be on file in the HSC-COM Office of Graduate Studies.

The final examination covers the thesis and all work taken on the degree plan and, at the option of the Advisory Committee, may be written or oral or both. The final examination may not be administered before the thesis is available to all members of the committee in substantially final form and all members have had adequate time to review the document. A student may be given only one opportunity to repeat the final examination for the master's degree and that must be within a time period that does not extend beyond the end of the next regular semester (summer terms excluded).

Doctor of Philosophy: The student's major department, interdisciplinary program and/or Advisory Committee may require qualifying, cumulative or other types of examinations at any time deemed desirable. These examinations are entirely at the discretion of the department and the student's Advisory Committee.

The preliminary examination is required. It may not be administered unless the student's GPA is a least 3.000 cumulative. The exam may be given no earlier than a date at which the student is within approximately three credit hours of completion of the formal course work on the degree plan (i.e., excluding research courses, seminars and similar courses). The examination shall be both written and oral unless otherwise recommended by the student's Advisory Committee and approved by the associate dean for Graduate Studies. The written part of the examination will cover all fields of study included in the degree plan. Each member of the Advisory Committee is responsible for administering a written examination in his or her particular field, unless he or she chooses to waive participation in this part of the examination and so indicates on the announcement of the examination. Each written examination must be completed and reported as satisfactory to the chair of the Advisory Committee before the oral portion of the examination may be held. In case any written examination is reported unsatisfactory, the Advisory Committee must agree (1) to proceed with the oral portion of the preliminary examination, or (2) to adopt another course of action regarding the unsatisfactory written examination. Either procedure is subject to approval by the associate dean for Graduate Studies. After passing the required preliminary oral and written examinations for the doctoral degree, the student must complete all remaining requirements for the degree within four calendar years. Otherwise, the student will be required to repeat the preliminary examination.

A student who has failed the preliminary examination may be given one re-examination, when adequate time has been given to permit the student to address the inadequacies emerging from the first examination (normally six months). The student and the Advisory Committee should jointly negotiate a mutually acceptable date for this purpose.

The candidate for a doctoral degree must pass a final examination/dissertation defense by the deadline date announced by the HSC Academic Calendar each semester or summer session. To be eligible to take the final examination, a student's official GPA must be at least 3.000 or better and be admitted to candidacy. There must be no unabsolved grades of "D," "F" or "U" for any course listed on the degree plan. To absolve a deficient grade, the student must have repeated the course and achieved a grade of "C" or better. An approved thesis proposal must be on file in the HSC-COM Office of Graduate Studies. Whereas the final examination may cover the broad field of the candidate's training, it is presumed that the major portion will be devoted to the dissertation and closely allied topics.

## Awards and Honor Societies

Membership in Alpha Omega Alpha (AOA) Medical Honor Society is based on scholastic excellence, integrity, capacity for leadership, compassion and fairness. The top 25 percent of the graduating class, based on class rank, is considered for the AOA award. Fifteen percent of the graduating class is selected for membership at the beginning of the fourth year; 5 percent are selected at the beginning of the third year.

The Gold Humanism Honor Society (GHHS) honors senior medical students, residents, role-model physician teachers and other exemplars recognized for "demonstrated excellence in clinical care, leadership, compassion and dedication to service." Organized to elevate the values of humanism and professionalism within the field of medicine and its constituent institutions, the society is fast becoming integrated into the educational environment.

# Curriculum

The Doctor of Medicine degree requires a minimum of four years of study. Students spend their first two years studying basic medical sciences and introductory clinical sciences. During the second year, students spend half a day each week learning fundamental clinical skills in the offices of and under the supervision of local, practicing physician faculty members.

The ethical and social aspects of medical practice receive special emphasis by the Department of Humanities in Medicine, which provides lecture, discussion and small group case studies that focus on the humanistic concerns of the ethics of modern medicine.

During the third and fourth years, students receive clinical training in several different patient care settings: Scott & White Memorial Hospital and Clinic, Olin E. Teague Veterans Center, and Carl R. Darnall Army Medical Center at Fort Hood. Students also can rotate to Driscoll Children's Hospital or CHRISTUS Spohn Health System in Corpus Christi, or Brazos Family Medical Residency in Bryan-College Station. Small classes permit individual attention and close working relationships between faculty and students.



## *Graduate Medical Education*

A student in graduate medical education, which encompasses numerous programs of formal specialty and subspecialty training and education, will become board eligible in a medical specialty. The programs require from three to seven years of clinical education subsequent to receiving the M.D. degree as required by 26 medical specialty review committees that govern and accredit them. The Texas A&M Health Science Center College of Medicine/Scott & White programs participate in the National Residency Matching Program to fill its residency positions. The HSC-affiliated Emergency Medicine Residency Program at Carl R. Darnall Army Medical Center utilizes the military selections system.

Scott & White Memorial Hospital has sponsored graduate medical education programs since the 1920s and currently has more than 200 residents and fellows in training. In several programs, affiliated hospitals are utilized for training, including the Veterans Affairs medical centers in Temple and Waco, Carl R. Darnall Army Medical Center at Fort Hood, Ben Taub and Shriners hospitals in Houston and others. Currently, the HSC-COM/Scott & White residency programs include: anesthesiology, emergency medicine, family practice, general surgery, internal medicine, obstetrics and gynecology, ophthalmology, orthopedic surgery, pathology, pediatrics, plastic surgery, psychiatry, radiology, and urology. Subspecialty or fellowship programs include: cardiovascular disease, endocrinology, diabetes and metabolism, gastroenterology, hematology, hematopathology, oncology, pulmonary disease, combined internal medicine-pediatrics, critical care, infectious disease, and child-adolescent psychiatry. Additionally, the college is one of seven community partners sponsoring a family practice residency program in the Bryan/College Station area. For more information, contact the Graduate Medical Education Department at Scott & White at (254) 774-2232.

## *Curriculum Listing*

*First Year*

- Medical Biochemistry, Genetics and Nutrition
- Gross Anatomy
- Neuroscience
- Structure and Function of Human Organ Systems
- Becoming a Clinician I
- Humanities in Medicine
- Medicine and Human Values
- Introduction to Medical Ethics
- Leadership in Medicine
- Electives (by department)

*Second Year*

- Medical Microbiology
- General Human Pathology
- Medical Pharmacology
- Becoming a Clinician II
- Clinical Preceptorships in Primary Care Medicine
- Systemic Human Pathology
- Electives (by department)
- USMLE Step I

*Third Year*

Required Clerkships:

- Family Medicine (6 weeks)
- Internal Medicine (12 weeks)
- Obstetrics and Gynecology (6 weeks)
- Pediatrics (6 weeks)
- Psychiatry (6 weeks)
- Surgery (12 weeks)

Required Course:

- Principles of Radiology

*Fourth Year*

- USMLE Step II

Required Clerkships/Courses:

- Acting Internship in Primary Care Medicine (4 weeks)
- Alcohol and Drug Dependence Treatment Program (2 weeks)
- Becoming a Clinician IV (3 weeks)

# Department Information

## *Anesthesiology (ANES)*

| | |
|---|---|
| Professor: | Hoffer |
| Associate Professors: | Bean-Lijewski, Cross, Daniels, Kim, May Jr., Morton, Villamaria, Walker |
| Assistant Professors: | Bittenbinder (Head), Brinkley, Ciceri, Councilman-Gonzales, Culp, Dias, Gibson, Gloyna, Johnston, Kenney, Kitchings III, Konvicka, Lay, Mascorro III, Matthews, McAllister, McDavid, Patel, Patton, Pollock, Preston, Rivera, Roberson, Stinson, Strohmeyer II, Yeleti |
| Assistant Clinical Professor: | Elliott |

The elective clerkships offered by the Department of Anesthesiology are designed to provide an introductory experience in the practice of anesthesiology. The two-week, third-year elective introduces the student to basic principles of anesthetic care in the operating room under supervision of a senior staff anesthesiologist or resident. The student gains practical experience with airway management, including endotracheal intubation. The four-week, fourth-year elective attempts to familiarize the student with the breadth of clinical anesthesiology. Through a lecture series and daily operating room experience, the student is introduced to the preoperative evaluation, anesthetic management and postoperative care of surgical patients. Emphasis is given to the pharmacology and practical use of common general and local anesthetic agents, management concepts of mechanical ventilation, and essentials of fluid and transfusion therapy. Further experience in anesthesia subspecialty areas, including obstetric anesthesia and pain management, are provided.

## *Emergency Medicine (EMER)*

| | |
|---|---|
| Professor: | Stone (Head) |
| Associate Professors: | Bollinger, Chlapek, Morgan |
| Assistant Professors: | Bass, Colvin, Drigalla, Fritz, Gest, Gorchynski, Gore, Greenberg, Heidenreich, Herrick, Jaffe, Jones, Krall, McLaughlin, Morris, Nimerick, Smith, Stallard, Strecker-McGraw, Tobleman, Wieters |
| Clinical Instructor: | Cooney |

Emergency medicine has emerged as a specialty with its own training programs, specialty boards and literature. Our approach to patient management is tempered by the unique circumstances of the emergency department. Many patients with multiple and different problems of varying duration and varying severity must be evaluated, treated and discharged safely. Often several patients are being cared for at one time. The need to give quality care is an ever-present factor, as is the need to expedite each case, avoid unnecessary history, physical examination, lab tests, procedures, etc. Add to this the ever-constant possibility of receiving one or more critically ill patients, and it is easy to understand that the emergency department must (and does) have its own "style" of medicine.

Our goal is to teach the principles of the acute care and stabilization of a wide range of illnesses and injuries. This involves formal discussion, reading of literature, and most importantly, allowing students to handle their own cases with appropriate supervision. Important concepts include: patient triage, performing an appropriate history and physical examination, and structuring an appropriate workup and following it through. Students will learn and practice skills such as suturing, vascular access techniques, and a wide range of orthopedic, surgical and diagnostic procedures. Students will become more comfortable in the management of diverse patient populations, as well as caring for multiple acutely ill patients at the same time.

The emergency department rotation presents a unique opportunity for students supervised by senior staff emergency physicians to care for patients with acute medical, pediatric, obstetric, gynecologic, psychiatric, and surgical illness and injury. Most patients present with a new problem requiring diagnosis and management. Frequently, the ability to prioritize and manage several patients at once is necessary. The emphasis is placed on efficient utilization of resources and rapid assessment and treatment of the patient's problems. Our goal is timely, compassionate, scientifically-excellent emergency care.

Students rotating in the emergency department will have an opportunity to develop their history, physical exam and differential diagnosis skills. They are expected to develop and implement a treatment plan with senior staff supervision. At the conclusion of the rotation, students will be able to recognize the subtle manifestations of serious disease and understand how the approach to the patient in the emergency department differs from other areas of medical practice.

It is our hope that students will develop an appreciation for the unique challenges and constraints presented by the practice of emergency medicine, as well as the role of emergency and pre-hospital care within the health care system.

## *Family and Community Medicine (MFCM)*

| | |
|---|---|
| Professors: | DeVaul, Dickey, Forjuoh, McNew |
| Associate Professors: | Bramson, Couchman (Head), Madler, McIlhaney, Segrest, Via, Wiprud |
| Assistant Professors: | Averitt, Barber, Barrow, Bartels, Biles, Boles, Braden, Brieger, Bross, Caire, Caro, Chang, Childs, Cisneros, Clanton, Cohen, Cooney, Edwards, English, Estment, Farrell, Fasolino, Flory, Fritz, Gehring, Gerdes, Gibson, Glassberg, Goebel, Gogulski, Grant, Hagen, Hall, Hamm, Henry, Herron, Higgins, Hinds, Hinojosa, Hinojosa, Holdampf, Holland-Barkis, Huang, Jensen, Jernigan, Johari, Jones, Joseph, Kim, Kindle, Kirkpatrick, Kitson, Lane, Lawrence, Lichorad, Ligon, Maedo, Manning, Martin, Maxwell, Maynard, McClellan, McElhannon, Nelson, Ngo, O'Neal, Parker, Patel, Paull, Pohl, Pope, Prihoda, Rascoe, Reis, Richardson, Robinson, Roquet, Ruggiero, Schroeder, Sharp, Smith, Smith, Soch, Sterling, Stern, Stigler, Stone, Tindall, Tobias-Merrill, Vance, Villarreal, Wagner, Welch, Weldon, Whitham, Wu |

The goal of the Department of Family and Community Medicine is to prepare medical students for family-oriented health care delivery and to give students an understanding of the family as a basic unit of society. The program is broad, and it emphasizes comprehensive medical care for the whole family. It is taught by a core of full-time faculty members and a large contingent of practicing physicians who serve as part-time faculty. Together, this team exposes students to the role of the physician in the medical community as well as in the patient community.

## Department Information

The department offers two required courses for first-year students. Working with Patients, taught in the winter of the first year, introduces students to methods for dealing with patients. Physical Diagnosis, which begins in the spring of the first year, is taught jointly with the Department of Internal Medicine; it introduces students to medical history-taking and bedside examination. A required preceptorship program for second-year students applies the concepts of primary care to the context of a practicing physician's office. Students rotate through the local community and surrounding areas. A clerkship in the third year exposes students to family practice in a clinical setting.

The department also offers an elective course: Preclinical Preceptorship Program. This course is offered during the summer months following the first year of medical school. Students are matched with a family physician in Texas and spend four weeks working with this doctor. The course is designed to improve the students' clinical skills.

### *Humanities in Medicine (MHUM)*

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|---|---|
| Professors: | Berry, Cooney, DeVaul, Dickey, Edwards, Howard, McDermott, McMurray, Russell, Rosen, Sadoski, Self |
| Associate Professors: | Bramson, Davenport, Herring, Sanders (Head), Wiprud |
| Assistant Professors: | Borchardt, Cobbs, Caylor, Gore, Lobb, Nicowala, Sicilio, Tyler |

The Department of Humanities in Medicine is a charter department in the HSC-College of Medicine. The tasks of this department include: 1) to educate first- and second-year students in the basic ethical and social questions confronting the contemporary physician; 2) to acquaint the student with works in the history of medicine, social medicine and literature as related to medicine; 3) to integrate ethical and social concerns with the accompanying basic sciences curricula; 4) to provide sustenance for students with regard to the developing relationship between scientific, technological and humanistic learning in the making of a physician; 5) to stress the complex interpersonal, social, legal and political factors in the physician-patient relationship; and 6) to increase tolerance of differing values in order to reduce prejudice in health care delivery.

Courses are required in humanities in medicine during the first and second years and in medical jurisprudence in the fourth year. Electives are also offered during the first, second and fourth years. Symposia, workshops, electives and visiting speakers are available to first- and second-year students. Occasional programs are arranged for students in their third and fourth years at Temple.

Humanities in Medicine periodically invites outstanding medical humanists with national/international reputations to the HSC-College of Medicine to speak with the medical students.

Students are encouraged to visit with faculty members. Members of the department view their mission as one of helping.

#### *Leadership in Medicine Program*

Within the Department of Humanities in Medicine is the Leadership in Medicine Program. This enrichment program for all medical students was created to prepare them to take a leadership role in meeting the challenges of health care in the 21st century. Over the four-year curriculum, students may participate in small group discussion sessions, work with a distinguished HSC faculty member/mentor, receive enhanced assistance in choosing a medical residency, and in the fourth year spend an extended period of time with an individual recognized as an outstanding leader in his/her field.

The faculty of the HSC-COM believes strongly that this institution has a responsibility to inspire in its students the highest ideals of service. The Leadership in Medicine Program gives students the skills to take an active role in improving the society in which we live.

### *Internal Medicine (IMED)*

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|---|---|
| Professors: | Alpini, Baker, Brasher, Butler, Carpenter, Erickson, Foulks (Interim Head), Gantt, Huang, Hurley, Mukhopadhyay, Perez-Guerra, Piziak, Rohack, Skelton, Starr, Terry, Watson, Westblom, Wesson |
| Professors Emeritus: | Dyck, Green |
| Associate Professors: | Avots-Avotins, Cain, Caraveo, Chandler, Crisp, Dostal, Dvoracek, Havemann, Holguin, Holleman, John, Lenehan, Madsen, Malabonga, Myers, Nickel, O'Brien, Ogden, Posey, Schuchmann, White, Wilkinson |
| Assistant Professors: | Aguirre, Albers, Aleman, Barenholtz, Bassari, Beckendorf, Becker, Bennett, Bhatt, Boethel, Bolton, Booz, Bowling, Burgin, Calhoun, Campbell, Carlin, Cesani, Chen, Chune, Clark, Cohen, Concepcion, Cornelius, Costa, deKeratry, Desai, Drake, Droemer, Dugall, Duke, Dusold, Eakin-Wegener, Erwin, Finch, Forest, Friedman, George, Giebel, Gupta, Gupta, Hackethorn, Hall, Haq, Harris, Harrison, Harrison, Hearne, Hodges, Houck, Jenkins, Jesse, Jew, Jones, Kennedy, Kehler, Keyser, Khan, Kimmey, Koehler, Kwan, Lammoglia, Lange, Lawlis, Lawrence, Lechin, Lee, Lindzey, Lodhia, Lowe, Mackey, Martin, Martinez, May, Mayorga, McMahan, McNeal, Meade, Meade, Mehta, Mixon, Mondal, Moss, Motaparthi, Mott, Mukhopadhyay, Nampoothiri, Nuri, Perurena, Petersen, Pfanner, Pokala, Randall, Rawls, Reddy, Resendes, Revote, Rice, Richards, Roby, Ruud, Ryan, Scott, Sibbitt, Siddiqui, Sikka, Simon, Singh, Signpurwala, Smith, Smith, Spann, Stanley, Stauffer, Surani, Thallapureddy, Thamban, Thirumurthi, Van Wormer, Velasquez, Vourganti, Walker, Weinblatt, Weiss, Westwick, Win, Wong |
| Clinical Assistant Professors: | Lim, Shanmugam, Tripathy |
| Clinical Instructors: | Bielik, Ralkowski, Reed |
| Instructor: | Jeffries |

The basic mission of the Department of Internal Medicine is to produce broad-based, well-prepared, undifferentiated physicians. The program of instruction is designed to develop clinical skills and problem-solving abilities. A holistic approach to the patient is emphasized. The need for perpetual scholarship on the part of the physician is stressed and attention is given to reported clinical investigation and evidence-based medicine.

Components of the department's program include instruction in physical diagnosis (first year), pathophysiology and clinical presentation of disease (second year) and basic patient management (third year). Active patient care on one of several general medical wards and teaching outpatient clinics is an integral part of the required third-year clerkship.

Fourth-year electives in general medicine and the subspecialties, a required clerkship in neurology and a required primary care subinternship are supervised by the department.

Current research interests in the department include basic physiology and pathophysiology of biliary and hepatic function, diagnostic modalities in clinical gastroenterology, diagnosis and treatment of venous thromboembolism, clinical trials in oncology, endothelial physiology and pathophysiology, obesity, and women's health issues.

## *Molecular and Cellular Medicine (MCMD)*

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| Distinguished Professors: | Johnson, Pace |
| Professors: | Ficht, Kapler, Scholtz (Head) |
| Professor Emeritus: | Ihler |
| Associate Professor: | Maxwell |
| Assistant Professors: | Bayless, Bernstein, Musser, G. Wells |

The Department of Molecular and Cellular Medicine offers innovative courses for medical and graduate students in medical biochemistry, medical genetics, and cell biology. These courses provide insights into the molecular basis for human disease, as seen by the medical biochemist and geneticist. Medical biochemistry is concerned primarily with the study of macromolecules and intermediary metabolism, and is closely integrated with medical genetics through the recently available human genome sequence. Lectures, problem-based learning, audiovisual and web-based material, and self-instructional programs are used to provide integrated instruction in medical biochemistry and genetics. The department also offers graduate level courses on the structure and function of biomolecules (nucleic acids, proteins and membranes) and fundamental cell biological processes.

Research programs in molecular and cellular medicine are rapidly expanding, with the goal of strengthening existing teams and establishing new ones in multidisciplinary research areas, including collaborative studies with clinical science departments. Research in the molecular and cellular medicine department spans a wide range of biological processes, from the structure and function of biomolecules to cell physiology. Emphasis is placed on understanding normal and abnormal biological processes at the molecular and cellular levels. Using state-of-the-art biophysical technologies, researchers are studying the molecular mechanism for how proteins are synthesized, folded, assembled into functional macromolecules and trafficked throughout the cell. Reverse genetic approaches are being exploited to elucidate the roles of newly discovered proteins and define functional protein domains. Research bridging the molecular and cellular levels focuses on understanding mechanisms of basic cellular physiology (DNA replication, transcription, translation and protein sorting), molecules that control complex regulatory pathways (signal transduction, gene expression, development, differentiation and cell migration) and the molecular basis for cancer. Faculty members have strong collaborative ties with research groups in the Texas A&M University chemistry and biochemistry/biophysics departments, College of Veterinary Medicine and interdisciplinary faculties, including the programs in genetics and neurosciences.

## *Microbial and Molecular Pathogenesis (MMPA)*

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|---|---|
| Professors: | Leibowitz, McCallum, McMurray, Quarles (head), Samuel, Skare, Tesh, Wilson |
| Associate Professor: | Cirillo |
| Assistant Professors: | Andrews-Polymenis, Hendrix, Sanchez, Jeevan, Zhang |

The Department of Microbial and Molecular Pathogenesis provides instruction and training in basic and applied aspects of modern microbiology and immunology, for both medical students and graduate students. Students of medicine take a required sequence covering the diagnosis, management and prevention of infectious diseases during their second year of medical school.

The courses are complementary in content and are accompanied by appropriate laboratory experiments and demonstrations. For graduate students, a program leading to the Ph.D. in medical sciences with emphasis in microbiology or immunology is available, as well as an intradisciplinary track in microbial and molecular pathogenesis. The program prepares students for careers in the diverse areas of microbiology and molecular biology, including research, diagnostic fields, teaching or industry. For a current list of courses offered, please contact the department.

The training and research interests of faculty members in the department reflect the major subdisciplines encompassed in the courses offered. These interests focus on host-parasite interactions and include such specific areas as: 1) the modulation and regulation of the host's immune response to intracellular pathogens, including *Mycobacterium* tuberculosis; 2) the basic biology of specific agents such as *Escherichia coli* and influenza virus; 3) basic and clinical studies on the pathogenesis of respiratory viruses and vaccine and chemotherapeutic intervention in human disease; 4) the molecular regulation of papovavirus gene expression; 5) pathogenic mechanisms of secreted toxins produced by *E. coli* and *Shigella* spp.; 6) survival strategies of rickettsial pathogens; 7) host adaptation and tissue tropism of *Salmonella*; and 8) pathogenesis in Lyme disease and pathogenesis of a fever. Medical students may elect to work with faculty members in the department on these or related interests as part of the fourth-year elective program.

## *Neuroscience and Experimental Therapeutics (NEXT)*

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| Professors: | Chiou, Earnest, Frye (Joseph A. Shelton Professor), Gelderd, Griffith (Head) |
| Professor Emeritus: | West |
| Associate Professors: | Chen, Dohrman, McCord, Miranda, Sohrabji |
| Assistant Professors: | Brandt, Hubbard, Winzer-Serhan |
| Research Assistant Professor: | Murchison |

The HSC-College of Medicine is rapidly expanding its programs in neuroscience and experimental therapeutics with the goal of strengthening existing teams, and/or establishing new ones, in multidisciplinary research areas with a commitment to collaborate with clinical science departments. Research in the neuroscience and experimental therapeutics department covers a broad spectrum of topics in the neurosciences, currently including stem cells and brain development, mechanisms of learning and memory, sleep and circadian rhythms, stress, the influence of aging and hormonal changes on brain function, and the effects of alcohol and drug abuse on the developing nervous system, as well as other neurodegenerative and psychiatric diseases. The department will be home to basic as well as clinical scientists, involving a broad spectrum of research expertise and techniques including neurophysiology, pharmacology, neuroendocrinology, cell biology, molecular biology and genomics. Many faculty members have collaborative ties with the departments of biology and psychology at Texas A&M University, as well as the college's clinical partners in the departments of psychiatry and behavioral science on the Temple campus.

## Department Information

### *Obstetrics and Gynecology (OBGY)*

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|---|---|
| Professors: | Baker (Head), Capen, Knight, Kuehl, Shull, Sulak |
| Associate Professors: | Allen, Brakemeier, Leavelle, Pliego, Rayburn, Sanders, Wincek |
| Assistant Professors: | Appleton, Bachofen, Beaird, Bertsch, Bonds, Chancellor, Davis, Dunn, Greene, Harrell, Huddleston, Johnson, Micus, Montgomery, Morales, Yandell, Zivney |

The goal of the Department of Obstetrics and Gynecology is to expand students' basic science knowledge of reproductive medicine to provide an introduction to those aspects of obstetrics and gynecology and women's health care that are pertinent to all physicians and that will enable them to provide primary health care to all female patients.

The Department of Obstetrics and Gynecology adheres to the educational objectives put forth by the Association of Professors of Gynecology and Obstetrics Medical Student Educational Objectives, which represent a careful evaluation of the knowledge, skills and attitudes that ideally would be acquired during an obstetrics and gynecology clerkship by all students, regardless of their choice of medical specialties. Curriculum objectives include: 1) to develop an awareness and basic understanding of reproductive medicine including gynecologic disease and obstetrics; 2) to develop the skills of obtaining an obstetric-gynecologic history and of performing a physical examination with a proficient pelvic examination and Pap smear; 3) to develop the appropriate attitude and behavior to provide physical, emotional and psychosexual care for women; 4) to develop the ability to recognize patients requiring specialized obstetric and gynecologic care; 5) to develop an awareness and inquisitiveness concerning obstetrics and gynecology upon which future knowledge can be added; and 6) to develop problem-solving/patient-management skills and self-learning concepts and skills as a component of career-long learning.

In the first year, the fundamentals of the obstetric-gynecologic history and examination are taught as a portion of the physical diagnosis course conducted by the Department of Internal Medicine. The presentation utilizes lectures, audiovisual instruction, model patient examinations, and outpatient observation and examination.

During the second year, faculty members teach Introduction to Obstetrics and Gynecology. This course is designed to provide background material in normal obstetrics and gynecology, to relate clinical material to other courses offered in the first and second years, to introduce concepts of problem-based learning, and to serve as a foundation for the obstetrics and gynecology clerkship and electives in the third and fourth years.

A six-week clerkship in obstetrics and gynecology is presented during the third year. This clerkship introduces students to specific areas and disease processes of obstetrics and gynecology that are pertinent to all physicians. During the six-week clerkship, students rotate for three weeks on the obstetrics service and three weeks on the gynecologic service. These rotations provide exposure to patients in the outpatient setting as well as in the hospital setting and include activities in labor and delivery and the operating room.

Several fourth-year electives in obstetrics and gynecology are offered. These electives are designed to improve the clinical acumen of students in recognizing the problems of obstetric-gynecologic patients as individuals, to further students' educational experiences in the clinical care of patients with subspecialty obstetric and gynecologic disorders, and to provide students with experiences that will enable those who are considering obstetrics and gynecology as a career to evaluate this decision as to its appropriateness. Fourth-year elective externships are individually designed to meet the needs of each student.

The Department of Obstetrics and Gynecology is actively involved in both basic science and clinical research, and many opportunities exist for student participation in research in any area of reproductive medicine including gynecologic oncology, reproductive endocrinology including gamete and embryo research, urogynecology and pelvic reconstructive surgery, high-risk obstetrics, women's health care and preventive medicine, and all areas of general obstetrics and gynecology.

### *Pathology and Laboratory Medicine (MPAT)*

*College Station*

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| Senior Lecturer: | Lindner |
| Instructor: | Nettum |

*Scott & White - Temple; VA - Temple*

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| Professors: | Scott & White: Asea, Donner, Greene (Head), Koss, Rappaport, Spiekerman, Speights. Temple VA: Astarita |
| Associate Professors: | Scott & White: Adams, Beissner, Dobin |
| Assistant Professors: | Scott & White: Fader, Jones, Linz, Lopez, Rao, Sayage-Rabie. Temple VA: Johnson, Rachut |

The purpose of the Department of Pathology and Laboratory Medicine is to: 1) provide appropriate learning opportunities for medical students, graduate students, postgraduate and practicing physicians; 2) pursue a variety of research projects at the basic and applied levels in the fields of human disease, seeking to provide an overview for those projects based on a knowledge of human disease; and 3) provide appropriate and accurate diagnostic and consultative pathology service for patient care.

The department offers a required program of instruction in general, systemic and clinical pathology to medical students throughout their second year and a selective two-week rotation in a hospital pathology department in the required ambulatory clerkship in the fourth year.

General pathology (host response to injury and introduction to clinical pathology) and systemic pathology (diseases of the organ systems) are taught in the second year. The pathology courses serve as a bridge between the basic sciences and the clinical disciplines.

General and systemic pathology presents disease processes as manifestations of a common set of mechanisms of injury. Topics included are the normal and adapted cell, inflammation and repair, cell and tissue injury as a result of infectious agents, immunologic events, vascular lesions, genetic abnormalities, lesions caused by physical and chemical substances, and the causes and behavior of neoplasms. Pathologic changes are correlated with the resultant clinical manifestations, and in this framework, a foundation for understanding specific diseases is established.

"Frontiers in Medicine" lectures are provided to students to give current research directions in the rapidly advancing areas of molecular medicine. Systemic pathology applies these general principles to present a detailed understanding of disease for each organ system.

The fourth-year clerkship teaches students how to use the laboratory service and the consultant pathologist in an efficient and cost-effective manner. Students participate in the work of anatomic and clinical pathology sections of the hospital laboratory. This clerkship also provides students with in-depth instruction in those disorders seen during their rotation.

Research interests of department members include molecular studies of angiogenesis and vascular development; tumor growth invasion; p53-mediated apoptosis; transcriptional regulation of cancer; viral pathogenesis including models of hepatitis and CVS demyelintion; structural biology of CNS neurotransmitter receptors; and clinically oriented studies involving the gastrointestinal tract, bone marrow, prostate and cancer of the lung.

## *Pediatrics (MPED)*

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| Professors: | Allen, Beeram, Krauss, Ponder, Wilson (Head) |
| Professor Emeritus: | Myers |
| Associate Professors: | Asbury, Browning, Cipriani, Dobin, Easley, Fergie, Gaglani, Hardy, Oltorf, Thompson |
| Assistant Professors: | Baca, Bierwirth, Black, Blevins, Bobele, Brien, Bryant, Buck, Burke, Candas, Coles, Comstock, Cortes, Deline, Dirksen, Drigalla, Douty, Douty, Dulaney, Etuknwa, Foster, Gibson, Kastner, Lawrence, Marquardt, McNeil, Medina, Meyer, Milligan, Morales, Morris, Mullins, Myers, Nickel, Ni-Jones, Orr, Patel, Patel, Pliska, Pohl, Ransom, Reed, Santema, Santiago, Sicilio, Smith, Stafford, Svendsen, Timperlake, Vijjeswarapu, Wick, Williams |

Pediatrics is taught in two required courses: Introduction to Pediatrics in the second year and Clinical Clerkship in the third year. The introductory course consists of topic discussions by the students mediated by practicing pediatricians from Bryan-College Station. Major emphasis is placed on normal growth from birth through adolescence, including physical, mental/emotional, educational/cultural and language development. Preventive medicine and anticipatory guidance are stressed. Selected abnormal conditions are included to illustrate age-related disease and deviations from normal.

The six-week pediatrics clerkship is offered throughout the third year and consists of three weeks in the hospital and three weeks in the outpatient clinic. The clerkship is designed to contrast the problems of children with those of adults, both the approach to the diseases themselves and their impact on the family. Only relatively common diseases are discussed in the 16 hours of topic discussions. In the hospital and outpatient clinic, students are encouraged to evaluate their patients first and compare their findings with those of the staff. Each year, 55,000 outpatient visits and 4,250 inpatient days ensure students and the 18 residents sufficient numbers and diversity of patients. Residents and students are supervised by 51 staff pediatricians. More than a third of the pediatricians practice general pediatrics, and two-thirds practice a subspecialty.

Further experience in pediatrics is available from fourth year, four-week electives: outpatient, hematology/oncology, inpatient, neonatology, allergy and pediatric intensive care. A Pediatric Honors Program has been established for fourth-year students to foster experience in pediatric research and career planning.

## *Psychiatry and Behavioral Science (MPSY)*

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|---|---|
| Professors: | Colenda, DeVaul, Hicks, Rosen, Russell |
| Associate Professors: | Bodden, Chintapalli, Gamino, Kotrla (head), Krych, Meek, Young |
| Assistant Professors: | Airhart, Antunes, Brown, Davey, Denny, Eisenhauer, Fluet, Gregory, Johnson, Madisetty, Mathew, Montgomery, Moore, Parker, Quinn, Reddy, Ripperger-Suhler, Ross, Shook, Tamimi, Tolciu, Tsai, Willoughby, Zaphiris |

The Department of Psychiatry and Behavioral Science has as its educational objectives teaching the psychological dimensions of the human life cycle, the psychological determinants of the doctor-patient relationship, and basic aspects of the diagnosis and treatment of mental disorders.

The first year is devoted to an introduction to behavioral sciences, including factors that influence human development, the doctor-patient relationship, and maintenance of health. An emphasis will be placed on independent reading and developing the student's skills and problem-solving, especially related to problems that arise during the course of treating patients.

The second-year course will provide an introduction to basic knowledge about psychiatric disorders and their effect on an individual patient's life. Emphasis will be placed on clinical reasoning and problems related to assessment and diagnosis, differential diagnosis, treatment planning and clinical management.

The third-year clinical clerkship in psychiatry provides students with closely supervised experience with patients who have psychiatric disorders. The clerkship lasts six weeks, and clinical facilities with a broad variety of patients are used throughout Central Texas. Students will develop their knowledge base of mental disorders and will develop clinical skills in relating to patients, interviewing them, assessing clinical and other characteristics, formulating a diagnosis and implementing a treatment plan. Emphasis also will be placed on developing professional attributes to enable the student to become a capable, conscientious and ethical practitioner.

The fourth year offers a two-week clerkship on drug and alcohol disorders, which is required for all students. The student will develop a general fund of information about disorders of alcohol and other psychoactive substances.

Students will develop skills in assessing, diagnosing and treating acute phases of illness, such as managing withdrawal by detoxification protocols, as well as participating in rehabilitation programs that promote abstinence and restoration of functioning.

Elective courses cover a wide range of options in the fourth year. Established electives in child and adolescent psychiatry, consultation psychiatry, and advanced clinical experience in inpatient psychiatry, geriatric psychiatry, general outpatient psychiatry and psychotherapy, and partial hospitalization programs including an intensive group therapy-based program, are all available.

Electives for clinical research and other scholarly activities can be arranged with individual faculty members. In addition, special electives can be created with concurrence of a supervising faculty member to provide clinical and research opportunities in the student's area of interest within psychiatry.

Research projects underway within the department include an international study on somatoform disorders sponsored by the World Health Organization; studies on clinical management of depression in primary care settings; development of advanced assessment instruments in such areas as bipolar disorder in prepubertal children, and development of "an emotional status examination"; basic laboratory research on neurotransmitter systems and their interaction; clinical trials of medications and other somatic treatments; and studies of psychophysiologic parameters such as the startle response and eye tracking in patients with different psychiatric disorders.

## *Third-year Clerkship in Psychiatry*

At present, the basic rotation involves a core clinical component with additional specialized experience.

1. Core clinical experience: The student will rotate through four different clinical services in the HSC. These facilities are Scott & White Memorial Hospital, Olin E. Teague Veterans Center, Carl R. Darnall Army Medical Center and the Waco Veterans Medical Center. Basic experience in both inpatient and outpatient psychiatric services will be provided through close day-to-day supervision by senior faculty members. Special seminars and lectures also will be provided. Students will be expected to prepare case write-ups on patients they have followed.
2. Patients with severe psychiatric disorders: All students will spend one or two weeks during the clerkship at the Waco Veterans Medical Center, a referral hospital for psychiatric and extended care patients in the Veterans Affairs medical care system. Students will have responsibility for assessing and following patients with the most severe, disabling illnesses, and will also have an opportunity to experience group psychotherapy with patients suffering from post-traumatic stress disorder.

## Department Information

Evaluation of the clinical experiences will be made by faculty who have supervised the student during the clerkship. Emphasis in grading will be placed on professional attributes, clinical knowledge and skills, and related factors such as ability to function as a member of a clinical team. Additional evaluation will be by oral and written examination, and by the specialty subject examination prepared by the National Board of Medical Examiners. Unprofessional conduct will result in failure of the clerkship even with satisfactory completion of the cognitive aspects of the course.

### *Radiology (MRAD)*

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| Professors: | Boyer, M. Holbert, J. Montgomery, Monticciolo, Naul (Head), Runge |
| Associate Professors: | Bourland, Cheung, B. Holbert, Hopens, Kuhnhein, Lesley, McCord, Middleton, M. Montgomery |
| Assistant Professors: | Boyle, Calderwood, Culp, Dwyer, Fink, Glass, Hajdik, Hutka, Ko, McDonald, Metzger, Mistry, Naik, Neese, Nipper, Oas, Parman, Phillips, Ponzo, Santiago, Schnitker, Shepherd, Sincleair, Stewart, Strober, Trotter, Truitt, Ufema |

The Department of Radiology is responsible for the education of students in all fields of medical imaging, including conventional radiography, nuclear radiology, ultrasound, computed tomography, magnetic resonance imaging and the multiple subspecialties, including women's imaging, breast imaging, neuroradiology, interventional radiology, pediatric radiology, musculoskeletal radiology, thoracic radiology, body imaging and cardiovascular imaging. The department also instructs students in radiation oncology.

Medical imaging is one of the most important diagnostic tools available to the clinician. The field of medical imaging is rapidly expanding, and the development of new imaging modalities such as computed tomography, ultrasound and magnetic resonance imaging has revolutionized medical diagnosis. Other advances in the rapidly changing field of radiology include the development of digital radiology and more sophisticated diagnostic and therapeutic interventional procedures. The field of nuclear radiology also continues to expand rapidly, particularly in the area of cardiac imaging and other physiological studies such as positron emission tomography (PET). Radiation oncology plays a very important role in the treatment of cancer.

The educational mission of the department is to provide students strong backgrounds in the understanding of the imaging modalities available to the clinician, the indications for the various procedures and the fundamentals of image interpretation. A lecture course in medical imaging is required for third-year medical students. This course stresses the fundamentals of image interpretation and indications for the various imaging procedures. Several electives are offered to fourth-year students, including diagnostic radiology, nuclear radiology and therapeutic radiology. These electives can be tailored to meet the needs and interests of the individual student. The students work directly with the faculty radiologists and diagnostic radiology residents. Students may also rotate through the radiology department while on the surgery and neurology rotations.

### *Surgery (SURG)*

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| Professors: | Baugh, Brindley, Buckley, Coffield, Cooney, Dieckert, Klugo, Lairmore, Lenis, Lynch, Roberts, Smythe (Head), Snyder, Verheyden, White |
| Associate Professors: | Brindley, Bush, Childs, Custer, Feldtman, Fisher, Grothaus, Hendricks, Hermans, Jaffers, Knight, Probe, Ray, Raney, Reilly, Rosa, Smith, Symmonds, Weber |
| Assistant Professors: | Allinson, Beyer, Bird, Boysen, Bramhall, Brammeier, Cochran, Davis, Devall, Dreher, Dunlop, Eshbaugh, Fedorchik, Fulcher, Grinovich, Hamilton, Harris, Harris, Hitt, Hollingsworth, Hudson, Hudson, Kirby, Knieriem, Lichota, Lindsay, Lisley, Lowry, Lueck, Marr, Martin, Mehta, Miller, Miltenburg, Moul, Munroe, Nicholson, Norris, Opersteny, O'Shea, Pandya, Papaconstantinou, Pasichnyk, Patel, Pike, Pinkston, Rahm, Read, Reeve, Reiter, Reznik, Richards, Riess, Riggs, Schultz, Shabahang, Sherrard, Shipman, Smith, Thomas, Tuggle, Watson, Waxman, Wegener, Williams |

The required third-year clerkship taught by the Department of Surgery is designed to expose students to the basic principles of surgery, not to surgical techniques. Students are instructed in some techniques used in minor surgery. Major emphasis is given to the principles of wound healing, fluid and electrolyte balance, the introduction to specific surgical diseases, organ trauma, inflammatory responses and malignancy. Ward rounds and assignment of patients to students offers an opportunity for preoperative evaluation and the acquisition of sound surgical judgment. Daily surgical lectures, semi-weekly subspecialty seminars and surgical grand rounds provide students the opportunity to enhance their abilities. Participation in the operating room, postoperative management and case presentations help to complete the total surgical experience and provide continuity of care.

In addition to the experience in general surgery, the fourth-year elective program allows further exposure to anesthesiology, audiology, cardiothoracic surgery, neurosurgery, ophthalmology, oral and maxillofacial surgery, orthopedic surgery, otolaryngology, pediatric surgery, plastic surgery, podiatry, speech pathology, urology, and vascular surgery. Students also may participate in patient management in the Pain Clinic.

Student participation in any ongoing research program is welcome.

## *Systems Biology and Translational Medicine (SBTM)*

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| Distinguished Professor: | Granger (head) |
| Professor Emeritus: | Smith |
| Professors: | Hester, Kuo, Meininger, Parker, Peterson, Sampson, Trzeciakowski, Zawieja (associate head), Zimmer |
| Associate Professors: | Muthuchamy, Parrish, Wilson |
| Assistant Professors: | Trache, VanBuren |

Cells, tissues and organs are complex systems dependent on orchestration of the activities of large networks of genes, proteins and signaling molecules. The emphasis of systems biology is on understanding the emergent properties that arise from the interactions of the biomolecules, cells, tissues and organs that comprise biological regulatory networks. Dismantling the system and examining the parts independently do not adequately study this behavior. A deeper understanding of the system occurs by studying each of the parts within the context of the system as a whole. Key technologies for assimilating and integrating the necessary data include tissue and organ-level studies, genomics, proteomics, imaging, bioinformatics, mathematical modeling, computer simulation, data-mining and high-speed computation. An outgrowth of the study of biological systems is the development of an understanding of disease processes and the discovery of treatments for these diseases. A goal of the Department of Systems Biology and Translational Medicine is to develop a strong focus on applying the principles of systems biology to human tissues and disease. Major objectives include forming collaborative partnerships with clinical departments on the Temple campus for research, teaching and training programs and translation of experimental therapeutics to the clinical setting, while continuing established interdisciplinary collaborations with other basic science departments and research units within the Texas A&M Health Science Center and Texas A&M University.

Opportunities for participation in the departmental research programs are available for students in high school, college and medical school. In addition, the department is actively involved in graduate and postdoctoral training.

# Graduate School of Biomedical Sciences

# Graduate School of Biomedical Sciences

**http://gsbs.tamhsc.edu**

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## Administrative Structure

The Graduate School of Biomedical Sciences oversees all graduate programs leading to an advanced academic degree (M.S., M.S.P.H. and Ph.D.) from the Texas A&M Health Science Center and their graduate faculty. Each approved program of academic graduate training in the HSC-GSBS is based in a component of the HSC. Professional advanced degree programs, such as the D.D.S., M.D., M.P.H. and Dr.P.H., and postgraduate clinical programs leading to a combined M.S. certificate in advanced dentistry, are administered by the appropriate component of the HSC and their professional accrediting agencies.

The Vice President for Research and Graduate Studies is the administrative head of the HSC-GSBS. The Office of Graduate Studies is responsible for assuring the quality of graduate programs and for approving all education policies and procedures leading to advanced academic degrees (M.S., M.S.P.H. and Ph.D.) from the HSC. The Office of Graduate Studies works with the components to coordinate and facilitate the administration of all these programs of academic graduate instruction; to assure programmatic quality; and to coordinate interdisciplinary activities among graduate programs.

## Vice President's Biography

David S. Carlson, Ph.D.
Vice President for Research and Graduate Studies

*David S. Carlson, Ph.D.*, was appointed Vice President for Research and Graduate Studies of the Texas A&M Health Science Center in 2003. Prior to that, Dr. Carlson was chairman of the Department of Biomedical Sciences and associate dean for Research and Advanced Education at HSC-Baylor College of Dentistry (1993-2004). Dr. Carlson is also Robert E. Gaylord Endowed Professor at HSC-BCD and a Regents Professor of the HSC.

Dr. Carlson received his doctoral degree from the University of Massachusetts (Amherst) in 1974. He completed postdoctoral training at the University of Michigan where he became professor of anatomy & cell biology (School of Medicine), orthodontics & pediatric dentistry (School of Dentistry), and research scientist in the Center for Human Growth and Development.

Dr. Carlson has served on numerous study sections and special review panels for the National Institutes of Health and is a past president of the Craniofacial Biology Group of the International Association of Dental Research. Dr. Carlson's research interests on the development and growth of the craniofacial complex have resulted in more than 200 research articles, reviews and abstracts, as well as 11 edited books bridging basic biology and clinical treatment of craniofacial anomalies.

## Academic Calendar

Depending upon individual programs of study, students function under the academic calendars of the Texas A&M Health Science Center, Texas A&M University, HSC-Baylor College of Dentistry, Baylor College of Medicine or The University of Texas Health Science Center at Houston. Students should see individual academic calendars for specific details.

## History

On Jan. 1, 1999, The Texas A&M University System Board of Regents established the Texas A&M Health Science Center, which included Baylor College of Dentistry, the College of Medicine, the Graduate School of Biomedical Sciences, the Institute of Biosciences and Technology, and the School of Rural Public Health.

The HSC-GSBS is accredited as a component of the HSC by the Southern Association of Colleges and Schools.

## Mission Statement

The Texas A&M Health Science Center Graduate School of Biomedical Sciences is dedicated to providing a rigorous and stimulating research and training environment for qualified candidates in the biomedical and public health sciences. Outstanding M.S., Ph.D., M.D./Ph.D., D.D.S./Ph.D. and D.M.D./Ph.D. students provide the intellectual capital required to advance the research and educational mission of the HSC and to provide a new generation of leaders in the biomedical sciences and public health. The graduate faculty is committed to excellence in interdisciplinary and multidisciplinary research training for students whose intellectual contributions will provide the basic knowledge to cure diseases and to improve health and well-being for all people.

## Location

The Graduate School of Biomedical Sciences has programs at the following locations:

- Baylor College of Dentistry, Dallas
- College of Medicine, College Station and Temple
- Institute of Biosciences and Technology, Houston
- School of Rural Public Health, College Station

## Facilities

The Texas A&M Health Science Center College of Medicine on the College Station campus occupies a 169,852-square-foot facility that was completed in 1983. It is located adjacent to a medical sciences library that was constructed in 1986. Construction of a new 35,000-square-foot educational and research facility at the Temple campus began in June 1998 and was completed in late fall 2000.

HSC-Baylor College of Dentistry facilities include an eight-floor academic building, the Baylor Health Sciences Library, and the Oral and Maxillofacial Imaging Center. The academic building provides approximately 250,000 square feet of modern, comfortable, well-equipped lecture halls, teaching and research laboratories, clinics, faculty offices, and specialized areas for patients and students.

The HSC-Institute of Biosciences and Technology is located in a modern 11-story research tower at the Texas Medical Center at Houston. HSC-IBT serves as an interface for the HSC with the Texas Medical Center and the Houston medical and educational community. Texas Medical Center comprises 42 member institutions, all engaged in not-for-profit patient care, education and research. It includes Baylor College of Medicine, M.D. Anderson Cancer Center and The University of Texas at Houston Health Science Center. Approximately 110,000 people visit the Texas Medical Center daily, with more than 4,500,000 patient visits per year. In addition, some 19,000 students and 10,000 faculty are involved in research and education, from the high school level through postdoctoral studies.

The HSC-School of Rural Public Health's administration and faculty are located in a new state-of-the-art, three-building complex in College Station, adjacent to the Texas A&M University west campus. Classrooms are fully equipped with videoconferencing technology to support the school's innovative distance education program.

## Financial Assistance

Assistantships, fellowships and traineeships are available from local and national sources. For information, contact the associate dean or director of graduate education for the component or program of interest. Full health benefits are provided to students holding graduate assistantships. Students should expect additional expenses of between $2,000 and $3,000 per year for books, laboratory fees and miscellaneous fees. Loans also are available for graduate students. For more information on loans, contact the Office of Financial Aid at the Texas A&M Health Science Center.

## Housing

A wide variety of off-campus accommodations are available in College Station, Houston and Dallas at a broad range of prices.

## Policies and Regulations

### *Attendance*

Attendance in courses, laboratories, seminars, journal clubs and similar activities is the prerogative of the individual course and program directors.

Please refer to the introductory section of this catalog for details of additional rules and procedures. For most current information, contact the associate director for graduate studies at the individual components.

## Program of Study

### *Satisfactory Academic Progress*

Graduate students must maintain a GPA of 3.000 ("B" average based on a 4.000 scale) for all courses that are listed on the degree plan and for all graded and advanced undergraduate work eligible to be applied toward a graduate degree. Grades of "S" (satisfactory) or "U" (unsatisfactory) may be assigned in certain officially designated courses. If a student's cumulative GPA, or the GPA for courses listed on the degree plan, falls below the minimum 3.000, he or she will be considered to be scholastically deficient. If the minimum GPA is not attained in a reasonable length of time, the student may be dropped from graduate studies.

## Programs of Study

### *College of Medicine: Graduate Program in Medical Sciences*

The HSC-College of Medicine participates in the M.S. and Ph.D. degrees in medical sciences and the M.D./Ph.D. degree. The Graduate Program in Medical Sciences leads to M.S. and Ph.D. degrees and is offered through the HSC-Graduate School of Biomedical Sciences. A non-thesis master's degree is available under some conditions. A special feature of the program is an emphasis on broad-based instruction in medical sciences, inasmuch as the faculty believe that the quality of teaching and research in medical sciences is highest in those programs that provide a strong, conceptual framework derived from a firm foundation of formal course work. Students who master this background in medical sciences are properly prepared to undertake programs of high-quality research.

Traditionally, master's and doctoral degrees in basic medical sciences have been awarded in clearly subdivided disciplines such as anatomy, biochemistry, physiology, microbiology and pharmacology. However, the boundaries separating these disciplines have become less distinct because of the development of integrated programs in medical education and the necessity for interdisciplinary and multidisciplinary collaborations in biomedical research. While the requirements of medical schools for faculty and for medical researchers increasingly include a broad base in medical sciences, most of the graduate programs in this area continue to emphasize education along fairly narrow, traditional departmental lines. The Graduate Program in Medical Sciences at the HSC-College of Medicine is designed specifically to remedy this deficiency by bridging traditional disciplinary lines through both course work and research. The curriculum focuses on broad-based instruction in neurosciences and experimental therapeutics, systems biology and translational medicine, molecular and cellular medicine, and microbial and molecular pathogenesis. Because the major unsolved problems in medicine often defy solution with the singular approach of the classical biological sciences, the Graduate Program in Medical Sciences at the HSC-College of Medicine emphasizes interdisciplinary and multidisciplinary studies and research. Interdisciplinary studies are available in the areas of biochemistry and structural biology, cardiovascular and integrative biology, cell and molecular biology, microbial and molecular pathogenesis, neurosciences, and pharmaceutical sciences and therapeutics.

### *Baylor College of Dentistry: Graduate Program in Biomedical Sciences*

HSC-Baylor College of Dentistry offers the M.S. degree and Ph.D. degree through the Graduate Program in Biomedical Sciences. This program is oriented toward two types of students: (1) graduates of dental programs, students enrolled in specialty clinical programs and current students; and (2) non-dental students with baccalaureate degrees in the sciences. Objectives are to provide training in modern biomedical sciences and research methods and to equip students to critically analyze research and clinical literature. For dental graduates and current dental students, this training will prepare students for participation on clinical dental faculties. For students with a Bachelor of Arts or Bachelor of Science degree only, this training will enhance opportunities for careers in science or further education. Time required for completion of the degree varies, depending on whether participation is full- or part-time and on the amount of the applicant's prior training. The M.S. in biomedical sciences is offered in HSC-Baylor College of Dentistry's Department of Biomedical Sciences through the HSC-Graduate School of Biomedical Sciences, with multiple areas of concentration.

A Ph.D. degree in Biomedical Sciences is available for advanced students with an interest in academic research careers in the oral health sciences. The Ph.D. is administered through HSC-Baylor College of Dentistry's Department of Biomedical Sciences. However, the program is multidisciplinary in that students may take graduate level courses in other graduate specialty areas of the college and at other Dallas-area institutions of higher education, e.g., The University of Texas Southwestern Graduate School of Biomedical Sciences and The University of Texas at Dallas. A minimum of three calendar years (with dissertation) is required.

A combined D.D.S./Ph.D. option is available for highly qualified students who have been accepted to the college's Doctor of Dental Surgery degree program.

### *Institute of Biosciences and Technology: Graduate Program in Medical Sciences*

Students have the option of pursuing the M.S. and Ph.D. degrees in medical sciences at the HSC-Institute of Biosciences and Technology. Students may take courses in graduate specialty areas of the HSC-Graduate School of Biomedical Sciences or at Houston-area institutions of higher learning, e.g., The University of Texas-Houston Graduate School of Biomedical Science.

### *School of Rural Public Health: Graduate Programs in Public Health*

The M.S.P.H. and Ph.D. degrees in public health are available. Please see the section on the HSC-School of Rural Public Health in this catalog and contact the associate dean for Academic Affairs at the HSC-School of Rural Public Health for current information.

## Requirements for Graduation

Students must successfully complete all course work on the degree plan, must have completed a research proposal approved by the Advisory Committee, must pass a preliminary examination, and must successfully conduct independent research and present this research in a dissertation. The student also must successfully defend the research before the Advisory Committee.

Graduate degrees are conferred at the close of each regular semester and the entire summer semester. Candidates who expect to complete their work at the end of a given semester must apply for graduation by submitting the diploma application to the HSC Registrar and paying the required graduation fee by the posted deadline.

The Ph.D. programs require a minimum of 96 semester hours. The minimum time required to qualify for an advanced degree varies with the ability and preparation of the student. Students may find it necessary to extend their studies beyond the minimum requirements. For specific minimum residence requirements, students are directed to check the degree program description for the degree that they are pursuing.

Applicants to the graduate school normally will be admitted to pursue the Ph.D. degree, but dentists or physicians in residency training and other applicants who desire to study for a master's degree in basic science may do so. M.S. degree candidates must complete a minimum of 32 semester credit hours. For students who have completed a master's degree or D.V.M., M.D. or D.D.S./D.M.D. degrees at a U.S. institution, a minimum of 64 hours is required on the degree plan for the Ph.D. degree. Failure to complete the D.D.S. or M.D. invalidates this 64-hour degree plan and necessitates petitioning to convert to a 96-hour degree plan.

The HSC-College of Medicine, through the HSC-Graduate School of Biomedical Sciences, also offers a combined M.D./Ph.D. program by allowing highly motivated medical students to enroll in graduate programs simultaneously with studies toward the M.D. degree. In addition, highly motivated and well-prepared physicians in residency training may enroll in HSC-GSBS at HSC-Baylor College of Dentistry (coincident with their residency program) in order to pursue the Ph.D. degree.

## *Advisory Committee*

The student's Advisory Committee for the Master of Science degree will consist of no fewer than three members of the graduate faculty representative of the student's field of study and research. The chair or co-chair of the committee must be from the student's department, and one of the members must be from a department other than the student's major department.

The student's Advisory Committee for the Doctor of Philosophy degree will consist of no fewer than four members of the graduate faculty representative of the student's field of study and research. The chair or co-chair of the committee must be from the student's department, and one of the members must be from a department other than the student's major department.

The committee members' signatures on the degree plan indicate their willingness to accept responsibility for guiding and directing the entire academic program of the student and for initiating all academic actions concerning the student. Although individual committee members may be replaced by petition for valid reasons, a committee cannot resign en masse. The committee chair, who usually has immediate supervision of the student's research and dissertation or thesis, has responsibility for calling all meetings of the committee. Committee duties include responsibility for the proposed degree plan, the research proposal, the preliminary examination, the dissertation or thesis, and the final examination. In addition, the committee – as a group and as individual members – is responsible for counseling the student on academic matters and, in the case of academic deficiency, initiating recommendations to the associate dean.

## *Degree Plan*

The student's Advisory Committee, in consultation with the student, will develop the proposed degree plan. The degree plan must be submitted on the official form provided by the component, with endorsements by the committee and the head of the student's department or comparable interdisciplinary program chair. The degree plan must be completed and filed with the component prior to registration (or preregistration) for a third term, excluding summer terms, and no later than 30 days prior to the date of the final oral examination or thesis defense for master's students. For a doctoral degree, the degree plan must be filed with the component prior to registration (or pre registration) for a fifth term, excluding summer terms, and no later than 30 days prior to the date of the preliminary examination.

## *Research Proposal*

For the master's degree, the student must prepare a thesis proposal for approval by the Advisory Committee and head of the major department or center. This approved proposal must be submitted to the component at least 7 weeks prior to the close of the semester or summer session in which the student expects to receive the degree or prior to the scheduling of the final examination, whichever comes first.

For the doctoral degree, the general field of research to be used for the dissertation should be agreed upon by the student and the Advisory Committee at the first meeting, as a basis for selecting the proper courses to support the proposed research. As soon thereafter as the research project can be outlined in reasonable detail, the dissertation research proposal should be approved by the student's Advisory Committee and the head of the student's department, and submitted to the individual component.

If a student's research involves human or animal subjects, an approved form from the Institutional Review Board for Human Subjects or the Laboratory Animal Care Committee for animal use must accompany the research proposal.

## *Examinations*

Master of Science: The student must pass a final examination by dates announced each semester or summer session by the dean of the graduate school. To be eligible to take the final examination, a student's official GPA must be at least 3.000 for all courses eligible to be applied to a graduate degree, and there must be no unabsolved grades of "D," "F" or "U" for any course listed on the degree plan. To absolve a deficient grade, the student must have repeated the course and achieved a grade of "C" or better. An approved thesis proposal must be on file in the component.

The final examination covers the thesis and all work taken on the degree plan and, at the option of the Advisory Committee, may be written or oral or both. The final examination may not be administered before the thesis is available to all members of the committee in substantially final form and all members have had adequate time to review the document. A student may be given only one opportunity to repeat the final examination for the master's degree and that must be within a time period that does not extend beyond the end of the next regular semester (summer terms excluded).

Doctor of Philosophy: The student's major department, interdisciplinary program and/or Advisory Committee may require qualifying, cumulative or other types of examinations at any time deemed desirable. These examinations are entirely at the discretion of the department and the student's Advisory Committee.

The preliminary examination is required. It may not be administered unless the student's GPA is a least 3.000 cumulative and on the degree plan. The exam may be given no earlier than a date at which the student is within approximately three credit hours of completion of the formal course work on the degree plan (i.e., excluding research courses seminars and similar courses). The examination shall be both written and oral unless otherwise recommended by the student's Advisory Committee and approved by the component. The written part of the examination will cover all fields of study included in the degree plan. Each member of the Advisory Committee is responsible for administering a written examination in his or her particular field, unless he or she chooses to waive participation in this part of the examination and so indicates on the announcement of the examination. Each written examination must be completed and reported as satisfactory to the chair of the Advisory Committee before the oral portion of the examination may be held. In case any written examination is reported unsatisfactory, the Advisory Committee must agree (1) to proceed with the oral portion of the preliminary examination, or (2) to adopt another course of action regarding the unsatisfactory written examination. Either procedure is subject to approval by the associate dean of Research and Graduate Studies. After passing the required preliminary oral and written examinations for the doctoral degree, the student must complete all remaining requirements for the degree within four calendar years. Otherwise, the student will be required to repeat the preliminary examination.

Upon unanimous approval of the student's Advisory Committee and approval by the component, a student who has failed the preliminary examination may be given one re-examination, when adequate time has been given to permit the student to address the inadequacies emerging from the first examination (normally six months). The student and the Advisory Committee should jointly negotiate a mutually acceptable date for this purpose.

The candidate for a doctoral degree must pass a final examination/dissertation defense by the deadline date announced by the component each semester or summer session. To be eligible to take the final examination, a student's official GPA must be at least 3.000 or better and be admitted to candidacy. There must be no unabsolved grades of "D," "F" or "U" for any course listed on the degree plan. To absolve a deficient grade, the student must have repeated the course and achieved a grade of "C" or better. An approved thesis proposal must be on file in the component. Whereas the final examination may cover the broad field of the candidate's training, it is presumed that the major portion will be devoted to the dissertation and closely allied topics.

### *Admission to Candidacy*

To be admitted to candidacy for a doctoral degree, a student must have: (1) satisfied the residency requirements, (2) passed a preliminary examination, (3) completed all formal course work and (4) filed the approved dissertation proposal with the component.

### *Record of Research*

Master of Science: An acceptable thesis is required for the M.S. degree. The finished work must reflect a comprehensive understanding of the pertinent literature and express in clear and legible English, the problem(s) for study, the method, significance and results of the student's original research. Guidelines for the preparation of the manuscript and more detailed requirements are available from the component. A non-thesis option is available under some conditions.

Doctor of Philosophy: The ability to perform independent research must be demonstrated by the dissertation, which must be the original work of the candidate. Whereas acceptance of the dissertation is based primarily on its scholarly merit, it must also exhibit creditable literary workmanship. The format of the dissertation must be acceptable to the graduate school. The Advisory Committee must approve the dissertation. Guidelines for the preparation of the manuscript, deadlines and more detailed requirements are available from the HSC-Graduate School of Biomedical Sciences.

### *Petitions*

Exceptions to published rules may be requested by proper petition to the component. Each petition will be considered on its own merits by the component. The signature of the student, the student's department head and the signatures of all members of the student's Advisory Committee, if appointed, are required on a petition.

### *Time Limit*

All requirements for master's degrees must be completed within a period of seven consecutive calendar years for the degree to be granted. A course will be considered valid until 10 years after the end of the semester in which it is taken. Graduate credit for course work more than seven calendar years old at the time of the final oral examination may not be used to satisfy degree requirements.

All requirements for doctoral degrees must be completed within a period of 10 consecutive calendar years for the degree to be granted. A course will be considered valid until 10 years after the end of the semester in which it is taken. Graduate credit for course work more than 10 calendar years old at the time of the final oral examination may not be used to satisfy degree requirements.

Final copies of the dissertation or thesis must be approved and accepted no later than one year after the final examination or within the 10-year time limit for the doctoral degree or seven years for the master's degree, whichever occurs first. Failure to do so will result in the degree not being awarded.



## Departments and Faculty

The Texas A&M Health Science Center Graduate School of Biomedical Sciences faculty consists of faculties from Baylor College of Dentistry, the College of Medicine, the Institute of Biosciences and Technology, and the School of Rural Public Health, as well as from other HSC components that participate in teaching, training and evaluation, and supervision of research and committee work related to graduate education in the HSC. There are approximately 175 full-time faculty members who hold appointments to the graduate faculty of the HSC-GSBS and/or the graduate faculty of Texas A&M University. In addition, more than 650 part-time and contract clinical science faculty members are available to participate in appropriate research and educational projects. Graduate faculty members are qualified as educators by their scholarly or creative work and their effectiveness in graduate education, and they represent diverse areas of scholarship that contribute knowledge to the biomedical sciences. Members must be appointees of the Texas A&M University System, the HSC or such other institutions as may be authorized by the Board of Regents.

The faculty conducts numerous research activities and programs. Faculty members serve as principal investigators and researchers in federal, state and private grants. For the period Sept. 1, 2005, through Aug. 31, 2006, research expenditures for the HSC totaled approximately $52 million. Collaborations exist between basic scientists and clinical scientists in the HSC and colleagues in the Texas A&M University System and numerous institutions and agencies throughout the world.

# Institute of Biosciences and Technology

# Institute of Biosciences and Technology

**2121 W. Holcombe Blvd.**
**Houston, Texas 77030-3303**
**713-677-7710**
**Fax: 713-677-7779**
**http://ibt.tamhsc.edu**

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## Administrative Structure

Robert J. Schwartz, Ph.D. Director

The Texas A&M Health Science Center Institute of Biosciences and Technology is composed of centers, each with a specific research focus and director: cancer biology and nutrition, environmental and genetic medicine, extracellular matrix biology, genome research, molecular development and disease, and structural biology.

Currently, the institute has 15 faculty located in Houston. Most have joint academic appointments in departments at Texas A&M University or other components of the HSC. These appointments include the departments of Animal Science, Biochemistry and Biophysics, Medical Biochemistry and Medical Genetics, Veterinary Anatomy and Public Health, Veterinary Physiology and Pharmacology, and Human Anatomy and Medical Neurobiology.

HSC-IBT faculty members are also full members of the Graduate School of Biomedical Sciences at The University of Texas at Houston Health Science Center. Some have appointments at Baylor College of Medicine, Rice University and the University of Houston.

## Director's Biography

Robert J. Schwartz, Ph.D., is director of the Texas A&M Health Science Center Institute of Biosciences and Technology, located in Houston in the Texas Medical Center. He also directs the recently established Center for Molecular Development and Diseases at HSC-IBT. Dr. Schwartz previously was at Baylor College of Medicine in Houston, where he served as a tenured professor in the departments of cell biology, molecular and cellular biology, medicine, and molecular physiology. He also was co-director of the Baylor College of Medicine Center for Cardiovascular Development and had a presidential endowment. During his more than 30 years at Baylor, Dr. Schwartz became widely recognized for his research on the developmental and genetic aspects of congenital heart disease. He studies the way in which genes that create the heart are first turned on and function and seeks to apply the knowledge of how the heart is normally made to generating new heart cells for diseased or damaged hearts. In this field, he has received seven U.S. patents and co-founded three companies. The research by Dr. Schwartz has been supported by numerous large, long-term grants. In October 2004, he - along with five other scientists who serve as principal investigators - received a $6 million, five-year grant from Foundation Leduq, based in Paris. This grant sets up a transatlantic effort to study ways to help damaged hearts repair themselves, using stem cells from bone marrow, bloodstream and adult heart tissue. In addition, he is in the 11th year of a $10-million program project grant from the National Institutes of Health to investigate genetic approaches to early cardiac development. Dr. Schwartz received his bachelor's degree from Brooklyn College and his Ph.D. from the University of Pennsylvania. After serving as a teaching fellow there and holding a postdoctoral fellowship, he joined the laboratory of Dr. Bert W. O'Malley in the Department of Cell Biology at Baylor College of Medicine as a research associate and rose steadily through the professorial ranks.

## Academic Calendar

Depending upon their individual programs of study, students at the Texas A&M Health Science Center Institute of Biosciences and Technology function under the academic calendars of HSC components such as Baylor College of Dentistry or the College of Medicine, Texas A&M University, or The University of Texas Medical School at Houston. Please see individual academic calendars for specific details.

## History

The plans for an Institute of Biosciences and Technology at the Texas Medical Center at Houston were developed by the leadership at Texas A&M University. The concept was endorsed in 1986 by The Texas A&M University System Board of Regents. A number of philanthropic organizations and individuals provided the financial base for the institute. In addition, the U.S. Department of Agriculture awarded Texas A&M University $12.5 million for the initial construction of the institute, which in 1992 was named the Albert B. Alkek Institute of Biosciences and Technology. The building was occupied in the winter of 1991-1992. On Jan. 1, 1999, IBT became a member of the Texas A&M Health Science Center.

## Mission

A part of the Texas A&M Health Science Center but located in Houston's Texas Medical Center, HSC-IBT encourages collaborative and interdisciplinary ventures that bring about synergies in biomedical science.

The HSC-IBT is dedicated to being a leader in biomedical research and biotechnology related to meeting the demands of society for a safe food supply with high health value and for developing technologies for the prevention and treatment of human and animal disease.

## Location

HSC-IBT centers are located in the Albert B. Alkek Building at the Texas Medical Center in Houston and in basic sciences departments on the College Station campus of Texas A&M University. Houston, the country's fourth largest city, boasts superb cultural assets, including world-class theater, symphony, opera and ballet. Outstanding restaurants reflect Houston's cultural and ethnic diversity. Houston supports major league baseball (Astros), football (Texans) and basketball (Rockets, Comets). Outdoor opportunities, many and varied across Texas, include cypress swamps, dramatic canyons, hill country, and high desert and mountains of Big Bend National Park.

## Facilities

The HSC-Institute of Biosciences and Technology is housed in a modern 11-story tower in the heart of the Texas Medical Center in Houston. The medical center includes 42 member institutions, all engaged in not-for-profit patient care, education and research. The major institutions are Baylor College of Medicine, The University of Texas M.D. Anderson Cancer Center and The University of Texas Health Science Center. Approximately 19,000 students and 10,000 faculty members are involved in courses ranging from the high school level through postdoctoral studies. The institute's location in the medical center thus provides an ideal environment for conducting research.

The HSC-IBT building has excellent facilities for telecommunications technologies and computing, modern research laboratories, an auditorium and conference rooms for lectures, seminars, symposia, etc. The fully accredited animal resources facility for mice, rats and rabbits serves as a transgenic facility and meets the requirements to fully protect all animals without actually being a barrier colony. A surgery room with a microscope, a micromanipulator and microinjection system mounted on a vibration-dampening table is reserved for transgenic animal work.

## Research Organization

The HSC-Institute of Biosciences and Technology conducts research at both its Houston location and on the College Station campus of Texas A&M University.

Research programs focus on bridging concerns between human health and animal disease and food production. The institute's research is organized by centers, each with its own research director. The institute's centers focus on cancer biology and nutrition, environmental and genetic medicine, inherited diseases, arthritis, bone diseases and structural biology. Emerging research areas will necessitate the development of new centers as the institute continues to grow.

Technology transfer encourages the commercial development of scientific discoveries. The practical application of technologies improves both human and animal health, while bringing in new sources of research support for the institute. Virtually all senior HSC-IBT faculty members have productive working relationships with biotechnology companies, several licensing agreements have been established based on institute research, and a new company has been incorporated.

## Economic Impact

The HSC-Institute of Biosciences and Technology represents an opportunity to assist in the economic diversification of Texas. Adding to the critical mass of scientists both at the institute and at the Texas Medical Center are researchers from many parts of Texas A&M University. Colleges at Texas A&M that are participating in programs at the institute include Agriculture and Life Sciences, Engineering, Liberal Arts, Medicine, Science and Veterinary Medicine. Such broad representation helps the institute serve as a catalyst to put Texas at the forefront in biotechnology. The institute's broad-based research is helping to improve economic diversity and the return from new Texas-based biotechnology businesses.

## Graduate Education

Graduate and postdoctoral education is conducted at the HSC-IBT as part of the HSC-Graduate School of Biomedical Sciences. HSC-IBT graduate students pursue a Ph.D. in the Medical Sciences program. Most institute faculty members have affiliations with departments in the HSC-College of Medicine or at Texas A&M University. Some also have adjunct appointments in departments at Baylor College of Medicine, The University of Texas at Houston Health Science Center and The University of Texas M.D. Anderson Cancer Center – all of which are also located in the Texas Medical Center.

For details of rules and requirements for the degree program, please see the HSC-GSBS section of this catalog.

## Graduate Education

### *Admission to the IBT Graduate Program*

Students applying to the HSC-IBT should have a strong undergraduate background in biology, biochemistry, chemistry, mathematics and/or molecular biology. Strong letters of recommendation indicating academic excellence, personal maturity, and exceptional motivation and interest in the experimental sciences are an important part of the application. HSC-IBT also requires GRE General Test scores.

Correspondence and requests for additional information should be addressed to:

Director of the Graduate Program
Institute of Biosciences and Technology
Texas A&M Health Science Center
2121 W. Holcombe Blvd.
Houston, Texas 77030-3303
(713) 677-7612
Fax: (713) 677-7414
Email: jbender@ibt.tamhsc.edu
http://www.ibt.tamhsc.edu/

### *Required Courses*

An individualized curriculum will be designed to ensure that each student acquires, within five years, the necessary theoretical background and appropriate knowledge and skills in biochemistry, molecular genetics and cell biology.

### *Residency*

Graduate students are expected to be in residence and are expected to devote most of their time and energy to graduate studies under the direction of a major professor and Advisory Committee.

### *Basis for Acceptance*

A combination of factors is considered for admission. These include undergraduate or graduate record, standardized Graduate Record Examination (GRE) test results, recommendations, experience and the applicant's academic interest.

### *Transfer Students*

Students with previous graduate experience can apply for graduate study with advanced standing at the HSC-IBT. Depending upon their level of advancement toward degree completion, various requirements may be waived.

### *Expenses*

Graduate students receive a stipend to support their living expenses. Tuition and fees totaling approximately $4,400 per year are required of all full-time graduate students at the Texas A&M Health Science Center. These are paid in full for the student by the institute. Full health benefits are available to graduate students. Please see the Introduction section of the catalog for more details.

### *Financial Assistance*

Fellowships are available. Additional information may be obtained from the assistant to the director for the graduate programs at the HSC-Institute of Biosciences and Technology.

### *Housing*

Affordable apartments are located near the Texas Medical Center, which is adjacent to a variety of excellent neighborhoods that offer excellent housing opportunities.

### *Scholarship*

*Review of Academic Progress (Satisfactory Academic Progress)*

Graduate students must maintain a GPA of 3.000 ("B" average based on a 4.000 scale) for all courses that are listed on the degree plan and for all graded and advanced undergraduate work eligible to be applied toward a graduate degree. Grades of "S" (satisfactory) or "U" (unsatisfactory) may be assigned in certain officially designated courses.

If either a student's cumulative GPA or the GPA for courses listed on the degree plan falls below the minimum 3.000, he or she will be considered to be scholastically deficient. If the minimum GPA is not attained in a reasonable length of time, the student may be dropped from graduate studies.

### *Requirements for Graduation*

Students must have successfully completed all course work on the degree plan, completed a research proposal approved by the Advisory Committee, passed a written and oral preliminary examination by the Advisory Committee, and successfully conducted independent research and presented this research in a dissertation approved by the Advisory Committee. The student also must successfully defend the research before the Advisory Committee.

Graduate degrees are conferred at the close of each regular semester and the entire summer semester. Candidates who expect to complete their work at the end of a given semester must apply for graduation by submitting the appropriate forms to the Texas A&M Health Science Center Graduate School of Biomedical Sciences and paying the required graduation fee no later than the dates designated on the HSC calendar.

The minimum time required to qualify for an advanced degree varies with the ability and preparation of the student. Students may find it necessary to extend their studies beyond the minimum requirements. For specific minimum residence requirements, students should check the degree program description for the degree they are pursuing.

The HSC-Institute of Biosciences and Technology offers a program of study leading to a Ph.D. in Medical Sciences through the HSC-IBT. An individualized curriculum is designed to ensure that each student acquires, within five years, the necessary theoretical background and appropriate knowledge and skills in biochemistry, molecular genetics and cell biology. Through frequent interactions with fellow students, postdoctoral fellows and faculty, graduate students learn to design and develop successful research programs in preparation for careers as independent researchers in universities, industry or other research environments. The development of the student is closely monitored during the course of the program.

A special feature of the graduate program at the HSC is an emphasis on broad-based instruction in medical sciences, as the faculty believes that the quality of teaching and research in medical sciences is highest in those programs that provide a strong, conceptual framework derived from a firm foundation of formal course work. Students who master this background in medical sciences are properly prepared to undertake programs of high-quality research.

Traditionally, master's and doctoral degrees in basic medical sciences have been awarded in clearly subdivided disciplines such as anatomy, biochemistry, physiology, microbiology and pharmacology. However, the boundaries separating these disciplines have become less distinct because of the development of integrated programs in medical education and because of the necessity for interdisciplinary collaboration in biomedical research. While the requirements of medical schools for faculty and for medical researchers increasingly include a broad base in medical sciences, most of the graduate programs in this area continue to emphasize education along fairly narrow, traditional departmental lines. The Graduate Program in Medical Sciences at the HSC, including HSC-IBT's program at Houston, is designed specifically to remedy this deficiency by bridging traditional disciplinary lines through both course work and research.

The HSC-College of Medicine and HSHC-GSBS also offer a combined M.D./Ph.D. program by allowing highly motivated medical students to enroll in graduate programs simultaneously with studies toward the M.D. degree. HSC-IBT may be selected by students who wish to pursue an M.D./Ph.D. program and conduct their research for the dissertation after completion of requirements for the M.D. degree. In addition, highly motivated and well-prepared physicians in residency training may enroll in the graduate program (coincident with their residency program) in order to pursue the Ph.D. degree. The Ph.D. program requires a minimum of 96 semester hours. This program combines the strengths of basic research and rigorous educational programs.

## *Curriculum and Course Descriptions*

Students of the HSC-Institute of Biosciences and Technology can take courses at the HSC-IBT, The University of Texas Health Science Center-Houston or the Baylor College of Medicine as directed by their respective graduate advisory committees, within the approved requirements for the Ph.D. in Medical Sciences.

# Irma Lerma Rangel College of Pharmacy

# Irma Lerma Rangel College of Pharmacy

1010 W. Avenue B–MSC 131
Kingsville, Texas 78363-8202
361-593-4271
Fax: 361-593-4233
http://pharmacy.tamhsc.edu



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## Administrative Structure

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|---|---|
| Indra K. Reddy | Dean and Professor of Pharmaceutical Sciences |
| Barry Bleidt | Associate Dean for Academic Affairs and Professor of Pharmaceutical Sciences |
| James Robertson, Jr. | Associate Dean for Student Affairs |

## Department Heads

| | |
|---|---|
| Mary L. Chavez | Chair and Professor of Clinical Pharmacy Practice |
| Anna Ratka | Chair and Professor of Pharmaceutical Sciences |

# Dean's Biography

Indra K. Reddy, Ph.D.
Dean, Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy

*Indra K. Reddy, Ph.D.* serves as the founding dean of the Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy in Kingsville, Texas. Prior to joining the Texas A&M University System in 2004, Dr. Reddy was professor and co-chair of pharmaceutical sciences and professor of ophthalmology at the University of Arkansas for Medical Sciences in Little Rock. He has also held the positions of professor of pharmaceutics at Texas Tech University Health Sciences Center in Amarillo and Pfizer Endowed Professor of Pharmaceutics at the University of Louisiana at Monroe, School of Pharmacy.

Dr. Reddy received his Ph.D. in Pharmaceutical Sciences from the College of Pharmacy at the University of Florida in Gainesville in 1989. He received his M.S. in Pharmaceutics from Sagar University in Sagar, India, in 1984, and his B.S. in Pharmacy from Kakatiya University in Warangal, India, in 1982. Following completion of his doctorate, Dr. Reddy received a post-doctoral fellowship to study at the Center for Drug Design and Delivery at the University of Florida in Gainesville.

In 2004, Dr. Reddy completed the Universities and Health-Related Institutions (UHRI) Senior Fellowship Program at the Texas Higher Education Coordinating Board in Austin. He also completed the Management Development Program of the Harvard Institutes for Higher Education in Cambridge, Mass., in summer 2005. Recently, Dr. Reddy was awarded a fellowship by the Food and Drug Administration, an opportunity that will allow him to interact with the FDA researchers in an advisory capacity.

Dr. Reddy has done innovative work in the areas of ophthalmic and transdermal drug design/development and delivery. He has authored/co-authored six textbooks; written 13 book chapters; edited two reference books; and published more than 100 research and review articles. Among the books are *Ocular Therapeutics and Drug Delivery: A Multi Disciplinary Approach*, *Pharmaceutical and Clinical Calculations*, and *Essential Math and Calculations for Pharmacy Technicians*. His most recent publication is a book co-edited with Dr. Reza Mehvar entitled *Chirality in Drug Design and Development*.

Dr. Reddy is the recipient of many awards and accolades for his teaching, research and service. He was named "Teacher of the Year" five times at three different universities. He received an excellence in research award from the American Association of Pharmaceutical Scientists (1988) and the University of Florida (1988). He was awarded the "CenturyTel Accent on Excellence Award" in Northeast Louisiana in 2000 and the "Outstanding Service Award" by the Texas Optometric Association in 2001.

Dr. Reddy presently serves on the editorial boards for four international pharmacy journals and as a reviewer for more than a dozen scientific/pharmacy journals. He holds membership in numerous professional organizations, among them the American Association of Colleges of Pharmacy, the American Association of Pharmaceutical Scientists and the Texas Optometric Association. He recently completed two terms as president of the Optometry Health Care Advisory Committee of the state of Texas.

Dr. Reddy's primary research interests include the design of novel ocular drugs and delivery systems; the development, preformulation and evaluation of controlled, targeted and site-specific chemical delivery systems; and the development of cell culture models as alternatives to animal testing. He is also interested in active, student-centered learning strategies and the assessment of learning outcomes.

## History

The Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy, located on the campus of Texas A&M University-Kingsville, was selected in response to the shortage of pharmacists in the border region. According to a report by the Texas Department of Health Education and the Texas Higher Education Coordinating Board, the Texas-Mexico border region has a population-to-pharmacist ratio of 1,770-to-1, which is 32 percent higher than the statewide ratio. The report concludes that the border's rapid population growth and difficulty in recruiting and retaining pharmacists, as well as the decrease in the number of pharmacy graduates in Texas during the last several years, have contributed to the pharmacist shortage in the border region.

The specific reasons for the creation of Doctor of Pharmacy (Pharm.D.) program are to increase representation in the pharmacy profession by the traditionally under-represented demographic groups of South Texas, provide the population of South Texas access to a high quality Pharm.D. program, support advanced research into pharmaceutical care issues pertinent to the South Texas region, enhance health outcomes, and expand the scope and depth of regional health care service activities.

## Mission Statement

The mission of the HSC-Rangel College of Pharmacy is to provide a comprehensive pharmacy education in a stimulating, learning-intensive, student-centered environment to prepare students for the practice of pharmacy as competent, caring, ethical professionals dedicated to the provision of optimal pharmaceutical care through a balanced program of education, research, service and patient care. As a state-supported institution, the HSC-Rangel College of Pharmacy has an obligation to enhance the quality of life of its constituents by utilizing its experts to expand the knowledge of pharmacy and pharmacotherapy. The HSC-COP values excellence in teaching, research and scholarship; drug therapy management; and public service. In order to achieve this mission, the HSC-COP will strive to do the following:

1. Apply innovative and proven educational strategies to produce pharmacists who possess the knowledge and skills required to serve their patients in an ethical and professional manner;
2. Conduct competitive basic, clinical, and social and administrative science research that translates into improved pharmacy education, pharmaceutical research, pharmaceutical care and public policy;
3. Foster research and service programs to discover and apply new knowledge;
4. Produce quality graduates, highly competent in dealing with the daily demands, challenges and rewards of contemporary pharmacy practice and well prepared to move forward with confidence, innovation and professionalism;
5. Disseminate information about medication use and misuse to the community; and
6. Serve as a catalyst to advance the practice of pharmacy in South Texas.

## Educational Objectives

The predominant educational objective of the HSC-COP is to prepare entry-level pharmacy practitioners with the essential abilities necessary to be competent professionals, as evidenced by the ability to pass the national licensing exam (NAPLEX) on the first attempt.

The required core competencies to be attained by Pharm.D. students can be grouped into the following categories:

- Communicating with Patients and Health Professionals
- Applying Basic Science to Practice
- Problem-Solving and Decision-Making
- Dispensing Pharmaceuticals
- Providing Pharmaceutical Care
- Performing Professionally and Ethically
- Managing and Supervising within Pharmacy Practice

Each of the above categories has specific learning objectives that each student will be expected to satisfy over his or her course of study.

## Location

The HSC-COP is located on the campus of Texas A&M University-Kingsville. The address is Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy; 1010 W. Avenue B - MSC 131; Kingsville, Texas 78363-8202. The website address is pharmacy.tamhsc.edu.

## Facilities

The HSC-COP represents a significant addition to the HSC, which has exhibited dynamic growth in recent years. The HSC-Rangel College of Pharmacy is a learning intensive, student-centered, ability-based, educational program.

During the fall of 2006, the HSC-COP enrolled approximately 70 students in the first pharmacy class. A new, state-of-the-art building provides a 63,000-square-foot area to support the HSC-COP's curricular and programmatic goals where students are the central focus. The faculty and staff are committed to the education, professional training and overall success of students by helping them develop the knowledge, skills and attitudes to be confident and caring pharmacy professionals in an ever-changing health care environment. The HSC-COP provides an atmosphere that fosters critical-thinking skills and promotes a learning style necessary for continuous professional education.

# Curriculum

*P1 Year*

| Fall Semester | Hours |
|---|---|
| PHAR 626 Human Physiology | 4 |
| PHAR 627 Biochemistry | 3 |
| PHAR 641 Pharmaceutical Calculations | 2 |
| PHAR 610 Principles of Drug Action I | 2 |
| PHAR 656 Health care Systems/Public Health | 2 |
| PHAR 672 Intro to Patient Care | 2 |
| PHAR 671 Clinical Communications | 2 |
| PHAR 605 IPPE I: Introductory Pharmacy Practice Experiences | 1 |
| PHAR 600 Dean's Hour | 0 |
| PHAR 601 Forum/Student Portfolios/Professional Development I | ==> |
| **Total Hours** | **18** |

| Spring Semester | Hours |
|---|---|
| PHAR 673 Self-Care and Integrative Medicine | 3 |
| PHAR 611 Principles of Drug Action II | 2 |
| PHAR 628 Research Methods/Biostatics | 2 |
| PHAR 658 Pharmacoepidemiology | 2 |
| PHAR 642 Pharmaceutics I (w/lab) | 4 |
| | |
| PHAR 657 Pharmacy Law and Ethics | 3 |
| PHAR 606 IPPE II: Introductory Pharmacy Practice Experiences | 1 |
| PHAR 600 Dean's Hour | 0 |
| PHAR 601 Forum/Student Portfolios/Professional Development I | 1 |
| **Total Hours** | **18** |

*P2 Year*

| Fall Semester | Hours |
|---|---|
| PHAR 726 Microbiology/Immunology | 3 |
| PHAR 741 Pharmaceutics II | 3 |
| PHAR 710 IPT I: Electrolytes, Acid-Base, and Nutrition | 2 |
| PHAR 711 IPT II: Cardiovascular Diseases | 4 |
| PHAR 776 Patient Assessment (w/lab) | 3 |
| PHAR 777 Sterile Products/IV Admixtures (w/lab) | 1 |
| PHAR 705 IPPE III: Introductory Pharmacy Practice Experiences | 1 |
| PHAR 714 IPT Recitation/Rounds I | 1 |
| PHAR 700 Dean's Hour | 0 |
| PHAR 701 Forum/Student Portfolios/Professional Development II | ==> |
| **Total Hours** | **18** |

| Spring Semester | Hours I* | Hours II* |
|---|---|---|
| PHAR 742 Basic Pharmacokinetics/Biopharmaceutics | 3 | 3 |
| PHAR 756 Pharmacy Management | 2 | 2 |
| PHAR 712 IPT III: Endocrinology and Metabolic Diseases | 3 | 3 |
| PHAR 713 IPT IV: Neurology and Pain Management | 3 | 3 |
| PHAR 778 Self-Care and Integrative Medicine | 3 | 3 |
| PHAR 715 IPT Recitation/Rounds II | 1 | 1 |
| PHAR 706 IPPE IV: Introductory Pharmacy Practice Experiences | 1 | 1 |
| PHAR 7XX Elective_ (Option I) | 0 | 2 |
| PHAR 700 Dean's Hour | 0 | 0 |
| PHAR 701 Forum/Student Portfolios/Professional Development II | 1 | 1 |
| **Total Hours** | **17** | **19** |

*Elective Options: Students may select from two options (I* or II*) for completing their elective course work. Option I involves taking two semester credit hours of elective course work in semesters 4, 5 and 6. Option II involves taking 3 semester credit hours of elective course work in semesters 5 and 6.

*P3 Year*

| Fall Semester | Hours I* | Hours II* |
|---|---|---|
| PHAR 841 Toxicology and Poison Management | 2 | 2 |
| PHAR 871 Pharmaceutical Care Lab - Dispensing | 2 | 2 |
| PHAR 810 IPT V: Psychiatry and Addiction | 3 | 3 |
| PHAR 811 IPT VI: GI, Herbals, Pulmonary, Rheumatic, and Misc. | 4 | 4 |
| PHAR 875 Clinical Pharmacokinetics (w/lab) | 3 | 3 |
| PHAR 814 IPT Recitation/Rounds III | 1 | 1 |
| PHAR 7XX Electives* (Option I and II) | 3 | 2 |
| PHAR 800 Dean's Hour | 0 | 0 |

| | | |
|---|---|---|
| PHAR 801 Forum/Student Portfolios/Professional Development III | ==> | ==> |
| **Total Hours** | **18** | **17** |

| Spring Semester | Hours I* | Hours II* |
|---|---|---|
| PHAR 872 Advanced Patient Care and Counseling | 2 | 2 |
| PHAR 842 Pharmacogenomics and Biotechnology | 3 | 3 |
| PHAR 812 IPT VII: Infectious Diseases | 5 | 5 |
| PHAR 813 IPT VIII: Oncology and Transplant | 2 | 2 |
| PHAR 856 Pharmacoeconomics | 2 | 2 |
| PHAR 815 IPT Recitation/Rounds IV | 1 | 1 |
| PHAR 7XX Electives* (Option I and II) | 3 | 2 |
| PHAR 800 Dean's Hour | 0 | 0 |
| PHAR 801 Forum/Student Portfolios/Professional Development III | 1 | 1 |
| **Total Hours** | **19** | **18** |

*Elective Options: See explanation under P2 Year course work.

*P4 Year*

| Summer | Hours | Fall Semester | Hours | Spring Semester | Hours |
|---|---|---|---|---|---|
| PHAR 8XX APPE I | 6 | PHAR 8XX APPE III | 6 | PHAR 8XX APPE V | 6 |
| PHAR 8XX APPE II | 6 | PHAR 8XX APPE IV | 6 | PHAR 8XX APPE VI | 6 |
| | | PHAR 804 Grand Rounds I/ Midpoint Reflections | 1 | PHAR 805 Grand Rounds II/ Capstone | 1 |
| **Total Hours** | **12** | **Total Hours** | **13** | **Total Hours** | **13** |

# Progression Policies and Procedures

The HSC-COP's curriculum is designed to be followed in a stepwise, building block fashion. Each year's courses and activities build on the previous semester's knowledge base and level of professionalism. Therefore, students must successfully complete all the courses with a grade of C or better in each academic year and maintain an acceptable level of professional growth before enrolling in courses for the subsequent year. In other words, the first professional year must be completed in its entirety before students can begin the second professional year and so on.

The HSC-Rangel College of Pharmacy has established policies and procedures to expedite the review of student academic and professional performance. It was designed to "automate" the process as much as possible. These policies inform students beforehand of the consequences when the HSC-COP's performance standards for academic and professional progression are not met. In most cases, failure to maintain good academic performance will result in action being taken by the Office of Academic Affairs without discussion or appeal. The Credentialing Committee will convene primarily to hear student appeals, per the grievance procedures outlined below.

## *General Rules and Guidelines*

The GPA in core courses is used as one of the bases for determining progression, probation and suspension in the program. Core courses include the required didactic and all experiential components of the curriculum. For any course repeated at the HSC-COP, both grades will remain on the transcript, but only the second grade will be used to compute GPA. Specific rules will be used to provide for the immediate and automatic intervention by the HSC-COP in cases where a student fails to progress academically or professionally in a satisfactory manner. Additionally, the associate dean for Academic Affairs and the Credentialing Committee may intervene at times other than specifically stated below if it is deemed necessary to ensure the academic integrity of the HSC-COP.

- Courses are only offered during the fall and spring semesters (except the first two APPEs), per the HSC-COP's policies. Therefore, courses may be retaken only when offered during the regular academic year.
- Student attendance is considered the cornerstone of professional behavior and is expected in all classes. A student accumulating unexcused absences from a class that exceeds the number of class semester credit hours may be dropped from the class, or the grade will be lowered by one letter grade for each additional unexcused absence.
- Experiential education activities and other off-site activities have a compulsory attendance requirement.
- A minimum grade of "C" is required to pass all pharmacy core courses and electives.
- It is the student's responsibility to ask to be withdrawn from a course in a timely manner according to HSC guidelines. Failure to seek counseling or guidance in factors that negatively impacts academic performance will not be accepted as an excuse to prevent the imposition of the appropriate academic penalty.
- It is important to seek counseling or guidance in a very timely manner from a faculty advisor or other administrative persons regarding a situation that may negatively impact upon academic performance.
- Students are required to keep abreast of HSC-COP course work activities by checking email daily. Students should also check bulletin boards, student mailboxes and postal mail at the address on record.
- Students are required to follow the dress code of the HSC-COP as an integral part of their education and professionalization.
- One of the requirements for progression from the P3 year to the APPEs is passing the P3 Annual Benchmark Assessment. Failure to pass this examination after the second attempt will delay enrollment in the APPEs. For more information, refer to the Annual Benchmark Assessment section of the Student Handbook.
- One of the requirements for progression from the P4 professional year to graduation is passing the P4 Annual Benchmark Assessment as part of the Pharmacy Capstone Course. Failure to pass this examination after the second attempt will result in a failing grade in Pharmacy Capstone Course and will delay graduation. For more information, refer to the Annual Benchmark Assessment section of the Student Handbook.
- Experiential education program sites (introductory and advanced) are primarily provided off-campus. Some of these sites may be located a significant distance from the HSC-COP. Students are responsible for their own transportation and housing to complete experiential assignments. Relocation to another assigned site may be necessary at times. Failure to arrive at a site because of transportation difficulties is not recognized as a valid excuse.

- The HSC-COP will NOT grant credit for any course taken without proper prerequisites or corequisites.
- The faculty of the HSC-COP reserves the right to revise the curriculum at any time to assure that students acquire the most current and relevant education possible. If curricular changes become necessary, every effort will be made to apprise students of the change and how it impacts their course of study. Assurance of well-prepared graduates will prevail as the dominant concern.
- Students enrolled in the HSC-COP must complete all required course work in its entirety, with grades awarded within six years from initial enrollment in the professional program, including remediation, withdrawals (medical or otherwise) and progression problems. The associate dean for Academic Affairs will withdraw a student from the professional degree program when it becomes apparent that that student will not be able to meet this time frame. Any appeals or exceptions to this policy may be considered by the dean on a case-by-case basis.
- Students will NOT be permitted to register in the professional program for any course, including IPPEs and APPEs, more than two times. Registrations include courses in the professional program in which grades of "D" and "F" are earned. Students who fail a course or whose grade fails to meet minimum grade requirements as specified by the HSC-COP are ineligible to continue in the professional program. Failure to complete any course within the established time limits will result in dismissal from the program.
- The HSC-COP will graduate only those students it deems ready to accept the moral, ethical and professional responsibilities of the practice of pharmacy and consequently reserves the right to withhold the recommendation for graduation of any student who does not conform to these standards.
- A student may be dismissed from the program, after due process, by reason of conduct unbecoming a student-pharmacist or pharmacist.

## *Academic Progression*

The academic standing of all students will be reviewed at the end of each semester by the associate dean for Academic Affairs. The HSC-COP has specific academic standards (e.g., minimum GPA requirements, satisfactory completion of assignments, etc.) that must be met in order to progress within the degree program. Students who fail to meet these standards will be notified, in writing, by the associate dean for Academic Affairs.

The Credentialing Committee will hear student appeals regarding academic progression as outlined below. The committee's decisions may be appealed to the associate dean of Academic Affairs and subsequently to the dean of the HSC-COP. All appeals must be in writing, following the proper grievance procedures, and submitted within 10 calendar days of the student dismissal letter being sent. Decisions by the dean of the HSC-COP regarding academic progression are final and not subject to further appeal.

In order to maintain academic progression within the degree program, students must:

- Earn at least a "C" in any core or elective course for which credit is applied;
- Earn an "S" in any experiential or elective course for which the S/U option is applied;
- Maintain a cumulative GPA of 2.30;
- Attend didactic, experiential and laboratory classes on time, dressed appropriately; and
- Pass the annual Comprehensive Benchmark Assessments.

## *Academic Alert*

Students will be monitored closely for academic progression. Faculty members are asked to file early-in-the-semester grade reports (e.g., within three weeks) with the associate dean for Academic Affairs for any student who is in possible jeopardy. Early grades will serve as one of the primary signals to initiate the PEA Network. Additionally, any course coordinator or faculty member is encouraged to discuss with the associate dean for Academic Affairs if they perceive a potential problem in his or her class.

A student is placed on Academic Alert when:

- Instructor(s) report early-in-the-semester grades at "C" level or below.
- A student's performance or attendance is below expected standards.
- A student indicates that he or she is having trouble with the rigors of the program.
- A student asks to be withdrawn from a core course.
- Formative grades during the semester are earned at the "C" level or below on a consistent basis (as monitored by the associate dean for Academic Affairs).
- A faculty advisor indicates unsatisfactory progression in one semester toward completion of the student research project.

A student receiving an early warning from a single course will be placed on Academic Alert and will receive a letter stating such, signed by the associate dean for Academic Affairs and copied to the faculty advisor. Each student placed on Academic Alert will be required (as stipulated in the letter) to meet with the associate dean for Academic Affairs within five (5) calendar days to develop a plan of action to correct deficiencies.

There are no appeals associated with Academic Alert. However, when a student believes that his or her grade(s) was calculated in error, he or she should first meet with the course coordinator to make sure that all errors are corrected in a timely manner.

Some of the options available to the PEA Network to help a student placed on Academic Alert are:

- Having peer or outside tutors made available;
- Offering additional "review sessions" from the professor(s);
- Forming student study groups;
- Referring students to the Office of Student Affairs for counseling assistance; or
- Considering other stipulations deemed appropriate that are aimed at encouraging and supporting student success.

## *Academic Probation*

Even the best laid plans and systems cannot prevent all academic problems. It is possible that a student will not be successful. In this case, a student will be placed on Academic Probation or Academic Dismissal. Each student's academic status will be reviewed at the end of each academic semester, and each student's cumulative GPA will be determined. A student will be placed on Academic Probation if ANY of the following situations occurs:

- Receives a "D" grade in any professional course in any semester.
- Receives the grade of U in any APPE.
- Earns a cumulative GPA less than 2.3 in any semester.
- Unable to move forward on completing the student research project.

A student placed on Academic Probation will receive a letter from the associate dean of Academic Affairs. This written notice of probationary status will also include a notice that failure to meet the required conditions stated in the document will result in the student's dismissal from the HSC-COP. When placed on Academic Probation, a student will be required to meet with the associate dean of Academic Affairs within twenty (20) calendar days (or sooner if possible) to develop and agree to, in writing, a Plan for Academic Progress. This plan may include a reduced course load, mandatory study/advising sessions, mandatory class

attendance, professional counseling to resolve tangential problems, placing the student on the "three-for-two track" (where it will take three years to finish the first two professional academic years), or other stipulations deemed appropriate that are aimed at encouraging and supporting student success. There is no appeal process associated with Academic Probation.

A copy of a student's Plan for Academic Progress will be forwarded to his or her faculty advisor and to the Credentialing Committee. The associate dean for Academic Affairs will monitor the student's compliance and progress. Updates will be provided to the Credentialing Committee by the Office of Academic Affairs. The student will be expected to adhere to the plan. At the conclusion of the timeline set in the student's Plan for Academic Progress, the student must have achieved satisfactory academic standing; failure to do so will result in academic dismissal.

Probationary status will generally remain in effect for at least the following two consecutive academic semesters or two APPEs. Upon completion of each academic semester or APPE, a student on academic probation will receive in writing, from the associate dean for Academic Affairs, a notice of his or her current standing. It is expected that students on probation make progress toward good academic standing at the conclusion of each academic semester. Academic Probation will be lifted when the terms of the student's Plan for Academic Progress have been completely met and no further alerts have been triggered. At the conclusion of the timeline set in the student's plan, the student must have achieved good academic standing; failure to do so will result in academic dismissal.



### *Academic Dismissal*

At the end of each semester, each student's academic status will be reviewed, and each student's semester and cumulative GPAs will be calculated. A student will automatically be dismissed from the HSC-COP when a student's semester GPA falls below 2.3 for two semesters or there was a failure to meet the terms of a prescribed Plan for Academic Progress. A student will also be dismissed from the HSC-COP if ANY of the following situations occurs:

- One grade of "F" in a core course.
- A total of two grades of a "D" in core courses (except repeating students).
- A second grade of "U" in an APPE.
- Unsatisfactory progression on student portfolio for a third semester.

A dismissed student will receive written notification from the dean of the HSC-COP. The notice will include procedures for appeal and notice of loss of registration, financial aid, university housing, etc. It is the student's responsibility to make arrangements with the Office of the Registrar to begin the formal withdrawal process in a timely manner. Dismissed students will be required to turn in any HSC-COP ID badges and vacate university residence halls, if applicable, and may lose email privileges. The HSC-COP will also notify the Texas State Board of Pharmacy regarding the dismissal of any professional student.

Automatic dismissals or dismissal decisions made by the Credentialing Committee may be appealed. All appeals must be submitted in writing to the chair of the Credentialing Committee by the stated deadline in the letter of dismissal.

### *Professional Progression*

In addition to its academic standards, the HSC-COP has high professional standards for its students. Each student is expected to meet these standards and grow as a professional while in the program. Students must communicate and treat fellow students, faculty, staff, preceptors, patients, other health care professionals and the public in a professional manner. Students shall pursue all academic and professional matters fairly and honestly. Students shall keep all confidential information confidential; a student will not divulge confidential and sensitive information.

The professional standing of all students will be reviewed at the end of each semester by the associate deans for Academic Affairs and Student Affairs. The HSC-COP has specific professional standards (e.g., dress code, professional association activities, etc.) that must be met in order to progress within the degree program. Students who fail to meet the professional standards as outlined below will be notified, in writing, by the associate dean for Academic Affairs.

In order to maintain professional progression within the degree program, students must each semester:

- Attend didactic, experiential and laboratory classes on time, dressed appropriately.
- Act in a manner becoming a student pharmacist or pharmacist.
- Earn an "S" in Forum, Professional Development and Student Portfolios sequence.
- Maintain satisfactory progress on the student portfolio.
- Turn in completed seminar forms for programs attended.

The Credentialing Committee will hear student appeals regarding professional progression as outlined below. Pertinent committee decisions may be appealed. All appeals must be in writing, following the proper grievance procedures described later in this document and submitted within 10 calendar days of the student dismissal letter being sent. Decisions by the HSC-COP's dean regarding professional progression are final and not subject to further appeal.

### *Professional Alert*

Students will be monitored closely for professional progression. Faculty members are asked to file early-in-the-semester reports concerning professional conduct and attitudes with the associate dean for Academic Affairs for any student who is not meeting the expected standards. Additionally, other course coordinators or faculty members may indicate that they perceive a potential problem in his or her class to the associate dean for Academic Affairs.

A student is placed on Professional Alert when:

- Instructor(s) or preceptor(s) report early-in-the-semester attendance or timeliness problems.
- A student's professional performance is below expected standards.
- Participation in professional activities is below expected standards.
- A faculty advisor indicates unsatisfactory progression in one semester on the student portfolio.
- An infraction of professional behavior is reported in writing and verified.
- A second dress code violation is reported in writing.

A student receiving an early warning from a single course will be placed on Professional Alert and will receive a letter stating such, signed by the associate dean for Academic Affairs and copied to the faculty advisor. Each student placed on Professional Alert will be required (as stipulated in the letter) to meet with the associate dean for Academic Affairs within five (5) calendar days to develop a plan of action to correct deficiencies.

There is no appeal process associated with Professional Alert. However, when a student believes that his or her attendance or actions have been recorded in error, he or she should meet with their faculty advisor to make sure that all errors are corrected in a timely manner.

### *Professional Probation*

Each student's professional status will be reviewed at the end of each academic semester. A student will be placed on Professional Probation if ANY of the following situations occurs:

- Continued tardiness to classes or co-curricular activities after being placed on Professional Alert.

- Continued absences from classes or co-curricular activities after being placed on Professional Alert.
- Failure to meet the dress code requirements (including white coats when required) for a third time.
- Disruptive behavior in class, during a professional activity or in the HSC-COP building.
- Unsatisfactory progression on student portfolio for a second semester.
- Unsatisfactory progression toward completing the student research project for a second semester.

A student placed on Professional Probation will receive a letter from the associate dean of Academic Affairs stating such. This written notice of probationary status will also include a notice that failure to meet the required conditions stated in the document will result in his or her dismissal from the HSC-COP. When placed on professional probation, a student will be required to meet with the associate dean of Academic Affairs within twenty (20) calendar days (or sooner if possible) to develop and agree to, in writing, a Professional Improvement Plan. This plan may include mandatory advising sessions, mandatory class attendance, professional counseling to resolve tangential problems, or other stipulations deemed appropriate that are aimed at encouraging and supporting student success. There is no appeal process associated with Professional Probation.

A copy of a student's Professional Improvement Plan will be forwarded to his or her faculty advisor and to the Credentialing Committee. The associate dean for Academic Affairs will monitor the student's compliance and progress. Updates will be provided to the Credentialing Committee by the Office of Academic Affairs. The student will be expected to adhere to the plan. At the conclusion of the timeline set in the student's Professional Improvement Plan, the student must have achieved good professional standing; failure to do so will result in professional dismissal.

### *Professional Dismissal*

A student may be dismissed from the HSC-COP if ANY of the following situations occurs:

- Failure to meet conditions set by deadline in Professional Improvement Plan.
- Excessive tardiness to classes or co-curricular activities after being placed on Professional Probation.
- Excessive absences from classes or co-curricular activities after being placed on Professional Probation.
- Continues to NOT meet the dress code requirements (including white coats when required) after being placed on Professional Probation.
- Disruptive behavior in class, during a professional activity or in the HSC-COP building.
- Unsatisfactory progression toward completing the student research project for a third semester.
- Divulging confidential or sensitive information.

A dismissed student will receive written notification from the dean of the HSC-COP. The notice will include procedures for appeal and notice of loss of registration, financial aid, university housing, etc. It is the student's responsibility to make arrangements with the HSC registrar to begin the formal withdrawal process in a timely manner. Dismissed students will be required to turn in any HSC-COP ID badges and vacate university residence halls, if applicable. The HSC-COP will also notify the Texas State Board of Pharmacy regarding the dismissal of any professional student.

Automatic dismissals or dismissal decisions made by the Credentialing Committee may be appealed. All appeals must be submitted in writing to the dean of the HSC-COP by the stated deadline in the letter of dismissal.

## Notification of Official Decisions Concerning Students

Official communications to students concerning HSC-COP matters may be sent to students by email, U.S. mail, HSC-COP mailboxes or hand delivered. Students are responsible for checking all the communication modes used by the HSC-COP on a daily basis. The associate dean for Student Affairs may bar students from continued enrollment or re-enrollment for failure to respond in a timely manner to official notifications. Dismissal letters will be sent by certified mail.

## Academic and Professional Grievance Standards and Grievance Procedures

Grievances specifically related to academic and professional standards shall be pursued in accordance with the following procedure. These steps must be followed in order. Students who skip stages will be referred back to the appropriate level.

**Start** - The associate dean of Academic Affairs alerts the student to a problem or issue.

| Problem/Issue | Action |
|---|---|
| Academic Alert | No appeal |
| Academic Probation | No appeal |
| Academic Dismissal | Appeal to Credentialing Committee |
| Professional Alert | No appeal |
| Professional Probation | No appeal |
| Professional Dismissal | Appeal to Credentialing Committee |
| Denial of Re-admission | Appeal to Credentialing Committee |

**Step 1** - Submit an appeal to the Credentialing Committee

a. Submit the appeal and supporting documentation to the committee chair by the required deadline.
b. Prepare a detailed written description of the grievance:
   - The grievance may ONLY contain new information that was not available at the time of dismissal, or
   - An error was found in calculating the student's grade.
c. Provide supporting evidence, if available or if needed.
d. Course coordinators, instructors and preceptors may be asked to provide information to the committee regarding the student's academic performance and/or professional behaviors and attitudes.
e. The student may be invited to the hearing and must speak for himself or herself. A student has a right to bring legal representation with advanced notice (at least seven days). In this case, the committee must also invite the HSC legal council.
f. The hearing is not bound by common law or statutory rules of evidence.
g. The Credentialing Committee will make its determination in closed session without the student or his/her legal representative present.

h. The Credentialing Committee shall prepare a written statement of its determination. A copy of this decision will be sent by certified mail (return receipt requested) to the student and copied to the associate dean for Academic Affairs.
i. If the problem or concern is not resolved, proceed to the next level of appeal.

**Step 2** - Appeal to the associate dean for Academic Affairs within ten (10) calendar days of the date of the postmark on the letter.
a. The student submits the original written statement of the grievance and supporting materials, if available, to the associate dean for Academic Affairs.
b. The student and any other individuals involved may be required to appear before the associate dean for Academic Affairs.
c. The associate dean for Academic Affairs will make his/her determination without the student or his/her legal representative present.
d. The associate dean for Academic Affairs shall prepare a written statement of her/his determination. A copy of this decision will be sent by certified mail (return receipt requested) to the student and copied to the Credentialing Committee.
e. If the problem or concern is not resolved, proceed to the next level of appeal.

**Step 3** - Appeal to the dean of the Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy within ten (10) calendar days of the date of the postmark on the letter.
a. The student submits the original written statement of the grievance and supporting materials, if available, to the dean.
b. The dean may schedule a meeting with the student at his/her discretion.
c. The dean shall prepare a written statement of her/his determination. A copy of this decision will be sent by certified mail (return receipt requested) to the student and copied to the Credentialing Committee and associate dean for Academic Affairs.
d. The dean's decision is final and binding.



# Expenses

## *Expenses for Pharmacy Students*

See Tuition and Fees section of this catalog.

## *Withdrawal from the College of Pharmacy*

Once payment for tuition and fees has been accepted by the HSC-COP, a student is considered officially registered unless the student is otherwise restricted from enrolling. Stopping payment on a check for fees or allowing the check to be returned unpaid by the bank for any reason does not constitute official withdrawal. Failure to follow procedures for withdrawing from HSC-COM may result in financial penalties and delays for future enrollment. Once a student registers, he/she is responsible for the total fees assessed regardless of whether an installment option is used. Refund percentages are applied to total fees assessed and not the amount paid. This means that students who withdraw before paying all installments may, in the event of withdrawal, receive a bill with a balance due rather than a refund.

## *Cash Needs*

It is recommended that students have a checking account to meet cash and other financial needs while attending the HSC-COP.

# Health and Mental Insurance

All Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy students are required to carry health insurance and mental health insurance for themselves and are strongly encouraged to carry health insurance for all legal dependents that meets or exceeds the minimum criteria set by the HSC-Rangel College of Pharmacy. Students who presume they are covered on their parents' policies are advised to confirm this information with their insurance carriers. Some policies automatically delete coverage for family members who reach a certain age, get married, or who no longer reside with parents or for other defined reasons stated in a policy. Knowing these conditions in advance will permit time to obtain coverage elsewhere. Under optimal conditions, even for a healthy individual, it may take a month or more to obtain required insurance coverage.

Students must submit a copy of the front and back of the card and copy of the health and mental health insurance policy Summary of Benefits document that indicates the name, policy number, and coverage limitations or specifics (i.e., deductible, co-payment and limitations). The Office of Student Affairs does not endorse any specific carrier.

The following benefits are strongly recommended to provide minimum coverage:

| Benefits | Coverage |
|---|---|
| Overall lifetime minimum (student and each dependent) | $1,000,000 for all causes and $25,000 for mental, psychoneurotic, personality disorders and chemical dependency |
| Hospital Bills | All customary hospital services and supplies ( >70%); maximum deductible of $500 |
| Clinical Bills | All customary clinic services, supplies and physician fees (>70%) |
| Other Possible Tests | Diagnostic x-ray, radiotherapy and lab; rehabilitation services, including physical/ speech/occupational therapy/home health care |

Students are strongly encouraged to purchase health and mental health insurance coverage in excess of the required minimum for several reasons, as students can become ill or injured and have bills that present an unexpected burden that preclude them from completing the professional HSC-COP.

Students must provide a copy of the front and back of their insurance cards and the cards of their dependents to the HSC-COP Office of Student Affairs, or they will not be allowed to register in and attend classes.

## Counseling Services

Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy students are allowed access to Life and Wellness Center services such as counseling, health center, career services, Students with Disability Service facilities, and other related activities or services. Students who have any questions about where to go for help or who need assistance in arranging counseling should contact the Office of Student Affairs.

## Off-Campus Activities

Whenever possible, students are encouraged to develop some outside interest or activity in addition to academic study. A well-balanced college career includes formal and informal extracurricular involvement, as well as classroom and laboratory work.

An already-established organization sponsored by the Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy is the Pre-Pharmacy Association. This organization is open to all majors attending the Texas A&M University-Kingsville campus. The club sponsors events that promote social involvement among students, including PCAT workshops, seminars that promote interest in and discussion of the pharmacy profession, and activities that aid scholastic achievement.

Another organization established in the HSC-Rangel College of Pharmacy is the Academy of Student Pharmacists (ASP). This is a professional organization for all students in the college generally viewed as representing the pharmacy student body. ASP is the national student organization of the largest pharmacy society in the United States, the American Pharmacists Association (APhA). ASP is an officially sanctioned academy within the structure of APhA. This ASP chapter is a member of Region VI, which encompasses all the colleges of pharmacy in Texas, Oklahoma, Louisiana, Missouri, Kansas and Arkansas. In addition, it is the student extension of the Texas Pharmacy Association and Coastal Bend Pharmacy Association. This professional organization allows pharmacy students to take an active role in professional activities at the regional, state and national levels.

After candidate and full accreditation status have been realized, a number of pharmacy student organizations are planned for establishment in the HSC-Rangel College of Pharmacy.

## Policies and Regulations

### *Student Handbook*

The Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy Student Handbook is intended to welcome new students to the HSC-Rangel College of Pharmacy and serve as a source of information for all students throughout their enrollment regarding major policies and procedures within the HSC-COP. It informs students of the HSC-COP mission and philosophy and defines the rules that guide its actions. The provisions of the Student Handbook do not constitute a contract, expressed or implied, between any applicant, student or faculty member and the Texas A&M University System. Students are provided a copy of the handbook and are asked to cooperate by becoming familiar with its contents.

Faculty and students form a partnership, working together in a structured program with the common goal of educating a competent, responsible and caring pharmacist. Thus, the handbook contains guidelines for making this partnership optimally beneficial to both student and faculty in an effort to provide a learning environment to learn, grow and reach future pharmacists' maximum potential.

## Scholarship

### *Professionalism*

Students entering a formal medical education program are expected to uphold and adhere to the ethical and behavioral standards of the profession of pharmacy. The development and maintenance of a professional attitude is an ongoing responsibility of each student. Evaluation of professional behavior is an integral part of the curriculum, and it will be a factor in assigning grades and determining promotion, retention or dismissal.

## Requirements for Graduation

All Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy students are required to participate in the graduation ceremony and related activities.

# School of Rural Public Health

# School of Rural Public Health

**282 SRPH Administration Building**
**College Station, Texas 77843-1266**
**979-845-2387**
**Fax: 979-862-8371**
**http://srph.tamhsc.edu**

## Table of Contents

# Administrative Structure

## *Dean's Office*

| | |
|---|---|
| Ciro V. Sumaya, M.D., M.P.H.T.M. | Dean and Cox Endowed Chair |
| Craig H. Blakely, Ph.D., M.P.H. | Associate Dean for Academic Affairs and Assistant Dean for Research |
| Antonio A. Rene, Ph.D. | Assistant Dean for Academic Affairs |
| Kyle D. Foster | Director of Student Affairs |
| Rae L. Mitchell | Director of Communications |
| Barbara J. Quiram, Ph.D. | Director of Special Programs |
| John Zamora | Senior Academic Business Administrator |

## *Department Heads*

| | |
|---|---|
| Larry D. Gamm, Ph.D. | Head, Health Policy and Management |
| Brian Colwell, Ph.D. | Head, Social and Behavioral Health |
| Dennis M. Gorman, Ph.D. | (Interim) Head, Epidemiology and Biostatistics |
| Kirby C. Donnelly, Ph.D. | Head, Environmental and Occupational Health |

## *Center & Program Directors*

| | |
|---|---|
| James N. Burdine, Dr.P.H. | Director, Community Health Development Program |
| Larry D. Gamm, Ph.D. | Director, Southwest Rural Health Research Center |
| Marcia G. Ory, Ph.D., M.P.H. | Director, Active for Life™ National Program Office; Director, Aging and Health Promotion Program; Director, Health Maintenance Consortium Research Center |
| Charles D. Phillips, Ph.D., M.P.H. | Director, Health Services Research Program |
| Catherine Hawes, Ph.D. | Director, Program on Aging and Long-Term Care Policy |
| Joseph R. Sharkey, Ph.D., M.P.H. | Director, Texas Health Aging Network Research Center |

# Dean's Biography

Ciro V. Sumaya, M.D., M.P.H.T.M.
Dean, School of Rural Public Health

A native of Brownsville, Texas, *Dr. Ciro V. Sumaya* is founding dean of the Texas A&M Health Science Center School of Rural Public Health and holder of the Cox Endowed Chair in Medicine. Previously, Dr. Sumaya was a presidential appointee at the U.S. Department of Health and Human Services, serving as administrator of the Health Resources and Services Administration and subsequently as deputy assistant secretary for health, spearheading the federal Initiative on the Future of Academic Health Centers.

Dr. Sumaya has served as associate medical dean at The University of Texas Health Science Center at San Antonio and has held academic positions at the UCLA School of Medicine. His research and publications have focused on pediatric viral infections and national health policy issues.

He received a Bachelor of Arts degree with high honors and graduated as a member of Phi Beta Kappa from The University of Texas at Austin. His Doctor of Medicine degree was obtained from The University of Texas Medical Branch in Galveston. He also earned a master's degree in public health and tropical medicine from Tulane University School of Public Health.

## History

The Texas A&M Health Science Center School of Rural Public Health is the first of its kind in the nation. The Texas Legislature established the school in 1995 as part of a rural health initiative to better address rural health needs in the state. After receiving degree-granting authority for the Master of Public Health degree in April 1998 from the Texas Higher Education Coordinating Board, the HSC-School of Rural Public Health welcomed its inaugural class in September 1998. In January 1999, the HSC was formed as a separate academic institution within the Texas A&M University System.

While still a classic school of public health, the HSC-SRPH concentrates on the health needs of traditionally underserved and rural areas. Consistent with its mission, the school offers its Master of Public Health degree program to a variety of communities across Texas, including communities in Central Texas, East Texas, the Coastal Bend region, and in the Rio Grande Valley. By 2001, the school had been added to the elite list of 31 accredited schools of public health by the Council on Education for Public Health, the sole accrediting body for public health academic programs and institutions.

The school currently offers three master's degree programs: a Master of Public Health (M.P.H.), with concentrations in biostatistics, environmental and occupational health, epidemiology, health policy and management, social and behavioral health, community public health and management, and occupational safety and health; a Master of Health Administration (M.H.A.); and a Master of Science in Public Health (M.S.P.H.), with concentrations in biostatistics, environmental and occupational health, epidemiology, health policy and management, occupational safety and health, and social and behavioral health. All M.P.H. and M.H.A. students spend a semester equivalent working in a rural public health setting as a part of a requisite practicum. M.S.P.H. students complete an original research project as a part of a required thesis.

The school also offers two doctoral degree programs: a Doctor of Philosophy degree (Ph.D.) in health services research, and a Doctor of Public Health (Dr.P.H.) with a concentration in social and behavioral health and epidemiology.

## Focus of the School of Rural Public Health

### *Mission Statement*

The mission of the Texas A&M Health Science Center School of Rural Public Health is to improve the health of communities, with emphasis on rural and underserved populations, through education, research, service, outreach and creative partnerships.

### *Vision*

The HSC-SRPH promotes healthy communities and environments through collaboration with communities, organizations, other academic institutions, professionals and citizens; strengthens the capacity of health professionals to enhance the health of the public through consultation, skill development and education; pursues high-quality basic and applied research to strengthen public health knowledge and interventions; and supports the provision of public health and health services.

### *Institutional Objectives*

The mission of the school will be realized only by attainment of the following goals through well-planned and coordinated programs:

- To recruit, train and retain a diverse student body;
- To develop and implement a curriculum that emphasizes competencies for working with rural, diverse and underserved populations;
- To strengthen students' interest in and commitment to working with rural, underserved and diverse populations;
- To provide continuing educational opportunities for public health and health services professionals to meet the needs of rural communities and other underserved populations;
- To foster research activities that are consistent with the mission and vision of the school and represent interdisciplinary and multi-method approaches; and
- To identify, establish and develop ongoing research, teaching and service programs within select rural Texas communities.

The interdisciplinary faculty of the HSC-SRPH has developed a curriculum that provides students with the fundamental principles of public health, the skills of critical judgment based on evidence and experience, and the ability to use principles and skills wisely in solving problems of disease- or injury-prevention. The faculty keeps current with advances in the basic and social sciences and incorporates those into the courses, and fosters in students the ability to learn through self-directed, independent study throughout their professional lives.

## Location

The HSC-School of Rural Public Health's administration and faculty are located in a new state-of-the-art, three-building complex in College Station, adjacent to the Texas A&M University west campus. Classrooms are fully equipped with videoconferencing technology to support the school's innovative distance education program.

## Computing Resources

The HSC-School of Rural Public Health maintains a computer lab for students attending classes in College Station. This lab houses computers, printers, document scanners and CD read/write capabilities. There are also several locations on the Texas A&M University campus that provide computing resources for students. All students have access to the microcomputing laboratory in the Medical Sciences Library, the Learning Resources Department at Evans Library and more than 20 computing labs and help desks on the main Texas A&M University campus and on the west campus. Texas A&M University's computing facilities are among the best of any educational institution in the nation. Computing resources are available for students attending classes through the distance education program as well on location. Distance education students are encouraged to contact the local distance education liaison, or the director of the school's distance education program, with any questions regarding availability and location of computer resources.

## Student Counseling Services

All currently enrolled students of the HSC-cSchool of Rural Public Health are eligible for counseling from Texas A&M University Student Counseling Services. Student Counseling Services is located in Room 104 of Henderson Hall on the main A&M campus. Appointments are available by calling (979) 845-4427. No appointment is needed for emergency psychological services.

## Residency

A major purpose of the residence requirement for graduate study is to provide the student with the advantages of the university environment. These activities include, among others, access to the libraries, laboratory experiences, seminars and colloquia presented by faculty and other professionals, and numerous cultural events.

Students are considered to be "in residence" if they are engaged in graduate study while physically present in College Station, or are attending one of the distance education campuses, and are under the direction of the student's major adviser. For specific residency requirements, students should contact the Office of Student Affairs.

## Policies and Regulations

### *Special Accommodations*

If a student requires special accommodation to complete the program, the accommodation must be specifically stated in writing. Further, the student must submit written verification of disability and recommendations for accommodation. Such verification must be mailed from an appropriate professional to the director of Student Affairs.

1. If the student meets the technical standards for accommodations, the director of Student Affairs forwards verification to the associate dean for Academic Affairs and the dean regarding the accommodation to be provided to the student. A copy of the written notification will be provided to the student.
2. If at any time the student desires any change in accommodation, either deletion or addition of accommodation, the student must present that request in writing to the director of Student Affairs. The individual(s) who prescribed the initial conditions for accommodation will rule on the request and will notify the student, the Office of Academic Affairs and the dean of any change.
3. If the student disagrees with the decision and recommended accommodations, the student may appeal in writing to the dean of the Texas A&M Health Science Center School of Rural Public Health. Bases for appeal will include:
   a) Due process was not followed.
   b) A policy or procedural error was committed that adversely affected the evaluation.
   c) The information considered by the committee was not sufficient to justify the decision of the committee.
4. The director of Student Affairs will notify the associate dean of academic affairs to convene the HSC-SRPH Academic Appeals Panel to review the written petition. Members of the Appeals Panel may request additional information from the student, the initial evaluation committee or other reasonable expertise necessary in arriving at a decision and will make a recommendation to the dean.
5. At the appeals hearing, the student may choose to be accompanied by legal counsel, in which case HSC counsel will attend the Appeals Panel hearing. If the student chooses to be accompanied by legal counsel, the student must notify the director of Student Affairs at least five days in advance of the hearing. The attorneys will act in an advisory capacity only and may not address the committee.

Upon receipt of the recommendation of the committee, the dean will make a final decision and will so notify in writing all relevant parties. This step exhausts the student's appeal options.

## Degree Program Policies

### *Advanced Placement for M.P.H. Students*

Students who hold an advanced degree from an accredited university are eligible for advanced placement in the M.P.H. program (advanced placement is not available within the M.S.P.H. or M.H.A. degree programs). The assumption of advanced placement is that students may be exempted from up to nine credit hours of electives if they already hold an advanced degree relevant to the area of study. Recommendations for advanced placement may range from three to nine hours. Since advanced placement may only be used to exempt students from elective hours, students may only substitute, not waive, required courses. Thus, the minimum number of hours required for the M.P.H. degree for those students with advanced degrees is 36 semester hours.

Post-baccalaureate students enrolled in a degree-seeking program at the Texas A&M Health Science Center School of Rural Public Health must register for a minimum of two semesters. Only under extenuating circumstances will a student receive permission to graduate having registered for less than two semesters. In addition, students must meet the residency requirement in place where a majority of the courses for a degree must be completed at the HSC-SRPH.

### *Time Limits*

In accordance with Texas A&M University System policy, all degree requirements must be completed within seven consecutive years for a degree to be granted. Credit for course work that is more than seven calendar years old at the time of the final culminating experience (oral or written) may not be used to satisfy any degree requirements.

## Student Performance Policies

### *Rules*

The student's semester grade shall be based upon the grading policies, procedures and criteria stated in the course syllabus distributed at the beginning of the semester by the course instructor. The syllabus shall include the basis for calculation of grades, including weights as applicable for tests, laboratory assignments, field study work, projects, papers, homework, class attendance and participation and other graded activities. No such procedures or criteria should be in contradiction to other provisions of HSC-School of Rural Public Health procedures.

### *Appeal Policy*

Students are expected to attempt to resolve any concerns or disputes about a specific grade awarded in a particular class with the instructor. If the dispute cannot be resolved in this manner, the student may formally appeal the grade. Appeals will be heard when the student alleges that an arbitrary, capricious or prejudiced evaluation occurred. Formal appeals must be related to concerns over grading procedures within a specific course, not regarding general departmental or HSC-School of Rural Public Health degree program requirements. Similar procedures to those outlined below are followed in cases of allegations of academic dishonesty or behavioral misconduct.

### *Unsatisfactory Grades (D or F)*

Receiving either a "D" or an "F" in a graduate course is viewed as unsatisfactory for graduate students. Students are required to receive a "C" or better on all courses on their official degree plan with a cumulative GPA of at least 3.0. Students receiving either a "D" or an "F" on a required course will be required to retake the course in its entirety. Although the student will be required to achieve a minimum of a "C" on all courses on the official degree plan, all grades received are recorded on the official transcript. The most recent course grade will be used in calculating the official degree plan GPA. A student must have a GPA of 3.0 or higher in order to graduate.

### *Awarding of Incomplete Grades*

A temporary grade of "I" (incomplete) at the end of the semester or summer term indicates that the student has completed a majority of the course with the exception of an examination or other assignment. A request for an "I" grade should be student-initiated; however, if appropriate the request may be initiated by the instructor on the student's behalf. The instructor should only give this grade when the deficiency is due to an authorized absence or other cause beyond the student's control. If the incomplete work is not completed by the specified deadline, or if the student enrolls in the course again, the incomplete grade will be change automatically to an "F" on the student's transcript.

### *Academic Probation for Master's Students*

If a student's overall GPA falls below a 3.0 any given semester, the student will automatically be placed on probation. The student will be required to raise his or her GPA to 3.0 within one semester unless the department head and the associate dean for Academic Affairs approve an alternative plan. A student unable to raise his/her GPA above 3.0 within the specified time may be removed from the program. Likewise, students entering the program under probation will not be allowed to continue in the program if unable to meet the terms of his or her probation (i.e., achieving a 3.0 GPA in their first 9-12 credit hours of specified course work; refer to Admissions Policy for Low GPA Master's Students in the Admissions section of this catalog).

### *Academic Probation for Doctoral Students*

If a student's overall GPA falls below a 3.0 any given semester the student, will automatically be placed on probation. The student will be required to raise his or her overall GPA to a 3.0 within one semester unless the department head and the associate dean for Academic Affairs approve an alternative plan. A student unable to raise his/her GPA above 3.0 within the specified time may be removed from the program. Likewise, students entering the program under probation will not be allowed to continue in the program if unable to meet the terms of their probation (i.e., achieving a 3.0 GPA in their first 9–18 semester credit hours of specified course work. Following the annual review of all doctoral students, any student placed (or remaining) on academic probation, or who is experiencing other difficulties in the program, will receive a statement from the chair of his/her Student Advisory Committee (SAC) regarding the nature of the problematic condition(s) and actions required of the student to rectify the difficulties. A copy of this statement will be forwarded to the chair of the Department Doctoral Committee ()DDC and to the associate dean for Academic Affairs.

### *Academic Dismissal*

The department may recommend dismissal of a student to the dean. The dean may accept or reject the recommendation. If a student demonstrates academic or personal irresponsibility or unprofessional behavior, or is unable to successfully meet the probation criteria provided, he/she may be considered for dismissal.

### *Academic Dishonesty*

Academic integrity is the pursuit of scholarly activity free from fraud and deception, and it is an educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Individuals found guilty of academic dishonesty may be dismissed, suspended or expelled from the degree program. It is the student's responsibility to have a clear understanding of how to reference other individuals' work, as well as having a clear understanding in general as to the various aspects of academic dishonesty.

Any student accused of a specific act stated in the previous paragraph is subject to the Texas A&M Health Science Center's and the HSC-School of Rural Public Health's academic policies and procedures pertaining to violations of the student code of conduct for academic integrity.

### *Student Reinstatement*

A student who has not been enrolled in the HSC-School of Rural Public Health due to an unapproved leave of absence or withdrawal that has extended beyond one calendar year (12 months) from the initiation of the withdrawal or leave of absence must reapply to the HSC-SRPH to be considered for enrollment. Students must meet all the application criteria and posted deadlines, with the exception of the application fee and new letters of recommendation to be considered for reinstatement. This includes original transcripts if further education occurred during the absence. Application for reinstatement does not guarantee admission.

### *Student Misconduct*

#### *Disruption in the Classroom*

Students are to demonstrate professional conduct at all times. Among other things, this means respecting the diverse points of view and personal differences presented by other students. Any student who presents a disruption to classroom or laboratory sessions may be placed on probation or dismissed from the program. The term "classroom disruption" means behavior that a reasonable person would view as substantially or repeatedly interfering with the conduct of a class.

#### *Substance Abuse Policy*

Illegal drug use is incompatible with the ideals and values of public health. Any student found to be manufacturing, distributing, in possession of or using illegal drugs or alcohol on Texas A&M Health Science Center and/or Texas A&M University property may be subject to dismissal. Alcohol consumption on HSC or Texas A&M University property is not permitted, except in designated areas. The HSC and HSC-SRPH are committed to maintaining an environment that is free from substance abuse, as well as complying with state and federal law.

#### *Procedures for Academic Dishonesty and Student Misconduct*

1. The instructor of the class is the primary authority with respect to a student's proficiency and final grade in that course. Therefore, the student must first present grade disputes directly to the instructor for resolution. In cases of academic dishonesty or student misbehavior, the instructor has the right to either attempt to resolve it directly with the student or forward all related materials to the department head for review.

2. If no satisfactory resolution is reached with the instructor, and the student wishes to appeal, an evidence-based grade appeal must be initiated in writing with the instructor's department head and copied to the course instructor within 30 days (one month) of the last day of the semester or summer session in which the disputed grade was earned. The department head will examine the student's appeal in order to determine if the student has provided sufficient evidence of capricious, arbitrary or prejudiced academic evaluation. If sufficient information is not provided in the department head's estimation, the student and instructor will be notified within five business days that the appeal was denied.
3. If the department head believes there to be sufficient evidence, he or she is charged with investigating further the student's concerns and identifying a justifiable response to the concerns. The department head will secure statements or other information deemed helpful. Once sufficient information is gathered, the department head will inform both the student and instructor involved of his or her findings and remediation, if any. The department head should be guided by the principle that the burden is on the student to show that a capricious, arbitrary or prejudiced academic evaluation has occurred.
4. Either or both student and instructor may appeal the department head's decision (with respect to findings and/or remedial actions) to the associate dean for Academic Affairs. The individual wishing to appeal the decision must notify the associate dean for Academic Affairs in writing of his/her desire to appeal the decision (or action) within 10 business days of receiving written notice of any final action taken by the department head. The associate dean for Academic Affairs shall inform the student (if the appeal is filed by the instructor), the instructor (if appeal filed by the student), the student's faculty advisor (or chair of the student's Advisory Committee if a doctoral student), both the student's and instructor's department head(s), and the dean that a formal appeal related to a grade dispute has been filed.
5. The associate dean for Academic Affairs will be responsible for gathering all relevant information (including all information previously reviewed by the department head and the department head's recommendation) and any additional information deemed relevant. The associate dean for Academic Affairs will convene the Academic Appeals Panel to review the information and make a recommendation to the dean. An Academic Appeals Panel is also convened by the associate dean for Academic Affairs in cases of academic dishonesty or behavioral misconduct. In such cases, recommendations are forwarded by the appeals panel through the associate dean for Academic Affairs to the dean for review and final action.
6. The findings and recommendation of the Academic Appeals Panel will be forwarded by the associate dean for Academic Affairs to the student, the instructor, the relevant department head(s) and the dean. If either the student or instructor wishes to contest the recommendation, they must do so in writing within five business days of receipt of the Academic Appeal Panel's recommendation to the associate dean for academic affairs. Any additional information provided by either the student or instructor will be forwarded to the dean for consideration during the final review process.
7. The dean has the ultimate authority and responsibility for all internal matters regarding the School. Within 10 business days after receiving the recommendation (and all related materials) from the Academic Appeals Panel, the dean shall make a decision upholding, rejecting or modifying the recommendation. All parties will be notified by the associate dean for Academic Affairs in writing of the decision with a copy to be included in the Appeal Summary File (maintained in the Office of Academic Affairs). The dean's decision is final.

## Student Funding Policies

### *Assistantships*

The purpose of student assistantships is to provide financial assistance to recruit and retain outstanding or deserving students. Recruitment and selection of students for assistantships for externally funded research projects is at the discretion of the principal investigator or designated faculty member. Recruitment and selection of students for assistantships funded using state funds shall be the responsibility of the associate dean for Academic Affairs, in consultation with the dean and department heads. Recruitment for state funded assistantships will not proceed until written notification of the number of available assistantships is provided to department heads by the associate dean for Academic Affairs in consultation with the senior administrator for Business Affairs.

In order to be considered for a research or teaching assistantship within the HSC-School of Rural Public Health, a student must be enrolled half time (i.e., five semester credit hours for fall/spring semester; two semester credit hours for summer session) during the academic term in which they are recipients. Students receiving an assistantship must maintain a 3.0 GPA, must maintain half-time enrollment, and must be making satisfactory progress towards completing their degree. Students on full assistantships are expected to work 20 hours per week. It is the responsibility of the faculty member(s) to whom the student is assigned to mentor the student, assign or develop tasks, and supervise their activities.

### *Scholarships*

A limited number of competitive scholarships are available each year. The award of such scholarships is based upon criteria including but not limited to academic qualifications, need, scholarship, expressed interest in a particular facet of public health or health services, as well as additional requirements set forth by each scholarship. All new applicants, once reviewed and accepted into a degree program, are considered for these scholarships. Students must submit a completed application form by published deadlines to the HSC-SRPH Student Affairs Scholarship Subcommittee for consideration.

## Culminating Experience and Graduation Policies for Master's Degree Programs

### *Degree Plan for Master's Degree Programs*

To be eligible for graduation, a student must complete the degree requirements listed in his/her official degree plan. The degree plan is developed using the program requirements defined in this catalog (or as modified after consultation with his/her adviser) for the student's area of study. A student must file a degree plan in the Office of Student Affairs during his or her first semester of course work, with a final version of the degree plan filed by the last day of the semester prior to the student's semester of graduation. Forms for the degree plan are available from the student's academic adviser. Changes in the degree plan must be approved by the student, his/her academic adviser, the department head and the associate dean for Academic Affairs.

### *Master's Practicum for M.P.H. and M.H.A. Students*

Students in both the M.P.H. and M.H.A. degree programs are required to complete a practicum experience. This will generally be an off-campus assignment working with a qualified preceptor in the student's field of study. All practicum placements must be approved by the student's department, the school's practicum coordinator and the host agency before placement is finalized. A request for approval must be initiated at least one semester prior to the placement. Students will work with their academic advisers and the practicum coordinator to arrange their practicum experience. Specific guidelines and information on possible practicum sites are available at www.srph.tamhsc.edu or from the practicum coordinator.

## Culminating Experience and Graduation Policies for Master's Degree Programs

### *Comprehensive Examination for the M.P.H. Degree Program*

All M.P.H. students are required to take and pass an individual comprehensive exam. To be eligible to take the comprehensive examination students must have 1) completed all required core courses; or 2) completed a minimum of five of the six required courses and be currently enrolled in the sixth course and have written permission from the student's department head. Students must have at least an overall 3.0 GPA and no grades below a "C" on any course on their degree plan in order to be eligible to take the comprehensive examination. Students must apply and be cleared by the Office of Student Affairs, the Office of Academic Affairs and the Texas A&M Health Science Center Office of the Registrar to take the comprehensive exam.

The goal of the exam is to test the student's competency in their concentration discipline, as well as their ability to integrate knowledge of the other core disciplines in public health. The exam is problem-based and employs either a case study or a current issue in public health to test students' abilities.

In the case of unsatisfactory responses on any portion of the written comprehensive examination, an oral exam will be scheduled within 10 business days of the student being notified of the results of their initial written exam. The oral exam may cover additional topics related to the core or concentration area(s) deemed deficient in the written examination. In the event the student fails to demonstrate sufficient mastery of the material during the oral examination, a second and final written examination will be administered no sooner than during the next academic session and no later than one calendar year from notification of not passing the oral examination.

Thus, a student will be given a maximum of three (3) attempts (the first written exam, an oral exam if deemed necessary, and a final written exam if deemed necessary) to demonstrate sufficient mastery of the core and concentration areas. A degree will not be granted to any student not achieving a satisfactory rating in each core area and in the student's concentration area. The Office of Academic Affairs will be responsible for forwarding a listing of students achieving satisfactory mastery of the comprehensive exams to the to the individual student and the HSC registar's office.

### *M.H.A. Culminating Experience*

The M.H.A. culminating integrative experience in health management and the core areas of public health is met through successful completion of the M.H.A. Capstone course, PHPM 680: Health Systems Leadership. This course requires substantive project work and/or case study analysis that builds upon the comprehensive array of courses and fieldwork students have experienced.

The Capstone course requires integration of knowledge in health policy and management by analysis of readings, project activities and/or case studies. At least one component will call for the integration of knowledge from the other public health core disciplines with health management. With respect to the latter component, the PHPM 680 instructor(s) will invite input from faculty in the other core areas in the design and evaluation of student performance of this particular integrative segment following the model outlined in the comprehensive exam procedures (see above). This component of the integrative experience will require the analysis of an appropriate case study, the development of a strategy and/or the performance of a similarly demanding task to address health management problem(s) accompanied by information related to the public health core disciplines.

### *M.S.P.H. Degree Program Master's Thesis*

All students enrolled in the M.S.P.H. degree program will be required to complete a minimum of three hours of thesis research credit. A thesis proposal must be reviewed and approved by a three-member Graduate Committee (consisting of at least two faculty members from the student's department and one faculty member from outside the department) at least one semester prior to the student's intended graduation.

The thesis proposal meeting will comprise both an oral defense of the thesis proposal as well as an oral comprehensive examination assessing the student's general mastery of concentration-area material. The research thesis or thesis manuscript will be prepared in an appropriate format as prescribed by the school and consistent with HSC graduate school requirements. The content will include a review of pertinent literature, description of methods used, presentation and analysis of the data, and discussion of results and conclusions of the study.

The M.S.P.H. student's thesis defense will comprise a presentation of the thesis project open to interested students and faculty followed by a defense of the project open only to the members of the student's Graduate Committee. Any student not successfully passing the thesis defense may be afforded another opportunity to rewrite portions of the thesis or participate in another thesis defense if deemed appropriate by the student's Graduate Committee. Any student who ultimately does not successfully pass the thesis defense will not be granted an M.S.P.H. degree from the school.

#### *Thesis Proposal Process Overview*

A thesis proposal must be completed and approved by the student's graduate committee for all Master of Science in Public Health degree-seeking students prior to preparation of the master's thesis. The research proposal is a description of the research the student intends to perform in a detailed thesis. The research proposal gives the student the opportunity to demonstrate to his/her Graduate Committee the student's ability to plan a satisfactory thesis research project as well as the ability to successfully pursue the proposed topic.

The completed research proposal, with a requisite signed title page (signed by the student's advisor and all committee members, the department head and the associate dean for Academic Affairs) must be submitted to the Office of Academic Affairs. Filing the completed research proposal and accompanying signature page is one requirement for admission to candidacy for the master degree. The Office of Academic Affairs will be responsible for forwarding a copy of the signed title page to the HSC registrar.

#### *Thesis Proposal Parameters*

The narrative portion of the thesis proposal should do the following:

- List all references cited.
- Clearly state the objectives or hypotheses.
- State the problem clearly and specifically. The document should summarize pertinent previous research in the field, showing the relation of the material cited to the present problem. Documentation should demonstrate the student has surveyed the state of knowledge in the proposed field.
- List steps to be taken to achieve the objectives. The nature of the data to be gathered, methods to be used, and the procedures to be employed in the analysis of the data must be specified. The proposal should state clearly how the research is to be done and should indicate intent to explain results in light of past research.

#### *Thesis Proposal Review Process and Requisite Accompanying Documents*

Following review by the student's thesis committee, the department head will submit the approved thesis proposal to the Office of Academic Affairs in accordance with the due dates on the academic calendar. If the research in any way involves human or animal subjects, or data derived from the same, a fully executed or exempt approval form from the Institutional Review Board for Human Subjects or from the University Laboratory Animal Care Committee for animal use must accompany the thesis proposal.

### *Participation in Spring Graduation Ceremony*

Graduation requirements for the HSC-SRPH are specified below. However, as the HSC-SRPH only holds a commencement ceremony annually (in May each year), students graduating in December (of the previous year), May or August may participate in the spring commencement ceremony under the following conditions.

The student:

1. Has an overall GPA of at least 3.0;
2. Has a maximum of six semester credit hours of elective course work (or the practicum) remaining on his/her degree plan;
3. Has passed the requisite culminating experience (M.P.H.: comprehensive exam; M.H.A.: Cpstone course; M.S.P.H.: thesis defense; doctoral degree: dissertation defense);
4. Will have completed the practicum by the end of the summer session (if an M.P.H. or M.H.A. student);
5. Has submitted the necessary paperwork and paid requisite fees for spring graduation;
6. Has assured his/her accounts with the HSC are up-to-date and no blocks are on the student record.

Students graduating during the fall semester (i.e., December) have the option of participating in the next spring graduation. Summer graduates participating in the spring commencement ceremony will be allowed to walk the stage during the ceremony and will be included in the graduation program but will not receive a diploma until all graduation requirements are satisfied.

## Doctoral Program Committees and Culminating Experiences (Ph.D.)

### *Doctoral Student Advising Committee Membership and Charge*

A Student Advising Committee (SAC) for each student in the doctoral program is named within the first month of the student's entrance into the program. The SAC, comprised of four faculty members and its chair, is selected by the department head and the Department Doctoral Committee (DDC). The chair and at least one other member of the SAC must be members of the student's home department's tenured or tenure-track faculty, and all four must be members of the HSC-School of Rural Public Health graduate faculty. Responsibilities of the SAC include the following:

- Initial advising and direction of the student and selection of initial course work;
- Facilitating the completion of the student's initial plan of study, in consultation with the student, by the end of the student's second semester of course work and submitting it to the department head for approval;
- Reviewing student progress in the first two years of study (up until the qualifying examination) and forwarding their assessment of student progress to the DDC prior to its annual review.

### *Doctoral Student Qualifying Examination*

After satisfactory completion of a minimum of 36 semester credit hours of required course work for the doctoral degree (or in the case of transfer or waived credits, 12 or more credit hours of doctoral course work and no sooner than completion of two academic semesters of course work), the student will participate in a qualifying examination of the student's performance in core courses, methods and cognate areas to that date. The written exam is administered by the DDC (along with other faculty designated by the DDC) and will occur by the second week of June each year.

Failure of any portion of the written exam requires an oral examination administered by DDC supplemented with additional faculty at the direction of the DDC (e.g., the chair of the SAC and faculty members who participated in writing the exam questions). The results of the qualifying exam are reported to the associate dean for Academic Affairs (e.g., pass; pass with proviso, requirements or recommendations; or failure) with recommendations regarding student's repeating the exam or dropping the program in the event the student did not pass the examination. The student may retake the one or more failed portions of the written exam within six months. Failure of any part of the written exam on retake will result in dismissal from the doctoral program.

### *Student Doctoral Committee Membership and Charge*

The Student Doctoral Committee (SDC) for a student in the doctoral program will be comprised of a minimum of four members. The chair and at least one other member of the SDC must be members of the student's home department's tenured or tenure-track faculty. One member must be a faculty member outside the student's home department. All four must be members of the HSC-School of Rural Public Health graduate faculty. Committee members and the chair of the committee are selected by the student for approval by the department head and the DDC. Proposed membership must be forwarded to the DDC within one month of the student successfully completing the qualifying examination. Any changes in composition of the SDC or exceptions to this policy must be approved by the DDC and the associate dean for Academic Affairs.

Responsibilities of the SDC include the following:

- Approving the student's final degree plan (to be submitted no later than within six weeks of the student passing the qualifying examination);
- Approving the Capstone proposal;
- Providing oversight of the completion of the Capstone product(s);
- Conducting the comprehensive examination;
- Conducting the final examination over the Capstone project.

### *Doctoral Program Capstone Proposal*

The capstone proposal will be submitted to the student's Doctoral Committee no earlier than successful completion of the qualifying exam and no later than one month prior to the scheduled comprehensive exam. The Capstone proposal will be either a dissertation proposal or a proposal for three professional papers of publishable quality (see below).

### *Doctoral Student Comprehensive Examination*

After satisfactory completion of all required doctoral program course work (typically within 12 months of the qualifying exam, or after the end of the sixth semester for full time students) the student will take a comprehensive examination administered by the SDC. The comprehensive exam includes a written component and an oral component. The written portion of the comprehensive exam is designed to assess mastery in the specialized field and related research methods. The oral portion of the comprehensive examination, scheduled within two weeks of student notification of the results of the written portion, focuses on knowledge and preparation related to the Capstone proposal and on any failed portion of the written comprehensive.

### *Doctoral Program Capstone Product(s)*

In addition to the standard dissertation option, doctoral students may select a second option that includes the preparation and submission of three manuscripts of publishable quality. Each of these manuscripts must be completed following admission to the doctoral degree program. At least two of the three manuscripts must be based upon empirical research conducted by the student. The third manuscript may be either a journal article or a comparable book chapter that addresses other research content, e.g., a comprehensive literature review, a contribution to the theoretical literature, or a related scholarly effort. All three manuscripts must be considered to be of publishable quality in a peer-reviewed journal, and at least one must be submitted to a peer-reviewed journal prior to the Capstone completion and final examination.

### *Doctoral Program Capstone Completion and Final Exam*

The student participates in a formal public oral presentation of either the content of the dissertation or at least one of the three completed and SDC-approved Capstone papers. Following the presentation, a private oral examination over the Capstone product(s) is conducted by the SDC. Any student who fails this examination will be instructed by the SDC on the necessary preparations for a second required oral defense at a specified time. The SDC will report the examination results (along with evaluation ratings by members) to the DDC and associate dean for Academic Affairs.

### *Submission of the Final Capstone Doctoral Program Product*

The dissertation or other Capstone product with SDC committee member signatures and department head signature must be submitted to the HSC Office of the Registrar one month before the degree is conferred.

## Doctor of Public Health (Dr.P.H.) in Social and Behavioral Health Program

The Dr.P.H. degree program with a concentration in Social and Behavioral Health prepares students to plan, implement and evaluate social and behavioral interventions designed to improve individual, community and population health status, as well as to conduct high quality research addressing important public health issues.

Students with M.P.H. degrees with concentrations other than social and behavioral health are required to take additional courses to make up any deficiencies as deemed necessary by the departmental admission committee or student advisory committee. Applicants without M.P.H. degrees are required at a minimum to complete graduate-level courses in biostatistics, epidemiology, health policy and management, environmental and occupational health, and social and behavioral health.

There are four central areas in which additional course work must be completed beyond those completed for the M.P.H. or related master's level coursework. As an orientation to theories and practice issues in social and behavioral aspects of public health, doctoral students will be required to enroll in a two-year doctoral seminar that will review a wide range of literature and engage the students in critical thinking and leadership activities. Each student is also expected to take specialized courses to build expertise in a particular population, setting or problem. In addition to specialization in social and behavioral health, additional course work is required to provide the student with familiarity in at least one other public health discipline. This program also requires advanced training in research methods, statistics and evaluation techniques so that students will be prepared to design and evaluate interventions for improving health at multiple levels. Finally, research hours will be allocated for the dissertation or Capstone project.

## Miscellaneous Policies

### *Change of Personal Information*

If, for any reason, a student's personal information changes, e.g., name change due to marriage (or divorce), change of residence or telephone number, it is the responsibility of the student to notify the Office of Student Affairs of such change within 30 days of such change. Failure to do so could result in the inability of faculty or departments to contact the student with time-sensitive information.

### *E-mail Policy*

Each student at the school is required to have an official HSC-School of Rural Public Health email account. The account will be a GroupWise account that is provided by the school and will be available until time of graduation (or official withdrawal from the school). Students on approved leave (i.e. practicum) will also retain an active HSC-School of Rural Public Health email account. The school email account has certain guidelines students are responsible for following. This email account MAY NOT be used for personal gain or activities that are not directly related to the employment or educational requirements at the school. This account is not to be shared with anyone.

- **Privacy.** By virtue of the password provided as the account is set up, the student is granted privacy from unwarranted intrusions. In order to maintain privacy, students are strongly encouraged to not give anyone their password. If a student feels someone has gained unauthorized use of his/her password or account, the student should contact the Office of Information Technology immediately.
- **State Property.** The computer, its software, and the server that maintains all students' accounts are all property of the HSC and the state of Texas. As such, these may not be used for personal use.
- **Inappropriate Content.** The school is not interested in policing email messages. Rather, the school relies on students, staff and faculty to use their email accounts for legitimate academic purposes. It is important to avoid the use of e-mail in a manner that will challenge issues related to harassment or ethical violations.
- **Signature Block.** Students choosing to use a "signature" at the closing of email messages are required to identify themselves by name, not simply affiliated with the HSC-SRPH. Students are not permitted to use a HSC-SRPH signature block if the material being sent may be perceived as controversial to the reader. Students are not allowed to refer to themselves as "candidates" for a particular degree until they have successfully passed all or a portion of the culminating experience (i.e., the comprehensive examination for M.P.H. students; thesis proposal defense for the M.S.P.H.; the Capstone course for M.H.A. students; qualifying exam for doctoral students). If a personal system is used for an additional email account, the student may not use 'SRPH' in the email signature.

### *Off-Campus Activities*

The HSC-SRPH is supportive of student activities both on and off campus. Volunteer work in the local community or field trips to other communities, are encouraged subject to certain conditions. If the school's name or logo is either used or implied or if school or HSC property or facilities are used in such endeavors,

prior approval must be obtained from the director of Student Affairs, and in some instances the associate dean for Academic Affairs and the dean. In addition to approval, participants in school-related trips off campus must complete a statement releasing the HSC-SRPH from any liability associated with the trip. Release forms are available in the Office of Student Affairs. No reimbursement for expenses or disbursement of funds will be approved unless these requirements are met.

Anyone who is a state employee, including graduate assistants who travel out-of-town or out-of-state on state-related business, must complete a Travel and Leave form before travel commences. These forms are available in the school offices and must be approved by the student's supervisor (e.g., organization faculty advisor or assistantship supervisor necessitating the travel) and department head.

### *Fund-Raising Activities*

Students are reminded that sales of items require the collection of and accounting for state sales tax. All Texas A&M University, HSC and HSC-SRPH logos are copyrighted, which means they cannot be used on hats, shirts or other items without written permission from the Texas A&M University Collegiate Licensing Office. The HSC and/or HSC-SRPH logos require similar permission from the HSC or HSC-SRPH. Students must obtain permission for any designs created for fund-raising projects prior to copyrighting. The Office of Student Affairs can provide information on fund-raising procedures, activities and logo use. All student fund-raising activities must be reviewed and approved by the Student Leadership Council prior to initiation in order to facilitate coordination.

# DEPARTMENTS AND PROGRAMS

The following sections describe the academic departments and degree programs. While the programs have been authorized by the Texas Higher Education Coordinating Board, the curriculum is continually evolving in order to better meet the professional knowledge and skill needs of the students. Thus, degree program requirements are subject to slight changes.

## M.P.H. and M.H.A. Core Curriculum

All students enrolled in either the M.P.H. or the M.H.A. degree programs are required to complete courses in the five core areas of public health as well as complete an overview course on rural public health systems. The sequence of these courses is determined by students' specific concentration areas within the degree programs. Information on course sequences is available from the student's academic advisor or the relevant department head.

PHEB 600 FUNDAMENTALS OF EPIDEMIOLOGY / Credit 3. An overview course intended to familiarize students with the basic principles and applications of epidemiological concepts in the study of disease occurrence in populations.

PHEO 600 PRINCIPLES OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH / Credit 3. Overview of nature and magnitude of environmental and occupational disease; sources of exposure, methods of monitoring and modeling exposure; review of target organs and potential effects of specific chemicals; discussion of workplace hazards and monitoring programs.

PHPM 601 RURAL PUBLIC HEALTH SYSTEMS / Credit 3. An introduction to the field of public health and to rural health conditions, issues, professions, organizations and policies relevant to the health of rural communities.

PHPM 605 INTRODUCTION TO HEALTH POLICY AND MANAGEMENT / Credit 3. An examination of key health policy and management issues. This course introduces the student to knowledge in the major areas of health management such as finance, planning, operations, human resources and information systems.

PHSB 603 SOCIAL AND BEHAVIORAL DETERMINANTS OF HEALTH / Credit 3. An overview of theories and principles focusing on social and behavioral determinants of health, the social-ecological approach to the examination of health and health behaviors, social patterns of health behavior, and an introduction to health promotion and public health interventions. Course is for non-majors. Social and Behavioral Health majors are required to take PHSB 604 (Social Ecology and Health Behavior) instead.

PHEB 602 BIOSTATISTICS I / Credit 3. An introduction to statistical issues in public health, including basic probability, significance levels and confidence intervals, interpretation of public health data, and specific statistical techniques such as regression, analysis of variance, nonparametric techniques and categorical data.

***or***

STAT 651 STATISTICS IN RESEARCH I / Credit 3. A non-calculus exposition of the concepts, methods and usage of statistical data analysis; t-tests, analysis of variance, and linear regression.

***or***

STAT 652 STATISTICS IN RESEARCH II / Credit 3. Concepts of experimental design, individual treatment comparisons, randomized blocks and factorial experiments, multiple regression, chi-square tests and a brief introduction to covariance, non-parametric methods and sample surveys. Prerequisite: STAT 651.

*All "STAT" courses refer to courses offered in the Department of Statistics at Texas A&M University.

## Environmental and Occupational Health

| | |
|---|---|
| Professor and Department Head: | Donnelly |
| Professor: | Autenrieth, Congleton, Moore |
| Associate Professor: | McDonald |
| Joint/Adjunct Faculty: | Bokelmann, Gonzales, Vos, Zhou |

### *Department Overview*

The Department of Environmental and Occupational Health is concerned with the health effects of exposures to air and water pollution, pesticides, organic solvents, dusts and physical hazards that occur in the environment, the home or the workplace. Research is also being conducted to identify causes of or prevention of workplace injuries. The department draws from the knowledge generated from disciplines that contribute to recognizing, assessing, and controlling these risks that include epidemiology, toxicology, microbiology, safety engineering, industrial hygiene, medicine, nursing, law and labor economics.

The department includes a multidisciplinary core faculty and a large adjunct faculty. Major interests of the core faculty include environmental carcinogenesis, occupational safety and health, molecular and cellular toxicology, endocrine disruption, exposure assessment, and genotoxicity. The adjunct faculty includes scientists from other academic units. The M.P.H. training program reflects a commitment to education, research and service in public health. The core of the program is a set of required and elective courses. The department also offers an M.S.P.H. program for students interested in a research track.

Applicants range from recent college graduates to experienced physicians. Criteria for selection include background and experience relevant to environmental and occupational health, potential to make a contribution to the field, academic excellence, and recommendations. All applicants should have completed college-level biology, chemistry (both general and organic) and mathematics (through calculus).

### *Department Curriculum: Master of Science in Public Health Degree*

*M.S.P.H. WITH A CONCENTRATION IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH*

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHEO 610 | Basic Environmental Toxicology | 3 cr hrs |
| PHEO 650 | Risk Assessment | 3 cr hrs |
| PHEO 686 | Directed Research | 3 cr hrs |

| | | |
|---|---|---|
| PHSB 605 | Social and Behavioral Research Methods | 3 cr hrs |
| Elective | (one course) | 3 cr hrs |
| PHEO 681 | Seminar (required but not for credit) | |
| SRPH 690 | Thesis Development | 3 cr hrs |
| PHEO 691 | Thesis Research | 3 cr hrs |

### *Department Curriculum: Master of Science in Public Health Degree*

*M.S.P.H. WITH A CONCENTRATION IN OCCUPATIONAL SAFETY AND HEALTH*

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHEO 630 | Environmental and Occupational Diseases | 3 cr hrs |
| PHEO 640 | Industrial Hygiene | 3 cr hrs |
| PHEO 682 | Industrial and System Safety | 3 cr hrs |
| PHEO 655 | Human Factors and Behavior-Based Safety | 3 cr hrs |
| PHEO 678 | Ergonomics I | 3 cr hrs |
| PHEO 679 | Ergonomics II | 3 cr hrs |
| PHEO 681 | Seminar (required but not for credit) | |
| SRPH 690 | Thesis Development | 3 cr hrs |
| PHEO 691 | Thesis Research | 3 cr hrs |

### *Department Curriculum: Master of Public Health Degree*

*M.P.H. WITH A CONCENTRATION IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH*

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHEO 610 | Basic Environmental Toxicology | 3 cr hrs |
| PHEO 620 | Environmental/Occupational Case Studies | 3 cr hrs |
| PHEO 630 | Environmental and Occupational Diseases | 3 cr hrs |
| PHEO 640 | Industrial Hygiene | 3 cr hrs |
| PHEO 650 | Risk Assessment | 3 cr hrs |
| Electives | (three courses) | 9 cr hrs |
| PHEO 681 | Seminar (required but not for credit) | |
| PHEO 684 | Practicum | 3 cr hrs |

### *Department Curriculum: Master of Public Health Degree*

*M.P.H. WITH A CONCENTRATION IN OCCUPATIONAL SAFETY AND HEALTH*

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHEO 630 | Environmental and Occupational Diseases | 3 cr hrs |
| PHEO 640 | Industrial Hygiene | 3 cr hrs |
| PHEO 682 | Industrial and System Safety | 3 cr hrs |
| PHEO 655 | Human Factors and Behavior-Based Safety | 3 cr hrs |
| PHEO 678 | Ergonomics I | 3 cr hrs |
| PHEO 679 | Ergonomics II | 3 cr hrs |
| PHEO 681 | Seminar (required but not for credit) | |
| Electives | Two courses | 6 cr hrs |
| PHEO 684 | Practicum | 3 cr hrs |

## Epidemiology and Biostatistics

| | |
|---|---|
| Professor and Department Head: | Gorman (Interim) |
| Professor and Dean: | Sumaya |
| Associate Professor: | Brender, Carozza, Rene, Sweeney, Zheng |
| Assistant Professor: | Huber, Shipp, Zhu |

### *Department Overview*

The Department of Epidemiology and Biostatistics prepares students for research or practice in academia and numerous public and private health arenas. Students will acquire the expertise necessary to design and implement basic and applied research in disease etiology, control and prevention.

Epidemiological and biostatistical concepts, theories, and methods are fundamental building blocks upon which the public health sciences are built. Students following either the epidemiology or biostatistics track will become competent users of critical health related information, as well as proficient in the use of epidemiological research methods applicable to various health and public health related settings.

The goal of epidemiology is to identify the patterns and determinants of health and disease in human populations that may be used to determine appropriate health promotion and preventive responses. Students in the Department of Epidemiology and Biostatistics may collaborate with colleagues in other departments to apply their epidemiologic and biostatistics skills to various interdisciplinary areas. Practicum placements are available in a myriad of settings to allow students the opportunity to apply their skills.

Students will leave the program with a broad exposure to public health issues. They will also have developed the skills necessary to play an active role in improving the health of the population, particularly in rural settings.

## *Department Curriculum: Master of Science in Public Health Degree*

*M.S.P.H. WITH A CONCENTRATION IN EPIDEMIOLOGY*

| | | |
|---|---|---|
| CONCENTRATION COURSES: | | |
| PHEB 610 | Epidemiological Methods I | 3 cr hrs |
| PHEB 612 | Data Management/Computing | 3 cr hrs |
| PHEB 6xx | Content Epidemiology (from among PHEB 619 - 626) | 3 cr hrs |
| PHEB 6xx | Content Epidemiology (from among PHES 619 – 626) | 3 cr hrs |
| PHEB 603 | Biostatistics II | 3 cr hrs |
| PHEB 609 | Categorical Data Analysis | 3 cr hrs |
| PHEB 691 | Thesis Research | 3 cr hrs |

*M.S.P.H. WITH A CONCENTRATION IN BIOSTATISTICS*

| | | |
|---|---|---|
| CONCENTRATION COURSES: | | |
| STAT 604 | Special Problems in Statistical Computations and Analysis | 3 cr hrs |
| ***or*** | | |
| PHEB 612 | Data Management/Computing | 3 cr hrs |
| ***or*** | | |
| PHEB 609 | Categorical Data Analysis | 3 cr hrs |
| STAT 610 | Theory of Statistics I | 3 cr hrs |
| STAT 611 | Theory of Statistics II | 3 cr hrs |
| STAT 641 | The Methods of Statistics I | 3 cr hrs |
| STAT 642 | The Methods of Statistics II | 3 cr hrs |
| STAT 643 | Biostatistics I | 3 cr hrs |
| STAT 644 | Biostatistics II | 3 cr hrs |
| Elective | (Select one course) | 3 cr hrs |
| PHEB 690 | Epidemiologic Proposal Development | 3 cr hrs |

## *Department Curriculum: Master of Public Health Degree*

*M.P.H. WITH A CONCENTRATION IN EPIDEMIOLOGY*

| | | |
|---|---|---|
| CONCENTRATION COURSES: | | |
| PHEB 610 | Epidemiological Methods I | 3 cr hrs |
| PHEB 612 | Data Management/Computing | 3 cr hrs |
| PHEB 6xx | Content Epidemiology (from among PHEB 619 – PHEB 626) | 3 cr hrs |
| PHEB 6xx | Content Epidemiology (from among PHEB 619 – PHEB 626) | 3 cr hrs |
| ***or*** | | |
| PHEB 684 | Practicum | 3 cr hrs |
| Electives | (Select two courses) | 6 cr hrs |
| PHEB 603 | Biostatistics II | 3 cr hrs |
| PHEB 607 | Sampling | 3 cr hrs |
| PHEB 609 | Categorical Data Analysis | 3 cr hrs |

*M.P.H. WITH A CONCENTRATION IN BIOSTATISTICS*

| | | |
|---|---|---|
| CONCENTRATION COURSES: | | |
| STAT 610 | Theory of Statistics I | 3 cr hrs |
| STAT 611 | Theory of Statistics II | 3 cr hrs |
| STAT 641 | The Methods of Statistics I | 3 cr hrs |
| STAT 642 | The Methods of Statistics II | 3 cr hrs |
| STAT 643 | Biostatistics I | 3 cr hrs |
| STAT 644 | Biostatistics II | 3 cr hrs |
| *Recommended Electives* | | *9 cr hrs* |
| (select three courses from the following) | | |
| STAT 604 | Special Problems in Statistical Computations and Analysis | 3 cr hrs |
| ***or*** | | |
| PHEB 609 | Categorical Data Analysis | 3 cr hrs |
| PHEB 610 | Epidemiological Methods I | 3 cr hrs |
| PHEB 611 | Epidemiological Methods II | 3 cr hrs |
| PHEB 612 | Data Management/Computing | 3 cr hrs |
| PHEB 613 | Public Health Epidemiological Methods | 3 cr hrs |
| PHEB 619-626 | Epidemiology Content course | 3 cr hrs |
| PHEO 6xx | Occupational and Environmental Health Content course | 3 cr hrs |
| PHPM 6xx | Health Policy and Management Content course | 3 cr hrs |
| PHSB 6xx | Social and Behavioral Health Content course | 3 cr hrs |

### *Department Curriculum: Doctor of Public Health*

| | | |
|---|---|---|
| CORE REQUIREMENTS: | | |
| Doctoral Seminar | | 6 cr hrs |
| Methods/Statistics | | 15-18 cr hrs |
| EMPHASIS REQUIREMENTS: | | |
| *Major:* | | |
| PHEB 611 | Epidemiological Methods II | 3 cr hrs |
| PHEO 673 | Metabolic and Detoxification Mechanisms | 3 cr hrs |
| PHEO 605 | Chemical Hazard Assessment | 3 cr hrs |
| PHEO 655 | Risk Assessment II | 3 cr hrs |
| CVEN 605 | Environmental Measurement | 3 cr hrs |
| PHEB 623 | Environmental Epidemiology | 3 cr hrs |
| *Minor:* | | |
| SENG 655 | Process Safety Engineering | 3 cr hrs |
| SENG 683 | Evaluation and Control of the Occupational Health | 3 cr hrs |
| | Additional course work in specified area of desired expertise | 3-6 cr hrs |
| *DISSERTATION REQUIREMENTS:* | | |
| Dissertation or three publishable papers | | 12 cr hrs |
| | TOTAL HOURS | 63 cr hrs |

## Health Policy and Management

| | |
|---|---|
| Professor and Department Head: | Gamm |
| Professor: | Blakely, Hawes, Ohsfeldt, Phillips |
| Associate Professor: | Alexander, Johnson, Quiram, Tai-Seale |
| Assistant Professor: | Bolin, Kash, Wolf |
| Joint/Adjunct: | Dyer, Hader, Koran |

### *Department Overview*

Faculty members reflect a wide array of disciplinary expertise and interests. The current departmental members come from backgrounds in public health, ecological psychology, political science, urban planning, law, management, medicine and economics. Collectively they have conducted numerous policy- or management-related projects that include assessments of local health care infrastructures, national studies of the quality of health care services, studies of HIV, multiple sclerosis, critical access hospitals, long-term care policies, Medicaid-managed care and court-mandated access studies.

Courses in the health policy and management department reflect, in a general sense, the broad array of issues facing the profession in the new millennium. However, the emphasis on rural policy issues or management practices provides the student with a truly unique opportunity to prepare for a career in a rural health setting or as a rural health advocate. Incoming students range from recent college graduates to experienced physicians, hospital fiscal agents and administrators, and local, regional and state health department employees. The program looks for students with a strong interest in making a meaningful contribution to the public health or health delivery systems.

### *Department Curriculum: Master of Science in Public Health Degree*

*M.S.P.H. WITH A CONCENTRATION IN HEALTH SERVICES RESEARCH*

The M.S.P.H. program in Health Services Research is designed to prepare students for graduate study for a doctorate and for careers in research settings where investigators address important health services issues. Such research, for example, might focus on the need or the demand for health care, the availability or accessibility of health care, use of health services by different populations, the financing of health services, health care outcomes, quality of care, and numerous health-related policy issues.

| | | |
|---|---|---|
| CONCENTRATION COURSES: | | |
| PHPM 640 | Health Policy and Politics | 3 cr hrs |
| PHPM 661 | Introduction to Health Economics | 3 cr hrs |
| PHPM 671 | Introduction to Health Services Research | 3 cr hrs |
| STAT / METHODS CONCENTRATION COURSES: | | |
| STAT 652 | Statistics in Research II | 3 cr hrs |
| STAT 653 | Advanced Topics in ANOVA and Regression | 3 cr hrs |
| PHEB 600 | Introduction to Epidemiology | 3 cr hrs |
| PHEB 612 | Data Management / Computing | 3 cr hrs |
| Elective | (One course) | 3 cr hrs |
| SRPH 690 | Thesis Development | 3 cr hrs |
| PHPM 691 | Master's Thesis | 3 cr hrs |

### *Department Curriculum: Master of Health Administration*

The Master of Health Administration (M.H.A.) is a professional degree for students pursuing administrative practice in any of a number of health service related settings - provider organizations (e.g., hospitals, physician offices/groups, clinics, nursing homes), managed care organizations, health insurers, consulting

firms, trade associations, and a variety of organizations that supply or otherwise support public or private health service organizations. The goal of the M.H.A. program is to develop effective health care managers to provide leadership in health delivery systems.

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHPM 614 | Strategic Planning and Marketing I | 3 cr hrs |
| PHPM 615 | Strategic Planning and Marketing II | 3 cr hrs |
| PHPM 616 | Management of Human Resources | 3 cr hrs |
| PHPM 617 | Health Care Quality Evaluation and Utilization Management | 3 cr hrs |
| PHPM 623 | Health Delivery Systems Financing | 3 cr hrs |
| PHPM 624 | Managerial Accounting | 3 cr hrs |
| PHPM 631 | Health Information Management Systems | 3 cr hrs |
| PHPM 633 | Health Law and Ethics | 3 cr hrs |
| PHPM 640 | Health Policy and Politics | 3 cr hrs |
| PHPM 661 | Introduction to Health Economics | 3 cr hrs |
| PHPM 680 | Health Systems Leadership (Capstone) | 3 cr hrs |
| PHPM 684 | Practicum | 3 cr hrs |

## *Department Curriculum: Master of Public Health Degree*

*M.P.H. WITH A CONCENTRATION IN HEALTH POLICY AND MANAGEMENT*

The M.P.H. degree program offered by the Department of Health Policy and Management provides the student with broad exposure to the core public health disciplines. Beyond this core instruction, students complete a program of study that provides a mixture of management instruction (e.g., finance, health economics, managerial accounting, marketing) and study in health policy (e.g., health policy in the intergovernmental system, rural health systems). Students should leave the program prepared to take on significant responsibilities in both private and public sector public health or health care delivery.

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHPM 614 | Strategic Planning and Marketing | 3 cr hrs |
| PHPM 623 | Health Delivery Systems Financing | 3 cr hrs |
| PHPM 633 | Health Law and Ethics | 3 cr hrs |
| PHPM 661 | Introduction to Health Economics | 3 cr hrs |
| PHPM 640 | Health Policy nad Politics | 3 cr hrs |
| Electives | Three courses | 9 cr hrs |
| PHPM 684 | Practicum | 3 cr hrs |

## *Department Curriculum: Ph.D. in Health Services Research*

A health services research program is built upon a strong science and methodology base applied to health-related problems in access, quality, and finance of health services from primary prevention to hospice care. At the same time, effective framing of such research requires a clearly defined conceptual basis for understanding the context and key variables associated with the problem investigated. The program currently allows students to choose between two related core conceptual frameworks. One area is in health politics and policy, and the other is organizational theory and analysis. Either of these two core conceptual areas can be applied to a substantive field within health services research. Such substantive fields include: long-term care, child health services, mental health, substance abuse, quality assurance, or other areas approved by the student's advisor and doctoral committee. A total of 65 semester credit hours is required for the Ph.D. in health services research.

COURSE WORK REQUIREMENTS:

*Core Health Research Methods (17 semester credit hours)*

| | | |
|---|---|---|
| PHPM 671 | Introduction to Health Services Research | 3 cr hrs |
| PHPM 672 | Health Services Research Methods | 3 cr hrs |
| PHPM 668 | Applied Health Services Research I | 1 cr hr |
| PHPM 669 | Applied Health Services Research II | 1 cr hr |
| PHPM 674 | Secondary Analysis of Health Data | 3 cr hrs |
| | Qualitative Methodology (course taken at Texas A&M University) | 3 cr hrs |
| PHPM 675 | Survey Research Methods | 3 cr hrs |

*Core Conceptual Frameworks (Nine semester credit hours)*

| | | |
|---|---|---|
| PHPM 641 | Health Analysis and Policy Formation | 3 cr hrs |
| PHPM 661 | Introduction to Health Economics | 3 cr hrs |
| PHPM 619 | Organization Theory and Applications | 3 cr hrs |

*Additional Course work (39 semester credit hours)*

Four additional statistics/research methods courses to be approved by the student's committee (12 semester credit hours)
Three courses in either of the following two cognates (nine semester credit hours)
- Health Policy and Politics (illustration)
  - Critical Issues in Health Policy
  - Health Reimbursement
  - Special Topics in Health Politics and Policy
- Organization Theory and Analysis (illustration)
  - Sociology of Complex Organizations
  - Seminar in Organizational Behavior
  - Interorganizational Relations

Three courses in a specialized substantive field (nine semester credit hours)
A dissertation or a sequence of three high-quality research papers as the doctoral Capstone (nine semester credit hours)

## Social and Behavioral Health

| | |
|---|---|
| Associate Professor/Interim Head: | Colwell |
| Professors: | McLeroy, Ory, Robinson |
| Associate Professor: | Burdine, Millard, Sharkey |
| Assistant Professor: | Dowdy, Dorsey, Mier, Tai-Seale |

### *Department Overview*

Many factors influence individual and population health, from biology and individual behavior to environmental and social forces. The Department of Social and Behavioral Health prepares public health professionals to incorporate these broad factors into planning and evaluating programs, services and policies that will improve the health of individuals and communities. Underlying this approach are two key ideas. First, health is more than the absence of disease and goes beyond individual's biology or behavior. Second, individuals are part of larger social systems (including families, peer groups, organizations and communities) that influence individuals as well as interact with each other to affect health. Understanding the implications of these two key ideas requires a wide variety of theories, skills and strategies to produce effective health interventions.

Public health professionals with training in social and behavioral health are prepared to assess factors influencing health in individuals, communities and populations, plan effective programs and interventions, design evaluations for those interventions, and successfully manage the implementation of those programs. Graduates are trained in process skills – the how-to of public health and health behavioral change. This prepares them to operate under a wide variety of job titles and in a wide variety of different organizational contexts. Graduates from this department may work in and for local or state public health departments, federal health agencies, other health-related public and private sector organizations, such as hospitals, health maintenance organizations, pharmaceutical companies, clinics and non-profit health-related organizations.

### *Department Curriculum: Master of Science in Public Health Degree*

*M.S.P.H. WITH A CONCENTRATION IN SOCIAL AND BEHAVIORAL HEALTH*

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHSB 605 | Social and Behavioral Research Methods | 3 cr hrs |
| PHSB 611 | Program Planning | 3 cr hrs |
| PHSB 612 | Public Health Interventions | 3 cr hrs |
| PHSB 613 | Program Evaluation | 3 cr hrs |
| Elective | (One additional methods course) | 3 cr hrs |
| SRPH 690 | Thesis Development | 3 cr hrs |
| PHSB 691 | Thesis Research | 3 cr hrs |

### *Department Curriculum: Master of Public Health Degree*

*M.P.H. WITH A CONCENTRATION IN COMMUNITY PUBLIC HEALTH AND MANAGEMENT*

CONCENTRATION COURSES:

| | | |
|---|---|---|
| PHSB 605 | Social and Behavioral Research Methods | 3 cr hrs |
| PHSB 610 | Community Organization and Assessment | 3 cr hrs |
| PHSB 611 | Program Planning | 3 cr hrs |
| PHSB 612 | Public Health Interventions | 3 cr hrs |
| PHSB 613 | Program Evaluation | 3 cr hrs |
| PHPM 616 | Management of Human Resources | 3 cr hrs |
| PHSB 637 | Principles of Health Program Management | 3 cr hrs |
| PHPM 665 | Proposal Writing and Grants Management | 3 cr hrs |
| PHSB 684 | Practicum | 3 cr hrs |

*M.P.H. WITH A CONCENTRATION IN SOCIAL AND BEHAVIORAL HEALTH*

CONCENTRATION COURSES:

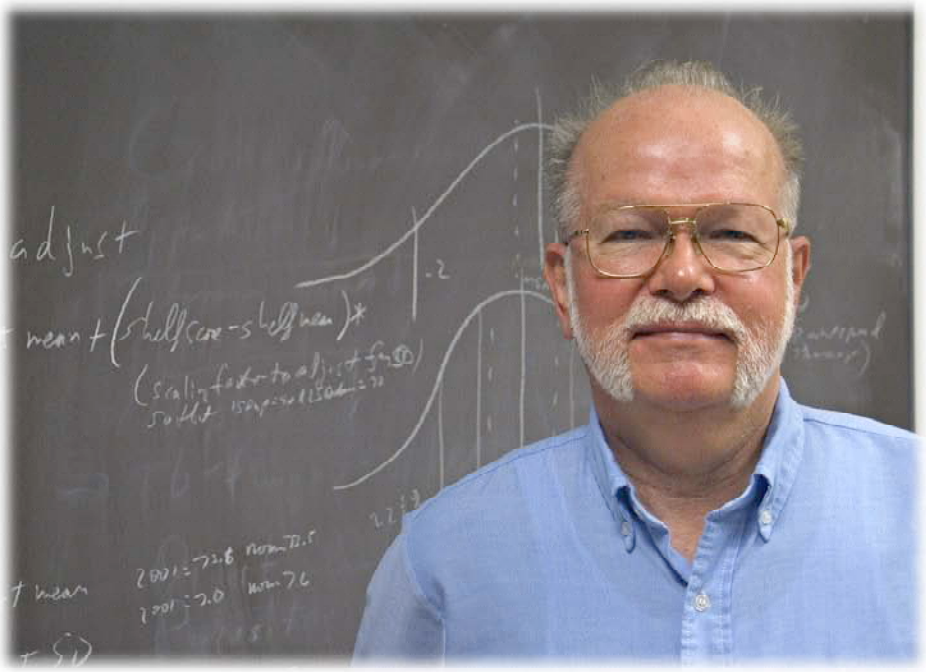
| | | |
|---|---|---|
| PHSB 605 | Social and Behavioral Research Methods | 3 cr hrs |
| PHSB 610 | Community Organization and Assessment | 3 cr hrs |
| PHSB 611 | Program Planning | 3 cr hrs |
| PHSB 612 | Public Health Interventions | 3 cr hrs |
| PHSB 613 | Program Evaluation | 3 cr hrs |
| Electives | (Three courses) | 9 cr hrs |
| PHSB 684 | Practicum | 3 cr hrs |

### *Department Curriculum: Doctor of Public Health*

The Dr.P.H. degree program with a concentration in Social and Behavioral Health (SBH) prepares students to plan, implement and evaluate social and behavioral interventions designed to improve individual, community and population health status, as well as to conduct high quality research addressing important public health issues. This program requires a clearly defined conceptual basis for understanding the context and key factors associated with health and public health problems. Students with M.P.H. degrees with concentrations other than social and behavioral health are required to take additional courses to make up any deficiencies as deemed necessary by the departmental admissions committee or student advisory committee. Required SBH concentration courses include course work in community assessment, program planning, interventions, research methods and evaluation. Applicants without M.P.H. degrees are required at a minimum to complete graduate-level courses in biostatistics, epidemiology, health policy and management, environmental and occupational health, and social and behavioral health.

There are four central areas in which additional course work must be completed beyond those completed for the M.P.H. or related master's level course work. As an orientation to theories and practice issues in social and behavioral aspects of public health, doctoral students are required to enroll in a two-year doctoral seminar series that reviews a wide range of literature and engages the students in critical thinking and leadership activities. Each student is also expected to take specialized courses to build expertise in a particular population, setting or problem. In addition to specialization in social and behavioral health, additional course work is required to provide the student with familiarity in at least one other public health discipline. This program also requires advanced training in research methods, statistics and evaluation techniques so that students will be prepared to design and evaluate interventions for improving health at multiple levels. Finally, research hours are allocated for the dissertation or Capstone project.

| | |
|---|---|
| Theoretical and Strategic Elements of Social and Behavioral Health | 12 cr hrs |
| Public Health Issues and Theoretical Foundations | |
| Change Strategies and Interventions | |
| Populations, Settings & Problems | 9 cr hrs |
| Public Health Electives | 9 cr hrs |
| Methods/Statistics and Evaluation | 21 cr hrs |
| A minimum of 21 hours courses covering topics such as: methods and data management; sampling and survey research; qualitative methods; statistics through regression and multivariate/logistic modeling; and evaluation | |
| Dissertation/Capstone Project | 9 hours |
| **Total** | **60 hours** |



# Course Descriptions

# Course Descriptions
# Baylor College of Dentistry

## Doctor of Dental Surgery

Numbers have been assigned within a designated pattern, with first-year courses numbered 6500-6999, second-year from 7000-7999, third-year from 8000-8999 and fourth-year from 9000-9999. An "S" preceding a course number indicates a selective course. A "C" following a course title indicates a clinical or preclinical course.

### *D1 Courses*

6500 BIOCHEMISTRY/NUTRITION / Chemical and metabolic processes in the human body and the application of the principles of nutrition to the practice of dentistry.

6520 CARIOLOGY AND PREVENTION / Cariology, identification, progress, prevention and management of dental decay and tobacco-related oral disease; oral hygiene index and clinical utilization of topical fluoride varnish.

6540 DENTAL ANATOMY / Form and function of the human dentition.

6543 DENTAL ANATOMY-C / Drawing and carving teeth to scale; restoring tooth form in wax to normal relation with adjacent and opposing teeth; identification of extracted natural teeth.

6580 DENTAL MATERIALS / Introduction to the effects of physical, chemical and mechanical properties on the manipulation of materials used in dentistry; laboratory exercises to demonstrate clinical applications.

6600 GENERAL HISTOLOGY / Microscopic and ultrastructural characteristics of cells, tissues and organ systems of the human; a brief introduction to function; light- and electron-microscopic study of human tissues.

6640 GROSS ANATOMY / Gross morphology of the human with special emphasis on the head and neck; dissection of the cadaver.

6660 GROWTH AND DEVELOPMENT / Prenatal growth of craniofacial structures; postnatal physical growth and maturation; development of the dentition and malocclusion; postnatal craniofacial development.

6680 HISTORY OF DENTISTRY / Development of dentistry from the past to the present; emphasizes progressive advancements; the development of the profession in the United States and throughout the world.

6690 HUMAN BEHAVIOR IN DENTISTRY / Application of principles of communication and motivation relevant to doctor-patient relations, patient compliance and stress management.

6724 INTRODUCTION TO CLINICAL PRACTICE I-C / Observation and assistance of students in delivering dental services in preventive dentistry, oral diagnosis, periodontics and general dentistry; dental health education; patient interviewing; history taking; record management.

6740 MICROBIOLOGY / Microorganism metabolism, genetics, bacteriology, immunology, virology, mycology, sterilization, chemotherapy and the oral microbial diseases; with laboratory exercises/demonstrations correlated with lecture topics.

6770 NEUROSCIENCE / Gross structural features and functions of the human nervous system; emphasis on physiology of nerve membrane and receptors, neural pathways for the major sensory and motor systems; the cranial nerves; and the autonomics of the head and neck.

6800 OCCLUSION / Temporomandibular joint occlusal function; intercuspal relationships; mandibular movements; record transfer; use of a semi-adjustable articulator.

6804 OCCLUSION-C / Preclinical laboratory to accompany course 6800.

6820 ORAL HISTOLOGY / Normal development and structure of tissues associated with the tooth proper, its adnexa and the oral cavity; light-, scanning electron-, and transmission electron microscopy; microfiche Gottlieb slides; emphasis on clinical aspects of oral histology.

6840 OPERATIVE DENTISTRY / Introduction to the treatment of diseased and injured teeth; emphasis on principles of cavity preparation; principles and manipulation of restorative materials.

6844 OPERATIVE DENTISTRY-C / Preclinical laboratory to accompany course 6840.

6870 PHYSIOLOGY / Theory and principles of human body function; detailed study of the cell membrane, skeletal muscle, blood, heart, lungs, gastrointestinal system, kidney and endocrine glands; demonstration of many principles in laboratory exercises.

6880 CELL AND MOLECULAR BIOLOGY / Cellular and molecular mechanisms that control gene expression in human cells and tissues with an emphasis on dental examples.

### *D2 Courses*

7010 DENTAL AUXILIARY UTILIZATION / Utilization of the chair-side dental assistant; self-study module.

7020 ENDODONTICS / Introduction to endodontics; technical and biological bases for nonsurgical root canal therapy; access, cleaning, shaping and filling of root canals.

7024 ENDODONTICS-C / Preclinical laboratory; discussion and demonstrations of techniques for nonsurgical root canal therapy including access opening, cleaning, shaping and filling of root canals in models and extracted teeth.

7040 FIXED PROSTHODONTICS / Instruction in the design and fabrication of fixed partial dentures and crown restorations, fabrication techniques and related dental materials.

7044 FIXED PROSTHODONTICS-C / Laboratory to accompany course 7040.

7060 GENERAL PATHOLOGY / Diseases of specific organ systems; pathology of infectious diseases.

7080 INTRODUCTION TO CLINICAL PRACTICE II / Introduction, orientation to the various clinical disciplines; concepts and implementation of quality assurance issues in dental practice, aseptic techniques, patient communications, diversity ethics, instrument management, dental patient record management, rotations and patient assignments.

7084 INTRODUCTION TO CLINICAL PRACTICE II-C / Clinic applications to accompany course 7080.

7100 OPERATIVE DENTISTRY / Treatment of diseased and injured teeth; emphasis on principles of cavity preparation; principles and manipulation of restorative materials.

7104 OPERATIVE DENTISTRY-C / Preclinical laboratory to accompany course 7100.

7120 BASIC PRINCIPLES AND TECHNIQUES OF DENTOALVEOLAR SURGERY / Introduction to the basic principles and techniques of dentoalveolar surgery; presurgical patient evaluation, risk management and assessment; surgical instrument identification and vocabulary, principles of soft tissue surgery, sterile techniques and infection control; preprosthetic surgical techniques.

7140 PRECLINICAL DIAGNOSTIC SCIENCES I / Introduction to clinical diagnostic methods and its vocabulary that contribute to the assessment of the dental patient. Techniques of gathering diagnostic information from the patient history, the extraoral physical examination and clinical laboratory studies.

7160 ORAL PATHOLOGY / Etiology, pathogenesis and clinical aspect of oral disease and oral manifestations of systemic disease.

7170 ORAL RADIOLOGY / The basic concepts of radiation physics, the generation of X-rays; operation of the X-ray unit; the control factors involved in the production of radiographic images, intraoral, extraoral and specialized radiographic acquisition techniques; and the radiographic interpretation of normal anatomy, dental caries, periodontal disease and dental anomalies.

7173 ORAL RADIOGRAPHY-C / Supervised practical experience in the application of the geometrical and photochemical principles of radiographic image formation.

7190 PRECLINICAL DIAGNOSTIC SCIENCES II / Techniques and vocabulary that contribute to the diagnosis of dental diseases, abnormalities of teeth and nondental lesions of the orofacial region. Physical and radiographic examination of oral/perioral tissues and the application of findings to diagnostic decisions are emphasized. Also, includes clinical documentation and dental treatment planning.

7210 ORTHODONTICS / Basic techniques of wire and acrylic manipulation, including soldering, welding, band fabrication and bonding.

7214 ORTHODONTICS-C / Patient evaluation during five weeks of clinical rotation; seminar-based instruction in diagnosis and treatment-planning procedures.

7230 LOCAL ANESTHESIA / NITROUS OXIDE-OXYGEN SEDATION / Regional pain control; nitrous oxide-oxygen sedation and enteral conscious sedation, pre-anesthetic evaluation of patients, techniques of administration, pharmacology, side effects, complications and risk, and management of complications.

7250 PEDIATRIC DENTISTRY / An introductory course to pediatric dentistry presented in small-group seminars, preclinical laboratory basic operative skills, diagnosis and treatment planning, behavioral management strategies, an introductory patient experience activity, and observation of clinical treatment in preparation for the pediatric clinical courses.

7270 PERIODONTICS / Classification of periodontal disease, systemic and dysfunctional factors associated with periodontal disease, diagnosis and management of periodontal diseases, emphasis on specific therapeutic techniques.

7274 PERIODONTICS-C / Clinical applications of course 7270.

7290 DENTAL PHARMACOLOGY / Terms and principles essential to understanding the rational use of drugs in dental practice; pharmacology of drugs used in dentistry; prescription writing techniques; evaluation of patient drug histories. Lecture and computer self-instructional modules.

7330 APPLIED PREVENTIVE DENTISTRY / Scientific basis for oral disease assessment and strategies for prevention of oral diseases.

7350 REMOVABLE PROSTHODONTICS / Concepts and techniques for fabricating complete and partial dentures. Complete dentures fabricated on a manikin, theory of various denture occlusions; RPD design and construction, immediate dentures, restoration of implants, mouth preparation and laboratory communication.

7353 REMOVABLE PROSTHODONTICS-C / Preclinical laboratory to accompany course 7350.

7400 STRUCTURED REVIEW FOR PART I NATIONAL BOARD EXAM / NATIONAL BOARD REVIEW.

### *D3 Courses*

8000 SUMMER CLINIC-C / All phases of clinic practice; mandatory attendance for third-year students.

8004 CLINICAL PREVENTIVE DENTISTRY-C / Clinical applications of disease detection.

8020 DENTAL PUBLIC HEALTH AND BIOSTATISTICS / Scientific and political issues related to community and public health; statistical concepts used in research and population studies.

8034 COMPREHENSIVE CARE PROGRAM-C / A clinical instruction and mentoring system with seminars that allows the student-clinician to learn to provide and coordinate patient care, as defined by clinical competencies, in a setting that simulates effectively managed dental practices that are patient centered and quality assured. It includes patient management skills, professionalism, ethics, time management, record and patient audits, work habits, treatment planning and other facets consistent with complete and socially sensitive patient care.

8044 DENTAL AUXILIARY UTILIZATION-C / Utilization of chairside dental assistant, clinical applications.

8060 ENDODONTICS / Clinical endodontics; diagnosis and management of pulpal and periradicular disease; integration of pulpal biology and clinical practice.

8064 ENDODONTICS-C / Clinical application of course 8060.

8080 FIXED PROSTHODONTICS / Biological, physiological, anatomical, and esthetic factors related to diagnosis, treatment planning and patient treatment.

8084 FIXED PROSTHODONTICS-C / Clinical application of course 8080.

8140 BEHAVIORAL DENTISTRY/JOURNAL CLUB / Behavioral management principles relevant to pain, anxiety, cultural background, etc. Management, treatment, prevention and disease control for geriatric patients. Critical thinking and evidence-based reviews of public health topics in current literature.

8160 ANESTHESIA IN DENTISTRY / Indications, contraindications, risks and techniques of enteral, parenteral and general anesthesia as applicable to dentistry.

8180 IMPLANT DENTISTRY / Indications and evidence-based rationale for dental implants, diagnosis and treatment planning, surgical concepts of placement, prosthodontic restorative treatment for single tooth, partially edentulous and completely edentulous patients, and maintenance procedures.

8200 OCCLUSION / Diagnosis and treatment of potentially pathologic and clinically pathologic occlusal conditions; etiologic factors; effects of pathofunction on oral tissues; diagnostic aids and methods of treatment.

8204 OCCLUSION-C / Preclinical laboratory to accompany course 8200.

8220 OPERATIVE DENTISTRY / Clinical principles of operative dentistry, the art and science of treating diseased teeth; restoration of proper tooth form, function and esthetics.

8224 OPERATIVE DENTISTRY-C / Clinical application of course 8220.

8240 ADVANCED PRINCIPLES AND TECHNIQUES IN DENTOALVEOLAR SURGERY / Continuation of course 7120. Emphasis on more advanced principles and techniques of dentoalveolar surgery and patient management, advanced pre-prosthetic surgery, odontogenic infections and management, maxillary sinus conditions and disease, osseointegrated implants, and principles of biopsy.

8241 ORAL AND MAXILLOFACIAL SURGERY, CHRONIC PAIN AND HOSPITAL DENTISTRY / Continuation of course 8240 with emphasis on more advanced surgical procedures and concepts; temporomandibular joint disease and chronic orofacial pain; peripheral nerve injuries; hospital dentistry; dentoalveolar and craniofacial trauma and management.

8244 ORAL AND MAXILLOFACIAL/SURGERY-C / Clinical application of course 8240.

8264 ORAL DIAGNOSIS-C / Clinical application of course; provides the format for the student's practical experience in the diagnosis and treatment planning for the dental patient; clinical rotations with patient screening; the diagnosis and treatment planning for assigned clinical patients.

8280 CLINICAL PRINCIPLES OF PATIENT EVALUATION / Diagnostic sciences and clinical principles of patient evaluation; interactive case-based, problem-solving course requiring the utilization of differential diagnosis skills of clinical oral signs and symptoms.

8304 ORAL RADIOGRAPHY-C / Application of basic principles, procedures and techniques of clinical radiology to patients.

8320 ORTHODONTICS / Introduction to orthodontic diagnosis and treatment; biological principles of tooth movement; cephalometric analysis; fundamentals of design, selection, and use of fixed and removable appliance systems and interdisciplinary interaction.

8324 ORTHODONTICS-C / Clinical application of course 8320.

8340 PEDIATRIC DENTISTRY / Small-group seminars covering treatment planning and child management; special problems in pediatric dentistry; emphasis on complete dental rehabilitation of patients.

8344 PEDIATRIC DENTISTRY-C / Clinical application of course 8340.

8360 PERIODONTICS / Introduction to advanced periodontal techniques; periodontics as it relates to general practice and comprehensive case analysis, and treatment planning emphasizing periodontal literature and interdisciplinary concerns.

8364 PERIODONTICS-C / Clinical application of course 8360.

8370 PROFESSIONAL ETHICS / Principles and theory; case analysis and decision-making; humanizing health care; virtue ethics.

8380 MEDICAL PHARMACOLOGY / Pharmacology of drugs used in medicine impacting dental patient evaluation and management. Focus is on fundamental drug information necessary for patient evaluation, the drug history and understanding potential adverse events.

8400 REMOVABLE PROSTHODONTICS / Fabrication of removable complete dentures, partial dentures and immediate dentures.

8404 REMOVABLE PROSTHODONTICS-C / Clinical application of course 8400.

8500 OFFICE MEDICAL EMERGENCIES / Prevention, recognition and management of medical emergencies; management of medically compromised patients.

8600 ADVANCED REMOVABLE PROSTHODONTICS/ Extension of course 8400 with emphasis on advanced concepts for removable complete dentures, partial dentures, immediate dentures and prosthetic restoration of implants.

## *D4 Courses*

9000 SUMMER CLINIC-C / All phases of clinical practice; mandatory attendance for fourth-year students.

9004 CLINICAL SERVICES ASSIGNMENT-C / Continuing clinical experience in selected specialties; emergency treatment in a practice setting; oral and maxillofacial surgery appropriate for general practice; oral diagnosis; treatment planning.

9020 ENDODONTICS / Advanced endodontics; endodontic-periodontic interrelationships; management of root resorption and root fractures endodontic surgery; technological advances in endodontics.

9030 DIAGNOSIS AND TREATMENT PLANNING SEMINAR / Sessions familiarize students with "phase treatment planning."

9040 ADVANCEMENTS IN TECHNIQUES AND MATERIALS / Innovations and advancements in dental materials and techniques; advantages and disadvantages; scientific basis for selection of materials and techniques.

9044 GENERAL DENTISTRY-C / All phases of general dentistry performed as required for each assigned patient; seminars and student presentations. Minimum of three semesters required. Note: Areas included in the General Dentistry program are fixed prosthodontics, geriatrics, removable prosthodontics, operative dentistry, oral and maxillofacial surgery, oral diagnosis, orthodontics, pediatric dentistry, periodontics, endodontics, community health and preventive dentistry, oral radiography, and special care clinic.

9050 SELECTED ADVANCED TO PICS IN ORAL AND MAXILLO FACIAL SURGERY / Emphasis is on more advanced and complex oral and maxillo-facial surgical concepts normally performed by the specialist in oral and maxillofacial surgery to extend the student's capability for patient evaluation.

9070 ORTHODONTICS / Comprehensive case analysis and treatment planning; role of the general dentist in detection, interception and treatment of orthodontic problems.

9080 COMMUNITY DENTISTRY EXTERNSHIP / Clinical experiences with historically underserved populations throughout a community dental center, the juvenile justice center, and other public health facilities.

9090 PEDIATRIC DENTISTRY / Lectures and small-group seminars, including child abuse, practice management, cleft lip/palate and case-based problem-solving exercises.

9110 APPLIED PHARMACOLOGY / Pharmacology in dental practice; therapeutic use of drugs; toxicology; practice in evaluating patient drug histories with special emphasis on drug interactions in patients receiving multiple drug therapy.

9120 PRACTICE ADMINISTRATION / Associateships, other professional practice opportunities, purchasing existing practices; locating and financing a dental practice; taxes and insurance; management, staffing and delegation of duties marketing; Occupational Safety and Health Administration; stress management; third-party consideration.

9140 PROFESSIONAL ETHICS/DENTAL JURISPRUDENCE / Principles and theory, professional responsibility; case discussion and analysis/decision-making; humanizing health care; virtue ethics; legal aspects of dental practice.

9160 SENIOR SEMINAR / Topics and issues of special concern to dental practitioners.

9190 ADVANCED PRINCIPLES OF PATIENT EVALUATION / Advanced problem-solving for complex dental diagnostic issues; case presentations with focus on medically compromised patients, uncommon dental diseases and treatment planning.

### *Selective Courses*

A variety of selective courses are offered to complete your requirement of two courses. Some selected courses have limited enrollment. Departments are listed in parentheses at the end of each course description.

S010 - ENTERAL SEDATION / This course will qualify participants to be permitted for enteral conscious sedation according to the Rules and Regulations of the Texas State Board of Dental Examiners. (Oral & Maxillofacial Surgery and Pharmacology)

S012 - FORENSIC DENTISTRY / This course will introduce students to the science of forensic dentistry, providing a broad overview of its scope but emphasizing forensic dental identification of deceased individuals. Identification procedures, particularly as they pertain to mass casualty situations, will be stressed. Twelve hours of hands-on laboratory participation in mock mass casualty exercises will allow students to utilize the knowledge they have gained and sharpen identification skills. (Diagnostic Sciences)

S016 - ORAL AND MAXILLOFACIAL SURGERY / Additional in-depth discussions of advanced OMS topics that are not in the core curriculum. For students interested in the field of oral and maxillofacial surgery. Topics are selected by the participants from a pool of 32 different topics. The emphasis is hands-on participation and open forum discussions. (Oral & Maxillofacial Surgery and Pharmacology)

S017 - ADVANCED TOPICS IN ENDODONTICS / Provides advanced information and training in current endodontic topics, including some of the state-of-the-art equipment used by endodontists today. These topics include: discussion of complex diagnostic cases, advanced cleaning and shaping techniques (i.e. new rotary instrumentation systems), advanced obturation techniques (i.e. warm vertical gutta-percha), notions of the utilization of an endodontic surgical microscope, and introduction to endodontic retreatment. (Endodontics)

S018 - ORTHODONTIC EXTERNSHIP / The seminar portion of the course provides the students with an opportunity to enhance their skills in the diagnosis and recognition of malocclusion and craniofacial anomalies, and the ramifications of these diagnoses in the development of comprehensive treatment plans. Faculty will provide examples of new cutting-edge technologies that are rapidly changing the approach to treatment of orthodontic patients. The externship provides an opportunity to discuss management considerations and other issues involved in the operation of a specialty practice. (Orthodontics)

S020 - EXPLORING DENTAL ACADEMIA / Information and experience on the pedagogical skills necessary to succeed as a dental educator. Includes experience through observation and mentoring by dental health professions educators. (Academic Affairs)

S021 - DENTAL PRACTICE MANAGEMENT SIMULATION / Teams of dental students "own" a simulated dental practice and have to make economic and management decisions. The computer simulation will indicate the potential outcome of their decisions. (Periodontics)

S023 - DENTAL PHOTOGRAPHY / Basic knowledge and skills; hands-on intraoral and extraoral experience. (General Dentistry)

S024 - EXTERNSHIP IN PEDIATRIC DENTISTRY / Objectives of this externship are to introduce the student to: (1) the Advanced Education Program in Pediatric Dentistry; (2) the delivery of dental care to medically and mentally compromised children and (3) the delivery of dental care to children under various forms of sedation and general anesthesia. (Pediatric Dentistry)

S025 - CERAMICS / Theory and fabrication of ceramo-metal and all-ceramic prosthodontic restorations. (Restorative Sciences)

S033 - STOMATOLOGICAL DISORDERS OF INTEREST TO THE GENERAL DENTIST / This course is designed to provide students with the knowledge and experience necessary to diagnose and treat the more common oral mucosal diseases and disorders encountered in dental practice. The course will include 4-5 hours of didactic seminars and four "hands-on" clinical sessions in the Stomatology Center. (Periodontics)

S034 - DENTAL IMPLANTOLOGY / A clinical (treatment of patient that received dental implants), laboratory, surgical and restorative exercise. Familiarize students with patient management of dental implants. (Restorative Sciences)

S042 - ATHLETIC MOUTHGUARDS / Students attend seminars and fabricate athletic mouthguards for a community athletic team. (General Dentistry)

S043 - TUTORING SKILLS SEMINAR / This course will train students nominated by course directors to become effective peer tutors by developing skills in instructional technique. (Student Development)

S048 - DENTAL ESTHETICS & VENEER RESTORATIONS / This program will give students introductory and intermediate knowledge on principles and practice of esthetic dentistry, including diagnosis and treatment procedures. (General Dentistry)

S049 - COMPUTERIZED MANAGEMENT OF THE DENTAL OFFICE / This D4 course will familiarize students with a variety of computer programs used in the contemporary dental practice, enabling them to keep adequate records, have an appreciation for computerized accounting, and learn how to retrieve information in managing the dental practice. (General Dentistry)

S052 - INTRODUCTION TO CAD/CAM TECHNOLOGY AND COMPUTERIZED DENTISTRY / This D4 course is designed to facilitate an understanding, working knowledge and clinical experience with contemporary computer-assisted design. Computer-assisted manufactured restorative procedures. (General Dentistry)

S060 - DENTAL SPANISH TERMINOLOGY FOR THE DENTAL PRACTITIONER / Provides students with a basic understanding of Spanish dental terminology and will help communication with Spanish-speaking dental patients. (Public Health Sciences)

S090 - BASIC LIFE SUPPORT INSTRUCTOR (CPR) / Completion of all training elements will provide certification status as an American Heart Association BLS (CPR) Instructor. For dental students who wish to become involved with teaching CPR. (Oral & Maxillofacial Surgery and Pharmacology)

S092 - CRANIOFACIAL RESEARCH / This course is for research participants in the Short Term Training Program only. Provides students with an introduction to dental and craniofacial research and instill recognized values of biomedical research ethics. (Biomedical Sciences)

S097 - DENTAL PUBLIC HEALTH / A clinical dentistry experience delivered through a non-profit community dental center, a juvenile detention facility or nursing home/home-bound programs. (Public Health Sciences)

S099 - PUBLIC HEALTH SCIENCES COMMUNITY PRECEPTORSHIP PROGRAM / Observation and/or provision of oral health care services for at least four days in private practice, Indian Health Service, Veterans Affairs hospital or other public health settings. (Public Health Sciences)

## Dental Hygiene

### *DH1 Courses*

3020 THEORY OF DENTAL HYGIENE PRACTICE I / Emphasis on advanced dental hygiene skills and services; provision of services to medically compromised patients.

3110 INTRODUCTION TO DENTISTRY / Introduction to the profession of dentistry and the specialty fields. Emphasis is on the role of the dental hygienist in each area.

3120 DENTAL ANATOMY / Form and function of the primary and permanent human dentition; laboratory and seminar emphasis on morphology and comparisons of teeth.

3160 PRECLINICAL DENTAL HYGIENE / Development of fundamental knowledge, skills and manual dexterity needed to perform basic dental hygiene services; lecture, laboratory and preclinical practice.

3220 ORAL RADIOLOGY / Principles of radiation; generation, properties and techniques for use of X-radiation in dentistry. Radiation safety, health physics, interpretive recognition techniques and clinical patient management for use of X-radiation in dentistry.

3250, 3340 BIOMEDICAL SCIENCES I and II / Structure of the human body, including its anatomy, biochemistry, histology, physiology and immunology with emphasis on the head and neck.

3310 EDUCATION AND BEHAVIORAL SCIENCE / Health education and promotion; emphasis on assessing the educational needs of patients, planning and implementing individualized educational plans and evaluating the outcomes; characteristics of various patient populations; techniques of patient management; strategies for effecting behavioral changes.

3410 INTRODUCTION TO PATHOLOGY / Concepts and vocabulary essential to understanding basic pathological processes; systemic pathology of organ systems and tissues; clinical manifestations that result from biological cellular alterations.

3425 HEALTH PROMOTION AND DISEASE PREVENTION / Prevalence and etiology of oral diseases; emphasis on the role of the dental hygienist in prevention of periodontal disease and dental caries; methods for prevention of oral cancer, traumatic injury, systemic disease and malocclusion; occupational hazards.

3430 MICROBIOLOGY / Relationships between microorganisms and the human in health and disease; microbiology of the oral cavity.

3325 APPLIED DENTAL MATERIALS / Didactic and laboratory instruction in the principles of the science of dental materials and in procedures within the scope of dental hygiene practice.

3830 CLINICAL DENTAL HYGIENE I / Application of dental hygiene principles and techniques to patient care.

### *DH2 Courses*

4010 NATIONAL BOARD REVIEW / Reviews applications of previous course content using a seminar format in preparation for the National Board Dental Hygiene Exam.

4015 PHARMACOLOGY / Actions, indications and contraindications of drugs; emphasis on drugs frequently encountered in dentistry.

4025 ORAL PATHOLOGY / Introduction to pathological conditions affecting the oral soft tissues, bones and/or teeth; oral manifestations of systemic diseases.

4110 MEDICAL EMERGENCIES / Discussions on the preparations for handling emergencies; prevention, recognition and management of various emergencies. The course includes case scenario presentations and mock “hands-on” drills.

4140, 4240, 4820 CLINICAL DENTAL HYGIENE II, III, IV / Comprehensive dental hygiene care through clinical application of procedures; intramural (dental school) and extramural site rotations.

4210 PROFESSIONAL ETHICS / Principles and theory; case analysis and decision-making; humanizing health care; virtue ethics.

4220 COMPREHENSIVE CARE SEMINAR / Activities designed to integrate dental hygiene care with total patient care; includes a case presentation.

4310 ORAL RADIOGRAPHY / Advanced clinical application of principles, procedures and techniques of oral radiology.

4320 PERSPECTIVES IN DENTAL HYGIENE / This course introduces the student to potential career options as a dental hygienist, including clinical practice, dental hygiene education, hospital/clinic administration, sales, educational consulting, etc. This course also includes principles of human relations and office management, interviewing skills and resumé writing. Ethical and jurisprudence issues, such as child abuse, informed consent, malpractice, record-keeping, substance abuse and chemical dependency as they relate to dental hygiene practice are also emphasized.

4410 GERONTOLOGY / Specific needs of older adults; strategies for meeting needs; attitudes of health care providers toward geriatric patients; influence of attitudes on provision of care.

4510 PEDIATRIC DENTISTRY / Child development as the basis for management of behavior in the dental environment.

4530 PUBLIC AND COMMUNITY HEALTH / Disease control; health care needs and utilization; governmental assistance; fund-raising; insurance coverage in health care delivery systems; emphasis on needs assessment, planning, implementation and evaluation of programs to fulfill oral health needs of community groups; includes independent field experience.

4610 PERIODONTICS / Characteristics, etiology and treatment of inflammatory and degenerative diseases of the supporting tissues of the teeth; emphasis on the relationship of periodontics to the practice of dental hygiene.

4620 THEORY OF DENTAL HYGIENE PRACTICE II / Management of patients with special needs.

4710 APPLIED RESEARCH METHODS / Practical experience in applying principles of research methodology; includes preparation of a formal proposal and table clinic under mentorship of individual faculty.

4715 RESEARCH METHODS / Identification of research problems and variables; sampling; research design; statistical testing of data; critical review of dental literature.

4810 LOCAL ANESTHESIA AND NITROUS OXIDE/OXYGEN SEDATION / Regional pain control, nitrous oxide/oxygen conscious sedation and enteral conscious sedation: patient evaluation, pharmacology of agents, techniques of administration, complications and risks.

## Specialty Core Curriculum

BMS 5V69 ADVANCED GROWTH AND DEVELOPMENT: MECHANISMS OF DEVELOPMENT / Normal prenatal growth and development. Patterns and mechanisms of growth and maturation.
Svoboda/Buschang—2 sem. hrs.

BMS 5V73 ADVANCED HUMAN CRANIOFACIAL DEVELOPMENT AND CRANIOFACIAL ANOMALIES / Detailed investigation of the basic processes and mechanisms of prenatal development and postnatal growth and adaptation of the craniofacial region.
Svoboda—variable

OP 5V21 ADVANCED ORAL PATHOLOGY / Diseases of the head and neck; developmental malformations, oral signs of systemic diseases, salivary gland disorders; neoplasms of odontogenic and nonodontogenic origin; 4 semester hours credit plus 1 additional hour for optional laboratory.
Kessler—2 sem. hrs.

BMS 5312 APPLIED MEDICAL PHYSIOLOGY / Cardiovascular, respiratory and renal systems; clinically relevant, abnormal physiology. Prerequisite: Mammalian Physiology 5804 or equivalent.
Bellinger—2 sem. hrs.

BMS 5V40 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES I / Processes of epithelial-mesenchymal interaction as related to odontogenesis; amelogenesis; dentiogenesis; collagen formation; intracellular and extracellular calcium homeostatis; plaque and calculus; and wound healing.
Svoboda—variable

BMS 5V42 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES II/ Processes of epithelial-mesenchymal interaction as related to odontogenesis, amelogenesis; dentiogenesis; collagen formation; intracellular and extracellular calcium homeostatis; plaque and calculus; and wound healing. The ultrastructure of the involved cells and tissues is emphasized. Clinical correlations also are developed.
Svoboda—variable

BMS 5214 CLINICAL PHARMACOLOGY / Selection and evaluation of dentally-related drugs and review of current literature; seminar format; limited to clinical specialty students.
Sharma—1.5 sem. hrs.

OMS 5218 CONSCIOUS SEDATION / Pain and anxiety control methodologies; pharmacology of sedative-hypnotic, anxiolytic drugs and nitrous oxide; routes of administration.
Henderson—1 sem. hr.

BMS 5V04 HEAD AND NECK ANATOMY / Surgical anatomy and distribution of facial nerves and vasculature of particular interest in dentistry.
Hutchins—1.5 sem. hrs.

BMS 5251 IMMUNOLOGY / Update on the principles of immunology with an emphasis on oral aspects and related diseases.
Nouri-Shirazi—1 sem. hr.

OMS 5221 INTERNAL MEDICINE / Oral manifestations of systemic disease and influence of systemic disease requiring modification of treatment planning and critical care.
Schow—1 sem. hr.

BMS 5350 ORAL MICROBIOLOGY / Environment of the mouth and its relation to the endogenous and exogenous oral microbiota; discussion of special differences; immunologic determinants of health and disease; lectures and student projects.
Ezzo—2 sem. hrs.

OD 5250 ORAL RADIOLOGY / Generation of X-rays; operation of X-ray unit; factors in the production of radiographic images, intraoral, extraoral and specialized radiographic techniques; basic concepts of radiation physics, biology and protection.
Benson—1 sem. hr.

OMS 5233 PHYSICAL DIAGNOSIS / Patient evaluation and examination, history-taking medical consultation and physical diagnosis and treatment modification in dental patients.
Schow—1 sem. hr.

AGD 5205 PRACTICE MANAGEMENT / Topics related to practice development and management location, financing, equipment, supplies, personnel, business management, insurance, managed care and patient records. Other areas include ethics, computers, quality assurance, peer review, infection control, risk management, marketing and building a harmonious office team.
Wakefield—1.5 sem. hr.

BMS 5221 RESEARCH DESIGN AND METHODOLOGY / Introduction of basic scientific concepts; development of research questions and hypotheses; formulation of research proposals and overview of research methods used in dentistry.
Buschang—2 sem. hrs.

BMS 5222 APPLIED BIOSTATISTICS / Introduction to concepts and methods of descriptive and inferential statistics with applications in dentistry emphasized. Topics include descriptive statistics, elementary probability, comparison of means and proportions, confidence intervals, hypothesis testing, statistical power, simple linear regression and correlation. Parametric and nonparametric methods are discussed. More advanced methods (multiple regression, analysis of variance, logistic regression) are briefly described but not covered in detail. Applications and examples in dentistry are stressed throughout. Computer laboratory with emphasis on using statistical software is to be taken concurrently.
Schneiderman—2 sem. hrs.

HPE 5225 TEACHING SKILLS / Overview of teaching principles and methods, including instructional planning, test construction, designing and developing instructional materials, lecturing, clinical teaching, individualizing instruction, and evaluating teaching effectiveness.
Brooks—1 sem. hr.

## Advanced Education in General Dentistry

5000 CLINICAL DENTISTRY / Clinical diagnosis and treatment of advanced comprehensive multidisciplinary cases under faculty guidance and supervision.
0 sem. hours

5201 IMPLANT DENTISTRY / Diagnosis, management and treatment of both fixed and re m ovable implant patients. Lecture, seminars and patient treatment.
Staff—1.5 sem. hrs.

5205 PRACTICE MANAGEMENT / All areas of practice and business management will be discussed, including office management, personnel management, professional ethics, financial planning, starting a practice, office design and legal responsibilities.
Staff—1.5 sem. hours

5213 ADVANCED REMOVABLE PROSTHODONTICS / Diagnosis, treatment planning and clinical treatment of complicated cases requiring advanced skills in removable prosthodontics.
Staff—1.5 sem. hrs.

5214 ADVANCED FIXED PROSTHODONTICS / Diagnosis, treatment planning and clinical treatment of complicated cases requiring advanced skills in fixed prosthodontics, including implant restoration.
Staff—1.5 sem. hrs.

5215 ADVANCED CLINICAL PERIODONTOLOGY / Diagnosis, treatment planning, prognosis and instrumentation skills; basic surgical techniques.
Staff—1.5 sem. hrs.

5216 ADVANCED CLINICAL ORTHODONTICS / Diagnosis and evaluation of a variety of malocclusions; emphasis on minor tooth movement, interceptive treatment and maintenance of arch integrity.
Staff—1.5 sem. hrs.

5217 CURRENT CONCEPTS IN OPERATIVE DENTISTRY / Recent theories and techniques relating to restorative dental materials; emphasis on indications and contraindications for tooth-colored restorative materials; esthetic dentistry.
Staff—1.5 sem. hrs.

5218 ADVANCED PEDIATRIC DENTISTRY / Diagnosis, treatment planning and clinical treatment of complex pediatric patients; emphasis on medically compromised and behavior management cases.
Staff—1.5 sem. hrs.

5219 TREATMENT PLANNING CONFERENCES / Diagnosis and treatment planning for comprehensive cases involving a multidisciplinary approach; student presentation of complex cases to a graduate faculty forum; defense of treatment plans using documented scientific or clinical evidence.
Staff—1.5 sem. hrs.

5220 CURRENT LITERATURE REVIEWS / Detailed review of relevant literature on topics selected by the graduate faculty and presentation by graduate students; enhancement of student knowledge in selected subject areas and development of ability to critically evaluate scientific literature.
Staff—1.5 sem. hrs.

5221 CLINICAL PATHOLOGY / Presentation and discussion of clinical cases representing various types of oral pathology of both hard and soft tissues; formulation of a logical differential diagnosis and appropriate treatment.
Staff—1.5 sem. hrs.

5222 CLINICAL ENDODONTICS / Diagnosis, management and treatment of patients with complex endodontic problems; surgical and nonsurgical treatment and retreatment of complicated cases.
Staff—2 sem. hrs.

5224 ETHICS IN DENTISTRY / Ethical approach to practice promotion and professional interactions.
Staff—1.5 sem. hrs.

5227 ADVANCED GERIATRIC DENTISTRY / Diagnosis, treatment planning and treatment of geriatric patients with special needs; emphasis on medically, physically and mentally compromised patients.
Staff—1.5 sem. hrs.

5228 ADVANCED DENTISTRY FOR SPECIAL CARE PATIENTS / Clinical application and experience in the care and treatment of special care patients with medical, physical and mental handicaps.
Staff—1.5 sem. hrs.

5303 ADVANCED MAXILLOFACIAL SURGERY / Principles of oral surgery techniques and procedures in the outpatient clinic and operating room environments; demonstrations and clinical application.
Staff—2 sem. hrs.

# Course Descriptions

## Baylor College of Dentistry

## Biomaterials Science

The courses listed below are available through the Department of Biomaterials Science. Additional basic science courses offered by the Department of Biomedical Sciences, The University of Texas Southwestern Medical Center, The University of Texas at Arlington and The University of North Texas may be applied toward the 30 semester hour minimum.

5150 TEACHING BIOMATERIALS SCIENCE / Instructional methods and teaching aids for the teaching of biomaterials science to dental auxiliary students, predoctoral dental students and postdoctoral dental students.

Watanabe–1.5 sem. hrs.

5260 MATHEMATICS FOR MATERIALS STUDY / Review of algebra, trigonometry and analytic geometry; overview of differential and integral calculus; series expansions; ordinary differential equations; matrix algebra; numerical methods; visual display of research data.

Griggs–2 sem. hrs.

5161 INTRODUCTION TO DENTAL APPLICATIONS / Opportunities and requirements for dental applications of materials; overview of dentistry; current challenges in dental practice; faculty research interests; need-based research design; key properties, esthetics and biocompatibility demands for dental materials.

Griggs–1 sem. hrs.

5262 FUNDAMENTALS OF MATERIALS SCIENCE / Atomic structure and bonding; crystalline and noncrystalline structures; solid solutions under equilibrium conditions (phase diagrams); diffusion kinetics; phase transformations; chemical and physical material properties; overview of synthetic composite materials.
Okabe–2 sem. hrs.

5201 SCIENCE OF MATERIALS - METALS / Fundamentals of metals; ferrous and nonferrous alloys; influence of microstructure on the chemical and physical properties of metals; equilibrium and nonequilibrium phase transformations; metal processing; metal applications.

Cai–2 sem. hrs.

5202 SCIENCE OF MATERIALS - POLYMERS / Fundamentals of polymers; formation of polymer structure; variation in structure; properties of thermoplastic and thermosetting polymers; special polymer products; polymer processing; polymer applications.
Prerequisite: DM 5262
Griggs–2 sem. hrs.

5203 SCIENCE OF MATERIALS - CERAMICS / Fundamentals of ceramics; coordination number; interstitial sites; silica and silicate structures; defect structures; thermal, optical, and mechanical properties of ceramics; ceramic processing; ceramic applications.
Prerequisite: DM 5262
Griggs–2 sem. hrs.

5204 SCIENCE OF MATERIALS - COMPOSITES / Fundamentals of composites; matrix materials; reinforcement materials; interfaces; composite processing; microscale and macroscale properties; laminates; synthetic and natural composite structures; composite applications.
Prerequisite: DM 5262
Griggs–2 sem. hrs.

5206 ADVANCED BIOMATERIALS SCIENCE - METALS AND ALLOYS / Properties and applications of metals and alloys in dentistry; dental amalgams, direct gold, cast and wrought noble and base metal alloys; casting, soldering, brazing and welding dental alloys; metal-ceramic systems; metals for implant dentistry, endodontics, orthodontics and surgical instruments and appliances; powder metallurgy in dentistry; non-cast metal-ceramic systems.
Prerequisites: DM 5262, DM 5201
Cai–2 sem. hrs.

5207 ADVANCED BIOMATERIALS SCIENCE - POLYMERS AND RESIN COMPOSITES / Properties and applications of polymers and resin composites in dentistry; polymers for denture bases, relines and teeth; elastomeric impression materials; direct restorative materials; silicones, polyurethanes and acrylics for maxillofacial prosthetics; dentin bonding agents; resin cements; glass ionomers.
Prerequisites: DM 5262, DM 5202
Faculty–2 sem. hrs.

5208 ADVANCED BIOMATERIALS SCIENCE - CERAMICS AND GLASSES / Properties and applications of ceramics and glasses in dentistry; ceramics for inlays, onlays, veneers, crowns and denture teeth; core ceramics; metal-ceramic porcelains; staining porcelains; ceramic die materials; ceramics for implants; castable ceramics; machinable ceramics; hydroxyapatite and natural ceramics.
Prerequisites: DM 5262, DM 5203
Griggs–2 sem. hrs.

5211 STANDARDS FOR MATERIALS TESTING / American Dental Association acceptance and certification program; ISO, ANSI and ASTM standards; ADA specifications; procedure for introducing dental materials into the American market; laboratory experience in testing materials according to ADA specifications.
Prerequisite: DM 5262
Faculty–2 sem. hrs.

5215 MATERIALS CHARACTERIZATION / Introduction to the fundamentals and techniques for modern materials analysis; stereology; scanning and transmission electron microscopy; x-ray microanalysis; x-ray and electron diffraction; thermal analysis.
Prerequisite: DM 5262
Cai–2 sem. hrs.

5221 MECHANICAL BEHAVIOR OF MATERIALS / Principles of mechanical damage in materials; elastic and plastic deformation; viscoelasticity and creep; strength, fast fracture and fatigue; hardness and wear resistance; methods of strengthening and toughening materials; mechanical test methods; failure analysis.
Prerequisite: DM 5262
Griggs–2 sem. hrs.

5224 MATERIALS THERMODYNAMICS / Principles of energetic equilibrium as applied to materials science; state functions and process variables; criteria for equilibrium; statistical analysis of entropy states; enthalpy of mixing; free energy basis for unary and binary phase diagrams; capillarity and surface energy; crystalline defects.
Prerequisites: DM 5260, DM 5262
Griggs–2 sem. hrs.

5227 COLOR THEORY FOR DENTISTRY / Principles of optical properties of materials; applications of color theory in dentistry; descriptive color systems; spectral energy distribution; colorants and color modifiers; metamerism; simultaneous contrast, shade matching and porcelain staining.
Prerequisite: DM 5262
Faculty–2 sem. hrs.

5230 ENVIRONMENTAL EFFECTS ON MATERIALS / Principles of *in vivo* and *in vitro* degradation of materials through chemical, physical and biological processes; mechanisms and characterization of electrochemical corrosion and passivation; corrosive environments; damage analysis.
Prerequisite: DM 5262
Cai–2 sem. hrs.

5240 BIOCOMPATIBILITY OF MATERIALS / Biocompatibility testing principles and methods; interactions between restorative dental materials and the oral environment; interaction between dental implant materials and surrounding tissue; local, topical and systemic toxicology of dental materials, vapors and particulates; histological assessment.
Prerequisite: DM 5262
Faculty–2 sem. hrs.

5V60 SPECIAL PROBLEMS IN BIOMATERIALS SCIENCE / Appropriate courses offered at other institutions; topics of individual interest to the student; literature review; development of research protocol; master's thesis proposal.
Faculty–Variable sem. hrs.

5V98 RESEARCH FOR THE MASTER'S THESIS / Design original research project in chosen topic; conduct laboratory work; perform data analysis; prepare written description; and prepare oral defense.
Faculty–Max. 6 sem. hrs.

## Graduate Program in Biomedical Sciences

5301 NEUROSCIENCE / Lectures and laboratory sessions on gross and microscopic anatomy of the human central and peripheral nervous system. Neurophysiology of the central nervous system, peripheral nerves, special sense, autonomics and clinical mediation.
Hutchins—2 sem. hrs.

5402 GENERAL HISTOLOGY / General histology and microscopic anatomy of the four basic tissues. Laboratory study of electron micrographs and prepared slides is employed.
Opperman—3 sem. hrs.

5603 GROSS ANATOMY / Conceptual and functional basis for understanding macroscopic structure of the human body utilizing laboratory dissection of human cadavers. Regional anatomy of the back, thorax, upper limb and head is emphasized.
Hutchins—4 sem. hrs.

5V04 HEAD AND NECK ANATOMY / Special emphasis on surgical anatomy and distribution of nerves and vasculature of particular interest in the field of dentistry.
Hutchins—1.5 sem. hrs.

5205 ORAL HISTOLOGY / Origin and development of the dental tissues and their related structures. Current publications and research reports are used to provide students with an opportunity to investigate some phase of active interest to them and their anticipated future interest in practice.
Spears—3 sem. hr.

5306 GENERAL BIOCHEMISTRY / Chemistry, function and occurrence of the principal organic materials in the human, together with a discussion of enzymology and carbohydrate and lipid metabolism.
Miller—2 sem. hrs.

5307 CELLULAR & MOLECULAR BIOLOGY / Prerequisite: 5306 or equivalent. Intermediary metabolism of protein, protein synthesis, nucleic acid metabolism and biochemical endocrinology.
Svoboda—2 sem. hrs.

5208 MICROBIOLOGY / Introduction to basic microbiology with emphasis on oral and medical microbes, taxonomy and microbial physiology. Taught in conjunction with dental curriculum. Additional readings and discussion for graduate student.
Ezzo—3 sem. hrs.

5210 MICROBIOLOGY LABORATORY / Introduction to classical laboratory methods of microbial staining, microscopy, isolation and cultivation. Taught in conjunction with 5208.
Ezzo—1 sem. hr.

5611 MAMMALIAN PHYSIOLOGY / Basic physiology principles of cells, muscle, nerve, blood, heart, circulation, respiration, digestion, excretion and central nervous system in maintaining homeostasis. Classical laboratory experiments are used to demonstrate these principles.
Wong—4 sem. hrs.

5312 APPLIED MEDICAL PHYSIOLOGY / Prerequisite: 5611 or equivalent. Basic physiology of the cardiovascular, respiratory and renal systems. Each area is expanded to include physiology problems seen clinically as they relate to the dental intern.
Bellinger—2 sem. hrs.

5221 RESEARCH DESIGN AND METHODOLOGY / An introduction to the research process; sufficient background in research design and methodology is provided to enable students to critically evaluate literature and assist in the formulation of research projects. Also includes discussion of rules and regulations for human and animal research.
Buschang—2 sem. hrs.

5222 APPLIED BIOSTATISTICS / Overview of applied biostatistics with an emphasis on oral health research. Training includes computer-based instruction in data analysis using SPSS.
Schneiderman—2 sem. hrs.

5324 ADVANCED BIOSTATISTICS / Prerequisites: CS5222 and 5122 or equivalent. Advanced biostatistical methods, including multivariate and longitudinal analysis; computer simulations; applications in craniofacial biology.
Buschang—2 sem. hrs.

5126 RESPONSIBLE CONDUCT IN BIOMEDICAL RESEARCH / A discussion of issues relating to ethical conduct and research. Offered spring semester of odd years.
Dechow—0.5 sem. hr.

5127 MICROSCOPY IMAGING AND ASSOCIATED TECHNIQUES / Principles and methods of scanning electron microscopy. Technical instruction includes tissue preparation and equipment maintenance. Includes the usage of scanning electron, light, fluorescent and confocal microscopes and computer imaging techniques.
Spears—2 sem. hrs.

5229 THE USE AND CARE OF ANIMALS IN RESEARCH AND TRAINING / Overview of the use and care of laboratory animals. Includes discussion of regulations and ethical issues.
Bellinger—1 sem. hr.

5214 CLINICAL PHARMACOLOGY / Selection and evaluation of dentally-related drugs and review of current literature; seminar format. Limited to clinical specialty students.
Sharma—1.5 sem. hrs.

5V40 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES I/ Prerequisites: 5208 or equivalent; 5306, 5307 or equivalent. A general survey intended to provide background information concerning the methods and theory of modern cellular/molecular biology. This lays the groundwork for more advanced study, aids those interested in incorporating cellular/molecular approaches into their research work and enables one to read, understand and evaluate current scientific literature.
Svoboda—2 sem. hrs.—variable

5341 TECHNIQUES IN CELL AND MOLECULAR BIOLOGY / Prerequisite 5340 or equivalent. Principal methods of cellular/molecular investigation of proteins and nucleic acids including immunocytochemistry, western blotting, northern/southern blotting, radioirnmunoassay, *in situ* hybridization, polymerase chain reaction, intracellular recording and fluorescence confocal microscopy.
Kramer—2 sem. hrs.

5V42 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES II / Processes of epithelial-mesenchymal interaction as related to odontogenesis; amelogenesis; dentinogenesis; collagen formation, intracellular and extracellular calcium homeostasis; plaque and calculus; and wound healing.
Svoboda—1 sem. hr.—variable

5350 ORAL MICROBIOLOGY / Prerequisites: 5208, 5209, 5210 or equivalent. The environment of the mouth is described and its relation to the endogenous and exogenous oral microbiota; relationship between disease and bacterial species; discussion of species differences; molecular mechanisms of bacterial pathogenesis; and host response to oral microbes.
Staff—3 sem.hrs.

5251 IMMUNOLOGY / Update on the principles of immunology with an emphasis on oral aspects and related diseases.
Newman—2 sem. hrs.

5360 ADVANCED NEUROSCIENCE / Prerequisite: 5301 or equivalent. Advanced concepts of neuroscience are presented with an in-depth coverage of membrane and system function.
Hutchins/Wong—1 sem. hr.

5462 ENDOCRINOLOGY / Prerequisites: 5611 and 5340 or equivalent. This course surveys endocrine physiology with a special emphasis on the control of growth. The course includes several laboratory sessions on endocrine-related molecular biology, fluid collection for hormone assays, and assay techniques for hormones and related compounds.
Bellinger—3 sem. hrs.—odd years

5263 SENSORY NEUROBIOLOGY AND PAIN / An overview of the various sensory systems is explored with the primary emphasis on the processing of pain and temperature information from the craniofacial complex.
Hutchins—1 sem. hr.—odd years

5V69 GROWTH AND MECHANISMS OF DEVELOPMENT / Normal prenatal growth and development. Patterns and mechanisms of growth and maturation.
Buschang/Svoboda—1 sem. hr.

5V73 ADVANCED HUMAN CRANIOFACIAL DEVELOPMENT AND CRANIOFACIAL ANOMALIES / Detailed investigation of the basic processes and mechanisms of postnatal growth and adaptation of the craniofacial region. This course emphasizes the areas of controversy surrounding current understanding of the factors influencing postnatal craniofacial growth and form; the adaptive capabilities of growth and form; the adaptive capabilities of craniofacial tissues; the effect of altered function on craniofacial growth and form; and the influence of treatment on craniofacial growth and form. Also considered are theories of craniofacial growth.
Svoboda—1 sem. hr.—variable

5274 SPECIAL PROBLEMS IN POSTNATAL CRANIOFACIAL GROWTH AND DEVELOPMENT I / Growth, development, adaptation and aging of craniofacial structures and tissues (especially skeletal); somatic growth and development; clinical implications; theories of craniofacial development.
Faculty—1 sem. hr.

5V75 PHYSICAL GROWTH AND MATURATION / Pattern and mechanisms of postnatal growth and maturation.
Buschang—0.5 sem. hr.—variable

5376 EVOLUTIONARY AND FUNCTIONAL MORPHOLOGY / Comparative anatomy and evolution of craniofacial structure, with emphasis on current techniques of electrophysiology, kinesiology and musculoskeletal biomechanics of orofacial function.
Dechow—1 sem. hr.

5377 BIOLOGY OF BONE AND MINERALIZED TISSUES / Overview of modern studies of bone structure, function and adaptation with specific relevance for the craniofacial region.
Dechow/Opperman—1 sem. hr.

5278 CARTILAGE BIOLOGY / This course familiarizes the student with the biology of cartilaginous tissues, with emphasis on the structureand metabolism of the chondrocyte and its matrix. Implications for the biomedical properties of the tissue and for the development of degenerative changes are explored.
Hinton/Svoboda—1 sem. hr.

5279 THE TMJ: GROWTH, DEVELOPMENT AND ADAPTATION / Review of the structure and characteristics of the tissues comprising the temporomandibular joint, as well as alterations taking place during prenatal development and postnatal maturation. Current views regarding local environmental determinants of joint adaptation and of the possibilities of growth alteration are presented.
Hinton—1 sem. hr.

5V81 SEMINAR: CURRENT ISSUES IN BONE AND MINERALIZED TISSUE BIOLOGY. Topics of current importance in bone and mineralized tissue biology.
Dechow—1 sem. hr.

5190 SEMINAR: CURRENT ISSUES IN SCIENCE / Guest lectures, workshop lectures and discussion includes topics of current interest to program faculty and students and of general interest in the biomedical sciences.
Faculty—1 sem. hr.

5V91, 5V92 SPECIAL TOPICS IN BIOMEDICAL SCIENCES / Reading and discussion of current literature pertinent to topic of seminar. Presentation of papers on selected topics is required for all students. May be used for multiple courses in any one semester.
Faculty—variable

5V93, 5V94, 5V95 DIRECTED READINGS / Individualized courses for single students involve in-depth study of specific topics in the biomedical sciences.
Faculty —variable

5V96, 5V97 RESEARCH AND SPECIAL PROBLEMS / Concentrated investigation in any area of biomedical sciences. This course may be used for individualized laboratory rotations or research.
Faculty—variable

5V98 THESIS RESEARCH AND PREPARATION OF MASTER'S THESIS
Faculty—variable

5V99 DISSERTATION/ Course used by students after achieving candidacy for research and preparation of Ph.D. dissertation.
Faculty—variable

*Relevant Courses Available at Other Institutions in the Metroplex**

| | | |
|---|---|---|
| BMS5630 | Classical and Molecular Genetics | UTD |
| BMS5631 | Eukaryotic Molecular and Cell Biology | UTD |
| BMS5632 | Biochemistry/Proteins and Nucleic Acids | UTD |
| BMS5633 | Molecular Biology | UTD |
| BMS5634 | Cell Biology | UTD |
| BMS5V35 | Methods in Molecular and Cell Biology | UTD |
| BMS5V36 | Topics in Molecular Biology | UTD |
| CMB5096 | Cellular and Molecular Biology | UTSW |
| AE1312 | Statistics | UTA |
| AE2312 | Dynamics | UTA |
| ME2312 | Structural Statistics | UTA |
| ME5340 | Finite Element Application | UTA |

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|---|---|
| *UTA | The University of Texas, Arlington |
| *UTD | The University of Texas, Dallas |
| *UTSW | The University of Texas Southwestern Graduate School of Biomedical Sciences |

Courses in Clinical Research Methodology are also offered through The University of Texas Southwestern Medical Center.

## Dental Hygiene

*Baylor College of Dentistry Caruth School of Dental Hygiene*

5100 ADVANCED DENTAL HYGIENE CLINICAL SKILLS / Includes self-assessment and development of advanced dental hygiene clinical skills. Contains intramural and/or extramural rotations to further advance clinical proficiency.
Campbell—1 sem. hr.

5112 INTRODUCTION TO FACULTY RESPONSIBILITIES AND ISSUES IN HIGHER EDUCATION / This course exposes the prospective new faculty member to the functions and responsibilities that help meet their institution's mission with respect to teaching, service and scholarly activity.
DeWald—1 sem. hr.

5130 CLINICAL DENTAL HYGIENE TEACHING PRACTICUM / This practicum course is designed to provide the graduate student with experience in clinical teaching and evaluation of first- and/or second-year dental hygiene students in the areas of patient assessment, treatment planning, dental hygiene educational and clinical services, patient management, and professionalism. This course is offered in both the fall and spring semesters.
Gutmann—1 sem. hr.

5200 EDUCATIONAL RESEARCH / Students will develop the knowledge and skills necessary to be intelligent consumers and producers of educational research. A focus is on conducting survey research.
McCann—2 sem. hrs.

5201 TEACHING STRATEGIES: DENTAL HYGIENE EDUCATION I / This course introduces the graduate student to a variety of clinical education philosophies. Cognitive, affective and psychomotor learning theories are addressed, and clinical teaching methodologies are emphasized. Evaluation mechanisms for assessing a novice student's progress and development are explored.
Campbell—2 sem. hrs.

5202 TEACHING STRATEGIES: DENTAL HYGIENE EDUCATION II / This course will expose the student to a variety of principles and methods that will familiarize the student with the requirements of clinical teaching, including accreditation, scheduling, dispensary management, developing positive staff and faculty interactions, and mentoring undergraduate students on projects.
Campbell—2 sem. hrs.

5208, 5118, 5219 HOSPITAL ADMINISTRATION PRACTICUM I, II and III / This series of practicums prepares the student for an institutional administrative/management position. Topics include hospital organization and protocol, hospital dentistry organization, health care financing and the changing health care market, human resource issues, assessment, planning and interventions as they relate to patient care and managing a dental clinic.
Seale—total 5 sem. hrs.

5210 SPECIAL CARE PATIENT SEMINAR / Contemporary health care issues that affect the medical and dental needs of special care patients will be discussed. Students in the education track will develop a special-needs patient course for a fictitious dental or dental hygiene program and include curriculum content, goals and objectives that address patients who are mentally, medically or physically challenged. In addition, they will prepare a lecture on a special-needs patient and present it to the undergraduate dental hygiene or graduate students. Students in the health administration track will develop a fictitious health care facility or a mobile dental clinic for special-needs patients and include targeted population, objectives, policy statements, budget, personnel and equipment. Health administration tract students will also present a dental in-service to either the nurses or aids that care for patients with disabilities in a group or nursing home or hospital setting.
Muzzin—2 sem. hrs.

5211 CLINICAL CASE STUDY / This course helps the student develop and apply the knowledge and skills necessary to develop a formal presentation of a case study.
Campbell—2 sem. hrs.

5314 CLASSROOM TEACHING PRACTICUM / This course provides the graduate student with additional opportunities to enhance classroom teaching experiences. The student will work directly with the course director to identify a topic of interest and to develop a unit of instruction, which will include goals, learning objectives, lesson plans and examination items. The student will also determine the most appropriate teaching methodologies, audio-visual aids and evaluation mechanisms.
Prerequisite: 5301
Gutmann—1 sem. hr.

5301 DIDACTIC TEACHING STRATEGIES / This course introduces the graduate student to the processes involved in the development of a course syllabus and a university-level classroom presentation. The student will develop a syllabus for a dental hygiene course and a classroom presentation that will include a lesson plan containing goals, learning objectives, examination items, a test blueprint, outline of material, evaluation mechanism and audiovisual materials. The student also will be introduced to item analyses and test blueprints. Academic integrity and evaluation of teaching performance also will be discussed.
Gutmann—2 sem. hrs.

5V88 RESEARCH FOR PRACTICUM PROJECT / (Non-thesis Option: Administrative Track) Students assess the need for, plan, implement and evaluate a major project in their interest area.
Staff—min. 3 sem. hrs.

5V89 PRACTICUM PROJECT / Students prepare a written report of their project and formally present and orally defend this project to the faculty.
Staff—min. 3 sem. hrs.

5V98 RESEARCH FOR THE MASTER'S THESIS / Conduct original research in chosen topic; literature review, data analysis.
Staff—min. 3 sem. hrs.

5V99 THESIS / Formal presentation of research literature review, objectives, methods, data analysis, results, discussion and conclusions in acceptable written form. Oral defense is also required.
Staff—min. 3 sem. hrs.

## Endodontics

5111 CURRENT LITERATURE REVIEW / Detailed review of recently published literature on all subjects related to endodontics; critical evaluation of the scientific literature; student assignment of recent issues of 28 selected dental journals for critical review of pertinent articles for scientific merit and clinical relevance. Students register for a total of 9 credit hours.
Regan—1 sem. hr.

5121 ENDODONTIC TREATMENT PLANNING CONFERENCE / Diagnosis and treatment planning for complicated endodontic cases requiring advanced skills; case presentation by students and graduate faculty in a prescribed format; formulation and defense of diagnosis and treatment plan with biologic rationale based on documented scientific or clinical evidence. Students register for a total of 9 credit hours.
Glickman/Staff—1 sem. hr.

5141 SPECIAL PROBLEMS IN ENDODONTICS / In-depth exploration of subjects of individual's interest under graduate faculty supervision; concentrated and detailed search for information and analysis of published data as a basis for special reports, protocol development, research orientation and formulation. Students may register for a total of 6 semester hours.
Glickman/Staff—1 sem. hr.

5142 ADVANCED SPECIAL PROBLEMS IN ENDODONTICS / Advanced topics of individual scientific or clinical interest. Students may register for a total of 5 semester hours.
Glickman—1 sem. hr.

5201 PRINCIPLES OF CLINICAL ENDODONTICS I / Development and discussion of the scientific basis for the application of clinical treatment modalities in lecture/seminar format.
Glickman/Staff—2 sem. hrs.

5202 PRINCIPLES OF CLINICAL ENDODONTICS II / Continuation of END 5201 with advanced clinical concepts.
Glickman—2 sem. hrs.

5203 PULPAL/PERIRADICULAR BIOLOGY I / Biological basis for treatment in seminar/lecture format based on classic and current scientific literature; embryology, physiology and microanatomy of tissues and related structures; integration of prevention, etiology, diagnosis and treatment using scientific principles.
Glickman—2 sem. hrs.

5204 PULPAL/PERIRADICULARBIOLOGY II / Biologic basis for treatment rationale based on classic and current literature. Continuation of END 5203.
Glickman—2 sem. hrs.

5205 PULPAL/PERIRADICULAR BIOLOGY III / Continuation of END 5204 with advanced concepts.
Glickman—2 sem. hrs.

5206 PULPAL/PERIRADICULAR BIOLOGY IV / Continuation of END 5205 with advanced concepts.
Glickman—2 sem. hrs.

5222 CLINICAL ENDODONTICS / Diagnosis, management and treatment of patients requiring endodontic therapy by beginning graduate students under faculty supervision; case selection and patient load determined by student aptitude and clinical competence; students register for a total of three semesters.
Glickman/Staff—2 sem. hrs.

5223 ADVANCED CLINICAL ENDODONTICS / Diagnosis and management of patients with complex treatment problems; includes medically compromised patients, retreatments, surgeries and difficult interdisciplinary cases.
Glickman/Staff—2 sem. hrs.

5V98 RESEARCH FOR THE MASTER'S THESIS / Original research on a meaningful problem related to endodontics as partial fulfillment for master's degree; students establish a research problem, search the literature, prepare a research proposal for submission to funding agencies and conduct necessary experimental and control procedures to test the established hypothesis. Students register for 1 to 5 semester hours.
Glickman/Staff—max. 3 sem. hrs.

5V99 THESIS / Credit for completion of thesis in acceptable form.
Glickman/Staff—max. 2 sem. hrs.

## Health Professions Education

DH 5112 INTRODUCTION TO FACULTY RESPONSIBILITIES AND ISSUES IN HIGHER EDUCATION / This course exposes the prospective new faculty member to the functions and responsibilities that help meet their institution's mission with respect to teaching, service and scholarly activity.
DeWald—1 sem. hr.

HPE 5225 TEACHING SKILLS FOR HEALTH PROFESSIONS EDUCATORS / Provides an overview of teaching principles and methods. Geared toward the special needs of the health profession educator. Students are presented with materials and are actively involved in exercises concerned with all aspects of the teaching/learning process. Seminar and workshop format.
Brooks—1 sem. hr.

HPE 5343 EDUCATIONAL ASSESSMENT / Promotes an in-depth understanding of assessment and continuous quality improvement in higher education. Students create assessment plans for the course and program level.
McCann—2 sem. hrs.

HPE 5V13 TEACHING INTERNSHIP / Students teach in the preclinical laboratories, clinics and lecture in selected courses. A progression from teaching observation to lecture and course development and presentation occurs over the duration of the program. Students work closely with course directors in the development of teaching and clinical activities.
Brooks—1 sem. hr.

HPE 5V25 RESEARCH PRACTICUM / Each student works with a mentor to conduct research in biomedical, clinical science or education. Students are required to prepare a research proposal in their first year and to complete a research project by the end of their second year.
Staff—0.5-2 sem. hrs.

HPE 5V26 LITERATURE REVIEW SEMINAR / This course is designed in a journal club format. Each semester, a major topic is explored through reading and discussion. Students take responsibility for leading class discussions. Semester topics address current issues in higher education.
Staff—0.5-2 sem. hrs.

HPE 5V27 TEACHING PRACTICUM / Each student works with a teaching mentor to improve teaching effectiveness. This mentoring process includes providing written feedback from students concerning teaching characteristics, self-analysis by the teaching student, observation by a mentor and videotaping of teaching session in the lecture, laboratory and clinical setting. Mentors and students meet in a seminar setting to discuss teaching and learning issues.
Harman—1-3 sem. hrs.

HPE 5V98 RESEARCH FOR THESIS / Original research on a meaningful problem related to education as partial fulfillment for the master's degree. Students establish a research problem, search the literature, prepare a research proposal for submission to funding agencies, conduct the project, do data analysis and prepare a draft of the written format.
Staff—1-4 sem. hrs.

HPE 5V99 THESIS / Preparation of the thesis in written format and oral defense.
Staff—1-4 sem. hrs.

### *(Off-campus)*

ETec 561 LEARNING AND TECHNOLOGY / This course focuses on the theory and principles underlying the uses of technology in the learning process. Included is the utilization of communication technologies applicable to teaching learning. The student develops competencies for selecting and evaluating media, equipment and processes that support learning. Students teaching on emergency certification must complete 10 hours of classroom observation.
Staff—3 sem. hrs.

ETec 578 INSTRUCTIONAL DESIGN AND DEVELOPMENT / This course is concerned with instructional design and development that utilizes the systematic approach to instruction. Particular objectives are stated explicitly, and appropriate teaching strategies and materials are utilized to facilitate achievement of goals.
Staff—3 sem. hrs.

PSY 519 ADVANCED EDUCATIONAL PSYCHOLOGY / This is a study of the factors influencing the nature and conditions of long-term cognitive learning and retention in the classroom of public schools, colleges and industrial training programs.
Staff—3 sem. hrs.

PSY 620 COGNITIVE PSYCHOLOGY / This is a study of human cognitive organization and functioning with emphasis upon the study of knowledge representation, memory, problem-solving, expertise, reasoning and language.
Staff—3 sem. hrs.

PSY 625 COGNITION AND INSTRUCTION I / This course examines the psychological principles and scientific knowledge base underlying the major models and theories of instructional design. Content includes an evaluation of how current theories and knowledge of human cognition relate to the principles and practices of instructional design and development.
Staff—3 sem. hrs.

PSY 626 COGNITION AND INSTRUCTION II / This course requires students to apply knowledge and theory derived from cognitive psychology to the design and development of instructional systems and products. Students are expected to integrate cognitive models and knowledge of human cognition within the process of developing and designing instructional systems and products.
Staff—3 sem. hrs.

PSY 661 PSYCHOLOGY OF ORGANIZATIONAL CHANGE AND IMPROVEMENT / This course examines the psychological principles and scientific knowledge base underlying the major models and theories of organizational change and improvement. Particular attention is given to models and practices of continuous organizational improvement and how such models relate to current psychological knowledge and theory.
Staff—3 sem. hrs.

SHEd 542 ANALYSIS OF TEACHING IN HIGHER EDUCATION / This course provides an analysis, comparison and contrast of a range of teaching styles and models available to community college and university faculty. Particular emphasis is directed toward teaching improvement models and assessment skills.
Staff—3 sem. hrs.

SHEd 621 TEACHING IN COLLEGES / This course provides a study of the research on effective college teaching, with an emphasis on teaching styles and learning styles. Procedures for tapping the creative potential of college students are examined along with a discussion of additional roles and responsibilities of the college teacher.
Staff—3 sem. hrs.

SHEd 651 CURRICULUM DEVELOPMENT IN HIGHER EDUCATION / This course provides a study of the factors and influences that have affected the development of the curriculum in higher education. Procedures for designing, implementing and evaluating curricula at the senior college level are examined. In addition, trends, issues, problems and variations in general education programs in colleges and universities are studied. The objectives of general education in all post-high school curricula are emphasized.
Staff—3 sem. hrs.

SHEd 655 ISSUES IN HIGHER EDUCATION / This course provides an in-depth analysis of prevalent issues unique to both community colleges and to senior institutions, as illustrated in the higher education literature. Emphasis is placed on the effects of these factors on the total institution.
Staff—3 sem. hrs.

SHEd 656 HIGHER EDUCATION AND THE LAW / Organic structure of the law, how to use legal resources and significant issues and trends (past, present and future) in higher education law.
Staff—3 sem. hrs.

SHEd 658 ADMINISTRATION IN HIGHER EDUCATION / This course provides study of the critical roles and responsibilities of the president, vice presidents, deans, department heads and other general administrators in higher education institutions. Also included is a discussion of different administrative organizations and practice within the colleges and departments.
Staff—3 sem. hrs.

## Oral and Maxillofacial Pathology

5113 CURRENT ISSUES IN ORAL AND MAXILLOFACIAL PATHOLOGY / Seminar discussion of current and past literature in oral and maxillofacial pathology.
Staff—hrs.

5190 SEMINAR: CURRENT ISSUES IN BIOMEDICAL SCIENCE / Guest lectures and workshops; lectures and discussion include topics of current interest to program faculty and students, as well as of general interest in the biomedical sciences.
Staff—1 sem. hr.

5221 INTERNAL MEDICINE / Oral manifestations of systemic disease and influence of systemic disease requiring modification of treatment planning and clinical care.
Staff—1 sem. hr.

5233 PHYSICAL DIAGNOSIS / Patient evaluation and examination, history-taking, medical consultation, physical diagnosis and treatment modification in dental patients.
Staff—1 sem. hour

5251 IMMUNOLOGY / Update on the principles of immunology with an emphasis on oral aspects and related diseases.
Staff—1 sem. hr.

BMS 5221 RESEARCH DESIGN AND METHODOLOGY / An introduction to the research process; sufficient background in research design and methodology is provided to enable students to critically evaluate literature and assist in the formulation of research projects. Also includes discussion of rules and regulations for human and animal research.
Buschang—2 sem. hrs.

BMS 5222 APPLIED BIOSTATISTICS / Introduction to concepts and methods of descriptive and inferential statistics with applications in dentistry emphasized. Topics include descriptive statistics, elementary probability, comparison of means and proportions, confidence intervals, hypothesis testing, statistical power, simple linear regression, and correlation. Parametric and nonparametric methods are discussed. More advanced methods (multiple regression, analysis of variance, logistic regression) are briefly described but not covered in detail. Applications and examples in dentistry are stressed throughout. Computer laboratory with emphasis on using statistical software is to be taken concurrently.
Staff—2 sem. hrs.

5V00 ORAL AND MAXILLOFACIAL PATHOLOGY SEMINAR / Seminar format on surgical anatomic pathology. The student interacts daily with faculty, utilizing multiheaded teaching microscopes, to discuss all pathology cases accessioned daily. These are supplemented with more diagnostically challenging cases. All aspects of the diseases and conditions are discussed as well as current and historical literature.
Staff—1-2 sem. hrs.

5V01 ANATOMIC AND CLINICAL PATHOLOGY, AUTOPSY SERVICE / Baylor University Medical Center rotation in Department of Pathology. Anatomic pathology, clinical pathology, autopsy service, cytology, selected electives.
Staff—5-14 sem. hrs.

5V05 ORAL AND MAXILLOFACIAL PATHOLOGY SERVICE / Independent study in surgical anatomic oral and maxillofacial pathology. Gross tissue preparation, microscopic analysis of routine surgical head and neck biopsies, special study sets and microscopic description.
Staff —0-2 sem. hrs.

5V10 CLINICAL STOMATOLOGY I / Emphasis is placed on the diagnosis and clinical management of patients with oral mucocutaneous diseases. Proper evaluation of medical histories, drug interactions and laboratory studies is stressed through close interaction with the medical community.
Rees/Plemons—0-1 sem. hr.

5V11 CLINICAL STOMATOLOGY II / Emphasis is placed on the diagnosis and clinical management of patients with oral mucocutaneous diseases. Proper evaluation of medical histories, drug interactions and laboratory studies is stressed through close interaction with the medical community.
Rees/Plemons—0-1 sem. hr.

5V12 ADVANCED CLINICAL STOMATOLOGY / Emphasis is placed on the diagnosis and clinical management of patients with oral mucocutaneous diseases. Proper evaluation of medical histories, drug interactions and laboratory studies is stressed through close interaction with the medical community. Students provide guidance in management of oral mucocutaneous diseases to selected predoctoral students and first-year graduate students.
Rees/Plemons—0-1 sem. hr.

5V21 ADVANCED ORAL PATHOLOGY / Disease of the head and neck; developmental malformations, oral signs of systemic diseases, salivary gland disorders; neoplasms of odontogenic and nonodontogenic origin. Three semester hours credit plus 1 additional hour for optional laboratory.
Kessler—2-3 sem. hrs.

5V42 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES / Advanced clinical application of cellular and molecular biology approaches, divided into hard and soft tissues.
Staff—2 sem. hrs.

5V98 THESIS / Research and preparation of master's thesis.
Staff—6 sem. hrs.

## Oral and Maxillofacial Surgery

5212 SEMINAR IN ORAL AND MAXILLOFACIAL SURGERY / Discussion of oral surgery topics by students, faculty or guest lecturers; new clinical or surgical procedures, research methods and results and other topics timely to the state-of-the-art of the specialty; may be repeated a maximum of four semesters.
Faculty—2 sem. hrs.

5219 CLINICAL CONFERENCES / Pre- and postsurgical case presentation in oral and maxillofacial surgery and oral pathology by students and faculty; diagnostic and treatment methods; may be repeated a maximum of four semesters.
Faculty—2 sem. hrs.

5301 ORAL AND MAXILLOFACIAL LECTURES AND DEMONSTRATIONS / Principles of oral and maxillofacial surgery techniques and procedures presented and integrated into clinical demonstrations; applications to patient treatment in both hospitals and clinics; may be repeated a maximum of four semesters.
Faculty—2 sem. hrs.

5333 CLINICAL ORAL MAXILLOFACIAL SURGERY IN AN OUTPATIENT CLINIC / Minor and major oral and maxillofacial surgery procedures by students under supervision; may be repeated a maximum of four semesters.
Franco, Frohberg, Schow, Triplett—2 sem. hrs.

5337 ADVANCED CLINICAL ORAL AND MAXILLOFACIAL SURGERY IN THE HOSPITAL / Major oral and maxillofacial surgical procedures by students under supervision; may be repeated a maximum of four semesters.
Franco, Frohberg, Schow, Triplett—2 sem. hrs.

5405 HOSPITAL EMERGENCY ROOM TECHNIQUES AND CLINICAL EXPERIENCE / Triage and treatment of emergency patients; initial evaluation, requesting of laboratory studies, consultations, record-keeping and methods of treatment for the comprehensive management of patients.
Franco, Frohberg, Grogan, Schow, Triplett—3 sem. hrs.

5409 HOSPITAL PROCEDURES AND RECORDS AND TEACHING ROUNDS IN ORAL AND MAXILLOFACIAL SURGERY / Hospital record keeping, chart composition and hospital protocols; lectures and demonstrations; participation in on-call status at the hospital; may be repeated a maximum of three semesters.
Franco, Frohberg, Schow, Triplett—3 sem. hrs.

5V24 HOSPITAL ROTATIONS / Rotation through related services at Baylor University Medical Center, Parkland Health and Hospital System, and Texas Scottish Rite Hospital for Children (i.e., anesthesiology, internal medicine, cardiology, general surgery, neurosurgery, radiology and emergency medicine). In-depth training and experience to improve the quality of the patients' surgical background; may be repeated a maximum of two semesters.
Hospital Staff—1 sem. hr.

## Orthodontics

5031 ORTHODONTIC-PERIODONTIC SEMINAR / An interdisciplinary course directed at topics relevant to orthodontics and periodontics. The effect of orthodontics on the supporting tissues, oral hygiene and periodontal assessment, and interdisciplinary approaches to treatment are topics of discussion.
Kerns, Taylor—0.5 sem. hr.

5042 TMD CLINIC / A series of lectures, guest speakers, demonstrations, laboratory exercises and patient care activities are conducted to enable the student to diagnosis, plan treatment and treat patients with occlusal discrepancies, compromised muscle function and TMJ abnormalities.
Holt, Polson—0 sem. hr.

5050 CRANIOFACIAL ANOMALIES CLINIC / During the second and third years, students rotate through the local children's hospital for the purpose of participating in the treatment of patients with a wide array of syndromes and craniofacial defects. From newborn to adult, a large number of patients are treated. Orthodontics is integrated with plastic surgery in this clinic.
Supakit—0 sem. hr.

5103 BIOMECHANICS I / Mechanical principles and biological factors affecting tooth movement, introduction to forces, statics, and dynamics, scalars and vectors, and analysis of force systems. Force and movement; basic concepts fundamental to an understanding of tooth movement.
Gandini—1 sem. hr.

5107 MATERIAL SCIENCE IN ORTHODONTICS / Evaluation and utilization of dental materials used in clinical orthodontics.
Cai—0.5 sem. hr.

5108 ADVANCED CEPHALOMETRICS / Advanced topics relating to the cephalometric technique are presented, including superimposition, growth and treatment prediction, treatment assessment, consideration of error, orthognathic surgery treatment planning, and image enhancement techniques.
Rossouw—1 sem. hr.

5109, 5110 ORTHOGNATHIC SURGERY CONFERENCE I, II and III / This seminar/conference series involves the departments of Orthodontics and Oral and Maxillofacial Surgery in a multidisciplinary approach to the treatment of those patients with substantial craniofacial deformities. The course begins in the first year with a series of lectures/seminars on specific diagnostic and treatment procedures, followed by assignment of patients that will be supervised jointly by both specialties. Regular conferences are held to discuss pertinent literature, review patient progress, plan treatment and present completed cases. Each student is involved in all phases of treatment: presurgical orthodontics, the surgical procedure, finishing and retention.
Taylor—varies by semester

5115, 5125, 5126 CLINICAL SPECIALTY SEMINARS I, II and III / This series of courses is a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature. In other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances. The students also are exposed to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment. Students present their cases through descriptions of diagnosis, treatment planning and treatment results.
Rossouw—varies by semester

5129 PRACTICE ADMINISTRATION / This course considers the ethical approach to practice promotion and professional interactions in addition to the basic principles of office management. The latter include consideration of staff selection, office design, accounting methods, insurance considerations, inventory control and financial planning.
J Mayes—0 sem. hr.

5143 PRINCIPLES OF SCIENTIFIC METHODOLOGY / Basic precepts of research and the methodology off critical literature review in preparation of a research proposal.
Buschang—0.5 sem. hr.

5144, 5145, 5146, 5147 SCIENTIFIC WRITING / A series of courses designed to assist the student in the preparation of a research proposal, a proposal to secure extramural funding and the thesis. When the research is concluded, instruction is given to enable the preparation of a manuscript suitable for publication.
Bushang—0.5 sem. hr./semester

5148, 5149 INDEPENDENT RESEARCH / Activity related to definition of a research problem, searching the literature, conducting the research, analyzing the results and preparing the thesis.
Buschang—varies by semester

5199 THESIS / During the term in which the thesis is defended, the student must elect this course. It includes activities related to the completion of the thesis.
Buschang—1 sem. hr.

5200 INTRODUCTION TO ORTHODONTICS / A course covering the basic topics related to the specialty of orthodontics. This series of lectures covers material presented in a textbook directed toward graduate education.
Ceen—1.5 sem. hrs.

5202 RADIOLOGY AND CEPHALOMETRICS / This course provides a thorough understanding of craniofacial radiographic techniques with emphasis on cephalometric roentgenography. This course is designed to acquaint the student with the use of X-rays, radiation hygiene, pathology and cephalometric techniques to assure proficiency in technical skills and in interpretation as needed for diagnostic procedures. This course includes both lecture and laboratory instruction.
Rossouw—1 sem. hr.

5230 CRANIOFACIAL GROWTH AND DEVELOPMENT / The clinical implications of changes in craniofacial form and function are presented. A critical review of the literature is conducted relating knowledge of facial growth and clinical practice.
Buschang—1.5 sem. hrs.

5532 ORTHODONTIC TECHNIQUES / This offering includes basic preclinical exercises designed to prepare the student for clinical practice. A series of exercises are performed involving wire bending, soldering, impressions and model trimming, and the manipulation of acrylic. An edgewise course is conducted on typodonts simulating the treatment of various malocclusions.
Ceen—2.5 sem. hrs.

5533, 5534 CLINICAL ORTHODONTICS I, II / Diagnosis and treatment of patients with a broad variety of malocclusions. Patient with typical malocclusions and requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected as educational models. Techniques focus on standard edgewise technique including pretorqued and preangulated brackets and lingual orthodontics.
Rossouw—varies by semester

5VO4 HEAD AND NECK ANATOMY / Special emphasis on surgical anatomy and distribution of nerves and vasculature of particular interest in dentistry.
Hutchins—1.5 sem. hrs.

5221 RESEARCH DESIGN AND METHODOLOGY / An introduction to the research process; sufficient background in research design and methodology is provided to enable students to critically evaluated literature and assist in the formulation of research projects. Also includes discussion of rules and regulations for human and animal research.
Buschang—2 sem. hrs.

5V69 MECHANISMS OF DEVELOPMENT Normal prenatal growth and development. Patterns and mechanisms of growth and maturation

5V73 ADVANCED HUMAN CRANIOFACIAL DEVELOPMENT AND CRANIOFACIAL ANOMALIES / Detailed investigation of the basic processes and mechanisms of prenatal development and postnatal growth and adaptation of the craniofacial region.
Svoboda—variable

5V75 PHYSICAL GROWTH AND MATURATION / Patterns and mechanisms of postnatal growth and maturation.
Buschang—variable

5222 APPLIED BIOSTATISTICS / Overview of applied biostatistics with an emphasis on oral health research. Training includes computer-based instruction in data analysis using SPSS.
Shulman—2 sem. hrs.

OP5V21 ADVANCED ORAL PATHOLOGY / Diseases of the head and neck; developmental malformations, oral signs of systemic disease, salivary gland disorders, neoplasms of odontogenic and nonodontogenic origin.
Binnie—2 sem. hrs.

## Pediatric Dentistry

5V11 PEDIATRIC DENTISTRY I / Basic techniques of pediatric dentistry, including restoration of primary teeth, behavior management, pulp therapy and assessment of the developing dentition.
Faculty—4 sem. hrs.

5V12 PEDIATRIC DENTISTRY II / A continuation of further topics in pediatric dentistry, including child development, treatment of traumatic injuries and appliance construction for space maintenance.
Faculty—1.5 sem. hrs.

5V13 PEDIATRIC DENTISTRY III / This course focuses on the assessment and treatment of developmental problems in the mixed dentition, materials used in pediatric dentistry and common oral lesions seen in the pediatric patient.
Faculty—1.5 sem. hrs.

5V14 PEDIATRIC DENTISTRY IV / This course presents the supporting literature for the concepts introduced regarding behavior management, pulp therapy and orthodontic therapy for the mixed dentition.
Faculty—2.5 sem. hrs.

5V15 PEDIATRIC DENTISTRY V / This course investigates the developing dentition along with more advanced concepts in pediatric dentistry.
Faculty—0 sem. hr.

5V16 PEDIATRIC DENTISTRY VI / A summary of topics in pediatric dentistry are presented, along with preparation for the American Board of Pediatric Dentistry.
Faculty—6 sem. hrs.

5V21 HOSPITAL DENTISTRY I / Introduction to hospital protocol, charting and the delivery of dental treatment to the medically compromised child.
Faculty—1.5 sem. hrs.

5V22 HOSPITAL DENTISTRY II / Introduction to conscious sedation and the treatment of traumatic injuries along with the delivery of dental care in the hospital environment.
Faculty—2 sem. hrs.

5V23 HOSPITAL DENTISTRY III / Evaluation and treatment of specific patient populations, including the neurologically handicapped and the medically compromised patient. In addition, there is an introduction to clinical anesthesia for children.
Faculty—5 sem. hrs.

5V24 HOSPITAL DENTISTRY IV / Further study and literature review that supports the clinical practice of dental care for the special-needs child are presented in this course.
Faculty—3.5 sem. hrs.

5V25 HOSPITAL DENTISTRY V / This course continues to discuss topics relevant to the care of the special-needs child and the delivery of pediatric dental care in the hospital setting.
Faculty—9 sem. hrs.

5V26 HOSPITAL DENTISTRY VI / This is intended to be a summary course that explores the interrelationship between medicine and dentistry in the care of pediatric patients.
Faculty—2 sem. hrs.

## Periodontics

5004 CLINICAL PERIODONTICS / Treatment and management of patients with various types and severities of periodontal diseases; emphasis on diagnosis, treatment planning, prognosis and fundamental periodontal instrumentation skills; introduction of periodontal surgical techniques.
Staff—0 sem. hr.

5005 ADVANCED CLINICAL PERIODONTICS / Prerequisite: Clinical Periodontics 5004. Continuation of first-year clinic; emphasis on management of advanced periodontal cases; complex surgical techniques with emphasis on pre-prosthetic and mucogingival surgery.
Staff—0 sem. hr.

5006 ADVANCED CLINICAL PERIODONTICS II / A continuation of PER 5005. More student autonomy and decision-making is required, assuring proficiency. Demonstration of surgical techniques to first- and second-year students is encouraged. Emphasis is placed on advanced implant and esthetic cases. Includes surgical cases at the Dallas VA Medical Center, Children's Medical Center of Dallas and Texas Scottish Rite Hospital for Children.
Staff—0 sem. hr.

5030 DERMATOLOGY SEMINAR / A review of basic dermatological terminology, common cutaneous diseases and their treatment. Presented every third year.
Glass—0 sem. hr.

5031 JOURNAL CLUB / Course reviews current periodontal literature and encompasses analytical review interpretation and abstraction of articles. Discussions and review also allow translation of contemporary periodontal principles to clinical patient care.
Hammi, Staff—0 sem. hr.

5035 ORTHO/PERIO SEMINAR / Diagnosis and treatment of basic orthodontic problems; force vectors; mechanical applications with various orthodontics systems; clinical management of combined periodontic/orthodontic cases and esthetic correction of mucogingival cases. Joint treatment of actual cases.
Orthodontics and Periodontics Staff—0 sem. hr.

5045 RELATED DISCIPLINES SEMINAR / Seminar for first-, second- and third-year residents that includes comprehensive interdisciplinary case planning, management and presentations, and affords opportunity for interactions with graduate faculty/residents in periodontics, prosthodontics and endodontics.
Hallmon, Faculty—0 sem. hr.

5065 VA HOSPITAL ROTATION / A three-month rotation at the Dallas VA Hospital Dental Clinic treating medically compromised dental patients. Diagnosis, treatment planning and consultation with physicians are emphasized. Supervised by HSC-BCD faculty. One resident each semester.
Griffiths, Hallmon—0 sem. hr.

5066 MOCK BOARD EXAMINATION I / Prepares students for certification by the American Board of Periodontology. Includes case write-up, presentation and comprehensive oral examination.
Hallmon, Staff—0.5 sem. hr.

5067 MOCK BOARD EXAMINATION II / Prepares students for certification by the American Board of Periodontology. Includes case write-up, presentation and defense, and comprehensive oral examination.
Hallmon, Staff—0.5 sem. hr.

5114 ADVANCED DENTAL IMPLANTS / A lecture and clinical course covering advanced implant techniques. The radiographic examination, diagnosis, treatment planning and management of patients with jaw deformities, inadequate remaining bone; ridge augmentation requirements, including sinus lift procedures and complications, are reviewed.
Boltchi, Staff—1.5 sem. hrs.

5115 PERIODONTAL PLASTIC SURGERY / Lectures and seminars covering the diagnosis and treatment of esthetic and functional gingival deformities. Recognizing normal and abnormal appearance and gingival discrepancies is stressed. Current techniques of grafting, shaping and sculpting tissues are taught. The techniques discussed are performed during clinical periodontics.
Allen—0.5 sem. hr.

5140 CASE PRESENTATION/TREATMENT PLANNING / Emphasizes diagnosis, analysis and treatment planning/approaches for cases presenting with moderate to advanced periodontitis, soft/hard tissue deficiencies and/or dental implant needs. First-year residents receive instruction and experience in preparing case presentations, and first-, second- and third-year residents present cases, participate in discussions and interact with faculty.
Hammi, Faculty—0.5 sem. hr.

5164 OCCLUSION: PRINCIPLES/THERAPY / Review of literature concerning occlusion and its relationship to periodontal disease. Clinical evaluation, diagnosis of occlusal trauma and treatment of patients with occlusal disharmonies via occlusal adjustment are discussed. Includes a review of occlusal concepts related to periodontics, anatomy and function of the masticatory system, temporomandibular joint dysfunction, and adjustment of the natural dentition.
Harrel, Faculty—1.5 sem. hrs.

5201 PERIODONTAL LECTURE SERIES I / Principles of basic science of periodontology, including anatomy of the periodontium, and the classification, etiology and pathogenesis of periodontal diseases, including plaque associated and nonplaque-related disorders. Provides an introduction to the clinical practice of periodontics and stomatology, including diagnosis, prognosis, treatment planning, basic flap design, instrumentation, therapeutic approaches, suturing techniques and wound healing. Oral hygiene methods and principles of oral hygiene instruction are also presented.
Hallmon, Faculty —1 sem. hr.

5207 PERIODONTAL LECTURE SERIES II / Advanced management of complex periodontal and stomatological problems is presented. An in-depth review of systemic diseases, and plaque associated and nonplaque-related periodontal disorders (mucocutaneous, etc.) related to the practice of periodontics is emphasized, including the roles of pharmacotherapeutics and complex regenerative therapeutic approaches.
Rees, Faculty—2 sem. hrs.

5211 PRACTICE TEACHING / Lectures and clinical instruction involving contact with second-, third- and fourth- year dental students. Eight hours per week per semester of clinical instruction, including diagnosis, treatment and maintenance of periodontal patients. Students register for four semesters for a total of 16 semester hours.
Stanford—2 sem. hrs.

5213 DENTAL IMPLANTS / Historical review of dental implants, including biological principles, techniques and systems; diagnosis, interdisciplinary considerations, treatment planning, and indications and contraindications for implants; wound healing for implants, including osseointegration, surgical techniques and implant maintenance.
Hallmon, Staff—2 sem. hrs.

5224 PERIODONTAL LITERATURE REVIEW I / Review of periodontics literature from early classic articles to current publications; development of basis for various periodontal concepts; anatomy, epidemiology, etiology, diagnosis, pathogenesis and therapy of periodontal diseases. Students register for two semesters for a total of 4 semester hours.
Hallmon, Staff—2 sem. hrs.

5227 PERIODONTAL LITERATURE REVIEW II / Continuation of Periodontal Literature Review I 5224. Students register for two semesters for a total of 4 semester hours.
Hallmon, Staff—2 sem. hrs.

5228 PERIODONTAL LITERATURE REVIEW III / A seminar series during the third year of residency. Students learn to select and then research various contemporary topics and lead group discussions. Use of computer search technology and interlibrary facilities is taught and utilized. Self-reliance and individual effort is emphasized instead of school-provided reading lists as in PER 5224 and PER 5227. Students register for two semesters for a total of 4 semester hours.
Hallmon, Staff—2 sem. hrs.

5432 CLINICAL ANESTHESIOLOGY FOR THE PERIODONTIST / A one-month anesthesiology rotation supervised by personnel in the Department of Anesthesiology at Baylor University Medical Center; operating room procedures; use of anesthetics; instruction in resuscitative procedures.
Hospital Anesthesiology Staff—3 sem. hrs.

5435 PERIODONTAL HISTOPATHOLOGY / Histopathologic study of the etiology and pathogenesis of periodontal diseases; seminars and laboratory exercises with block sections of human periodontium.
Rivera-Hidalgo, Staff—2 sem. hrs.

5V10 CLINICAL STOMATOLOGY I / Emphasis is placed on the diagnosis and clinical management of patients with oral mucocutaneous diseases. Proper evaluation of medical histories, drug interactions and laboratory studies is stressed through close interaction with the medical community.
Plemons, Rees—0-1 sem. hr.

5V11 CLINICAL STOMATOLOGY II / Emphasis is placed on the diagnosis and clinical management of patients with oral mucocutaneous diseases. Proper evaluation of medical histories, drug interactions and laboratory studies is stressed through close interaction with the medical community.
Plemons, Rees—0-1 sem. hr.

5V12 ADVANCED CLINICAL STOMATOLOGY / Emphasis is placed on the diagnosis and clinical management of patients with oral mucocutaneous diseases. Proper evaluation of medical histories, drug interactions and laboratory studies is stressed through close interaction with the medical community. Students provide guidance in management of oral mucocutaneous diseases to selected predoctoral students and first-year graduate students.
Plemons, Rees—0-1 sem. hr.

5V98 RESEARCH FOR THE MASTER'S THESIS / Activity to establish a research problem, search the literature, define and limit the problem and explore technical difficulties involved in the pursuit of research for the master's degree. Restricted to master's degree candidates.
Staff—3 sem. hrs.

5V99 THESIS PREPARATION / Credit awarded for the writing and completion of the thesis in acceptable form. Restricted to master's degree candidates.
Staff—max. 2 sem. hrs.

## Prosthodontics

5001 MOCK BOARD EXAMINATION I / Prepares the students for certification by the American Board of Prosthodontics (ABP). It includes a comprehensive written examination, presentation and defense of a Part 4 patient presentation with oral examination.
Nagy, Faculty—0 sem. hrs.

5002 MOCK BOARD EXAMINATION II / A continuation of (I), preparing students for certification by the American Board of Prosthodontics (ABP) with a comprehensive written examination, presentation and defense of a Part 2 or 3 patient presentation with oral examination.
Nagy, Faculty—0 sem. hrs.

5003 MOCK BOARD EXAMINATION III / A continuation of (I) and (II), preparing students for certification by American Board of Prosthodontics (ABP) with a comprehensive written examination and presentation and defense of a Part 2 or 3 patient presentation not yet presented with oral examination. Selection is also made of which Part 2, 3 or 4 should possibly be considered for actual presentation to the ABP. Students are required to take Part 1 (written) of the ABP examination in February of their third year.
Nagy, Faculty—0 sem. hrs.

5019 JOURNAL CLUB / Reviews current prosthodontic literature and encompasses analytical review and evidence-based approach. Students register for a total of three summers and six semesters.
Nagy—0 sem. hrs.

5020 TREATMENT PLANNING & CLINICAL REVIEW / A series of formalized treatment plans are presented by the students and are discussed and finalized by attending faculty and students. Students also present treatments in progress and completed treatments for review and discussion at this seminar. Students register for a total of three summers and six semesters.
Nagy, Faculty—0 sem. hrs.

5022 INTERDISCIPLINARY CONFERENCES / Specialized conferences in orthognathic surgery, craniofacial anomalies and dental implants are held weekly and monthly. The specialties of prosthodontics, periodontics, oral and maxillofacial surgery, and orthodontics attend with interdisciplinary treatment planning, presentation of treatment results, and future direction based on outcomes and new developments. Students register for six semesters.
Faculty—0 sem. hrs.

5118 PROSTHODONTIC TOPIC LITERATURE REVIEW / Detailed review of classical and current prosthodontic literature organized into specific topics, encompassing all sub-disciplines in prosthodontics. Students are assigned a specific topic, upgrade past literature packets, prepare and disseminate new material and summaries prior to the seminar, and lead discussion at the seminar. Students register for a total of three summers and six semesters.
Nagy, Faculty—1 sem. hr.

5122 ADVANCED PROSTHODONTICS CONCEPTS & TECHNIQUES / Theories, concepts and treatment modalities in complete denture, removable partial denture and fixed partial denture prosthodontics, with related contemporary literature and techniques. Students register for a total of two semesters.
Nagy, Faculty—1 sem. hr.

5126 RELATED DISCIPLINE SEMINARS / Interactive seminar presentations in the specialty areas of periodontics, oral and maxillofacial surgery, orthodontics, endodontics, dental materials, physiology and other disciplines not covered in the core curriculum specifically related to prosthodontics. Students register for a total of four semesters.
Faculty—1 sem. hr.

5127 ADVANCED TMD/OCCLUSAL CONCEPTS & TREATMENTS / Seminars and clinical application of contemporary literature and techniques in occlusion and temporomandibular disorders.
Nagy, Faculty—1.5 sem. hrs.

5130 CLINICAL TEACHING / Lectures and clinical instruction involving contact with second-year, third-year and fourth-year dental students. Students register for one semester.
Nagy, Faculty—1 sem. hr.

5136 MAXILLOFACIAL PROSTHODONTIC CONCEPTS & TREATMENT / Theories, concepts and treatment modalities related to the maxillofacial patient with a seminar, laboratory and clinical application format and a VA hospital rotation. Implant literature reviews of contemporary material with an evidence-based seminar approach.
Nagy, Faculty—1 sem. hr.

5160 ADVANCED IMPLANT CONCEPTS & TECHNIQUES / Seminars and clinical application on implant concepts, designs, placement techniques and clinical utilization. Specific prosthodontic diagnosis and treatment concepts are stressed with evidence-based rationale.
Nagy, Faculty—1.5 sem. hrs.

5210 INTRODUCTION TO PROSTHODONTIC CONCEPTS & TECHNIQUES / Assessment, development and enhancement of diagnostic and clinical skills in prosthodontics; lecture/laboratory format, concepts in fixed, removable and implant prosthodontics, porcelain laboratory techniques and applications.
Nagy, Faculty—2.5 sem. hrs.

5226 OCCLUSAL CONCEPTS & TECHNIQUES / Theories and clinical application of various occlusal concepts with utilization of various categories of recording mechanisms of condylar movements. Students register for a total of two semesters.
Nagy—1.5 sem. hrs.

5250 GERIATRIC PROSTHODONTICS / Seminars and clinical applications on the demographics epidemiology and special considerations of the aging patient in a prosthodontic practice. Clinic rotations in geriatric evaluation and management unit team meetings and nursing home rounds.
Faculty—1 sem. hr.

5259 IMPLANT CONCEPTS & TECHNIQUES / Seminars and clinical application of basic implant concepts, diagnosis and treatment planning, review of various systems, surgical considerations and restorative applications with evidence-based rationale.
Faculty—1.5 sem. hr.

5301 CLINICAL PROSTHODONTICS / Diagnosis, treatment and management of patients requiring various categories of prosthodontic core. Patient selection and load determined by student aptitude and clinical competence.
Nagy, Faculty—3 sem. hrs.

5402 ADVANCED CLINICAL PROSTHODONTICS I / Diagnosis, treatment and management of patients requiring various categories of complex prosthodontic care. Interspecialty relationships are stressed with students developing proficiency in treatment applications. A VA hospital rotation is included for a one-day-a-week for 3 months treating medically compromised patients with varying degrees of cognitive and physical impairments and maxillofacial prosthetic needs. Students register for a total of one summer and two semesters.
Nagy, Faculty—4 sem. hrs.

5503 ADVANCED CLINICAL PROSTHODONTICS II / A continuation of PRO 5402, with students diagnosing, treating and managing patients requiring various categories of complex prosthodontic care. Rationale and outcomes of treatment are stressed, with developing a high level of proficiency in treatment applications.
Nagy, Faculty—5 sem. hrs.

5V98 THESIS RESEARCH / Research on an original problem related to prosthodontics. Students establish a research problem, search the literature, prepare and submit a research proposal, and test the hypotheses with the necessary experimental and control procedures.
Nagy, Faculty—max 5 sem. hrs.

5V99 THESIS PREPARATION / Credit awarded for the writing, completion and defense of the thesis in acceptable form.
Nagy, Faculty—max 5 sem. hrs.

# Course Descriptions
# College of Medicine

All courses offered in the HSC-College of Medicine are described on the following pages and are listed by departments, arranged alphabetically. Figures in parentheses following some course titles indicate the clock hours per week devoted to theory and practice, respectively. Theory includes recitations and lectures; practice includes work done in the laboratory and clinical settings. The unit of credit is the semester hour, which involves one hour of theory, or from two to four hours of practice per week for one semester of 18 weeks or trimester of 12 or nine weeks. Any course may be withdrawn from the session offerings when the number of registrations is too small to justify offering it.

## Medical Student Courses

## Anesthesiology (ANES)

983-999 ELECTIVE CLERKSHIPS IN ANESTHESIOLOGY / Two to four weeks. To provide an introductory experience in the practice of anesthesiology at Scott & White and at the Olin E. Teague Veterans Center. Prerequisite: Satisfactory completion of year three of the medical school curriculum.

## Emergency Medicine (EMED)

983 & 984 ELECTIVE CLERKSHIPS IN EMERGENCY MEDICINE / Four weeks. To provide an introductory experience in the practice of emergency medicine. Prerequisite: Satisfactory completion of year three of the medical curriculum.

## Family and Community Medicine (MFCM)

912 INTRODUCTION TO PATIENTS / (2-0). Credit 2. Medical history-taking and physical assessment coordinated with recognition and management of common emotional reactions among nonpsychiatrically ill patients. Factors that may influence doctor-patient relationships. Prerequisite: Admission to medical curriculum.

944 CLINICAL PRECEPTORSHIP / (0-3). Credit 1. Students rotate through primary care experience in family medicine, internal medicine, pediatrics, gynecology, otorhinolaryngology; obstetrics, ophthalmology, dermatology and orthopedics. Prerequisite: IME 923.

981 SEMINAR / (1-0). Credit 1. Current issues in medicine. Prerequisite: Approval of department head.

982 CLERKSHIP / Credit 7.5. Full-time clerkship experiences in the offices of primary care physicians. Prerequisites: Completion of first and second years of the medical curriculum.

985 PROBLEMS / Credit 1 or more. Assigned readings and practical or laboratory work with weekly discussion period in a selected area of family and community medicine. Prerequisite: Approval of department head.

989 SPECIAL TOPICS IN… / Credit 1 to 4. Special study of an identified area of clinical medicine. Prerequisite: Approval of department head.

991 RESEARCH / Credit 1 or more. Laboratory research in an applied aspect of the basic sciences related to clinical medicine. Prerequisite: Approval of department head.

989-301 PRECLINICAL PRECEPTORSHIP PROGRAM / Credit 3. Students spend four weeks in the office of a family physician. Prerequisite: Successful completion of the first-year curriculum and departmental approval.

## Humanities in Medicine (MHUM)

910 MEDICAL LAW / (2.5-0). Credit 2.5. Discuss rights and responsibilities of physicans as members of a medical staff and in practice.

911 MEDICINE AND HUMAN VALUES: INTRODUCTION TO MEDICAL ETHICS / (2-0). Credit 2. Basic issues in medical ethics, focusing on the character of the patient-physician relationship. Prerequisite: Admission to medical curriculum or approval of department head.

921 HUMANITIES IN MEDICINE SEMINARS / (2-0). Credit 2. A wide variety of social issues in medicine addressed from various humanities perspectives, including literature, history, law, religion, etc. Prerequisite: Admission to medical curriculum or approval of department head.

941 MEDICAL JURISPRUDENCE / 18 clock hours. Introduction to forensic medicine; interface between the law and health care institutions; the medical record as a legal document; the creation of litigious situations; practice management. Prerequisite: Satisfactory completion of year three of the medical curriculum or approval of department head.

981 SEMINAR / (1-0). Credit 1. Presentation by advanced students, faculty and visiting lecturers of selected topics in medical ethics, history of medicine and other areas in the humanities in medicine. Prerequisite: Approval of department head.

986 DIRECTED RESEARCH / Credit 1 or more. Directed individual study of specialized areas of medical ethics, literature in medicine and the history of medicine. Prerequisite: Approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topics in an advanced area of medical humanities. Prerequisite: Approval of department head.

991 RESEARCH / Credit 1 or more. Research in a specific area of medical humanities. Prerequisite: Approval of department head.

## Internal Medicine (IMED)

*Required Courses:*

982 CORE CLERKSHIP IN INTERNAL MEDICINE / (Year Three). General outpatient and inpatient internal medicine, with patient work-up and management under supervision of the clinical faculty. Participation in clinical rounds, conferences, seminars and diagnostic evaluations. Prerequisite: Satisfactory completion of year two of the medical curriculum.

983 or 984 SERIES SUBINTERNSHIP / (Year Four). Required four-week experience that must include an inpatient component, night call and direct patient care under the supervision of senior housestaff or attending staff.

*Electives*

983, 984 SERIES ELECTIVE CLERKSHIP IN... / Two or four weeks. Year four electives in general medicine and the subspecialties, both inpatient and outpatient. Prerequisite: Satisfactory completion of year three of the medical curriculum.

991 RESEARCH / Original clinical and/or laboratory investigation in a specific area of internal medicine. Prerequisite: Approval of department head. May span all four years of the curriculum.

992 FOURTH YEAR CLERKSHIP IN NEUROLOGY / (Year Four). General outpatient and inpatient neurology, with patient work-up and management under supervision of the clinical faculty. Participation in clinical rounds, conferences, seminars and diagnostic evaluations. Emphasis on development of clinical diagnostic skills, rather than acquisition of factual knowledge. Prerequisite: Satisfactory completion of the year three medical curriculum.

## Medicine-Interdisciplinary (MEID)

901-301 LEADERSHIP IN MEDICINE / Credit 2. In a small group format, first-year medical students study the relationships between leadership, medicine, and community.

905 STRUCTURE AND FUNCTION OF HUMAN ORGAN SYSTEMS / Credit 13. (Year One). Histology and physiology of the human body presented in an integrated fashion; includes laboratory and application of basic knowledge by introducing various disease conditions. Prerequisite: Admission to medical curriculum.

911 BECOMING A CLINICIAN I / (2-2) Credit 3. (Year One). Physical assessment and medical history-taking using bedside examination of normal volunteers. Prerequisite: MFCM 912.

912 BECOMING A CLINICIAN II / (3-0). Credits 3. (Year Two). Multidisciplinary survey of internal medicine presented with emphasis on the pathophysiology and clinical presentation of common medical disorders in the adult patient. Didactic lectures, small-group problem-based learning and patient interaction are all utilized in the course.

981 SEMINAR / (1-0). Credit 1. Discussion of current developments and selected topics.

989 A SPECIAL TOPICS IN... / Credit 1 to 4. Special topics in an identified area of interdisciplinary medicine.

901 INTRODUCTION TO LEADERSHIP IN MEDICINE, PART I AND PART II / Credit 2. In a small-group format, first-year medical students study the relationships between leadership, medicine and community.

921-301 MENTORS IN LEADERSHIP, PART I / Credit 1. Elective study of leadership with an approved mentor from another college in the university.

921-302 MENTORS IN LEADERSHIP, PART II / Credit 1. Elective study of leadership with an approved mentor from another college in the university.

989 PRECEPTORS IN LEADERSHIP / Credit 1. One-month elective study of leadership with an approved preceptor. Prerequisites: Successful completion of MEID 901-301, MEID 901-302 and MEID 921; good standing with Office of Student Affairs; approval by Application Committee.

941 ACLS AND MEDICAL JURISPRUDENCE / Credit 2.5. Advanced Cardiac Life Support, medical jurisprudence-introduction to forensic medicine; interface between the law and health care institutions; the medical record as a legal document; the creation of litigious situations; practice management.

## Microbial and Molecular Pathogenesis (MMPA)

923 MEDICAL MICROBIOLOGY / (8-4). Credit 8. General concepts of immunological and microbiological principles and phenomena in relation to clinical manifestations of infectious disease in the human host, and mechanisms of the immune response. Prerequisite: Admission to medical curriculum or approval of department head.

## Molecular and Cellular Medicine (MCMD)

914 MEDICAL BIOCHEMISTRY, GENETICS AND NUTRITION / (10-0). Credit 10. Properties and metabolism of proteins, nutritional biochemistry, nutritional deficiencies, diet and disease. The metabolic basis of inherited disease; metabolism of lipids, carbohydrates, amino acids, purines and pyrimidines. Properties and metabolism of DNA and RNA, fundamentals of medical genetics, including diseases resulting from inborn errors of metabolism, chromosomal abnormalities, human gene mapping, and applications of recombinant DNA technology to problems of human genetics. Prerequisite: Admission to the medical curriculum or approval of the department head.

981 SEMINAR / (1-0). Credit 1. Presentation by advanced students, faculty and visiting scientists on current research in molecular and cellular medicine. Prerequisite: Approval of department head.

985 PROBLEMS / (1-0). Credit 1 or more. Directed individual study of advanced topics in molecular and cellular medicine. Prerequisite: Approval of department head.

989 SPECIAL TOPICS IN.../ Credit 1 to 4. Selected topics in the advanced area of molecular and cellular medicine. Prerequisite: Approval of department head.

991 RESEARCH CREDIT / Credit 1 or more. Original laboratory investigation in the specific area of molecular and cellular medicine. Prerequisite: Approval of department head.

## Neuroscience and Experimental Therapeutics (NEXT)

901 GROSS ANATOMY / Credit 8. Relationships of structures of the human body during its development and in adult form as revealed through dissection; functional significance. Prerequisite: Admission to the medical curriculum or approval of course coordinator and department chair.

922 MEDICAL NEUROSCIENCE / Credit 7. Neural substrates for regulation of somatic and visceral bodily function; mechanisms underlying the integrated action of the human central nervous system; neurologic significance. Prerequisite: Admission to medical curriculum or approval of course coordinator and department head.

923 MEDICAL PHARMACOLOGY / Credit 7. General concepts of pharmacological agents and substances; pharmacokinetics; pharmacodynamics; antimicrobial and antineoplastic agents; autonomic drugs; and toxicology. Endocrine pharmacology, renal pharmacology, cardiovascular pharmacology, respiratory pharmacology, neuropharmacology. Prerequisite: Admission to medical curriculum, NEXT 922, MBCH 914, or approval of department head. [throughout Year II Block]

981 SEMINAR. Credit 1. Selected topics of current interest are presented. Presentation and defenses of a scientific paper. Prerequisite: Approval of department head.

985 PROBLEMS / Credit 1 or more. Research in specialized areas of neuroscience, anatomy, and pharmacology. Prerequisite: Approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topic in an advanced area of neuroscience, anatomy and medical pharmacology. Prerequisite: Approval of department head.

991 RESEARCH / Credit 1 or more. Individual research projects conducted under the direction of a supervising professor. Prerequisite: Approval of department head.

## Obstetrics and Gynecology (OBGY)

921 INTRODUCTION TO OBSTETRICS AND GYNECOLOGY I / Credit 3. Principles of normal reproductive medicine; menstrual function, conception, sexual differentiation; fetal and maternal physiology; antepartum patient evaluation; intrapartum and postpartum care. Prerequisite: Satisfactory completion of year one of the medical curriculum.

982 CORE CLERKSHIP IN OBSTETRICS AND GYNECOLOGY / Clinical obstetrics and gynecology, emphasizing pathologic conditions, with patient evaluation on the inpatient and outpatient services under supervision of the clinical faculty. Participation in seminars, conferences and clinical rounds. Prerequisite: Satisfactory completion of year two of the medical curriculum.

983 ELECTIVE CLERKSHIP IN... / Four weeks. Elective clerkship in a specific area of obstetrics and gynecology. Prerequisite: Satisfactory completion of year three of the medical curriculum.

985 PROBLEMS / Directed study of selected problems in obstetrics and gynecology. Prerequisite: Approval of department head.

991 RESEARCH / Original clinical and/or laboratory investigation in a specific area of obstetrics and gynecology. Prerequisite: Approval of department head.

## Pathology and Laboratory Medicine (MPAT)

923 GENERAL PATHOLOGY / Credit 4. General Pathology. General characteristics and mechanisms of human disease, including language of disease, basic causes and mechanisms of disease, anatomic and physiologic changes in disease and resulting clinical manifestations. Includes laboratory examination and discussion of disease processes, basic laboratory skills. Specific diseases are presented as examples. Prerequisite: Year one of medical curriculum or approval of department head.

924 SYSTEMIC PATHOLOGY / Credit 8. Systemic Pathology. A continuation of MPAT 923 presenting a comprehensive survey of specific human diseases by organ systems, including their causes, pathogenesis, anatomic changes, clinical manifestations and clinical laboratory testing. Includes laboratory sessions. Prerequisite: MPAT 923 or approval of department head.

981 SEMINAR / (1-0). Credit 1. Pathology seminar presenting selected areas in depth. Prerequisite: Year one of the medical curriculum or approval of department head.

983 ELECTIVE CLERKSHIP IN ANATOMIC AND CLINICAL PATHOLOGY / Four weeks. Elective clerkship in a specific area of pathology. Prerequisite: Satisfactory completion of year two of the medical curriculum.

984 SELECTIVE CLERKSHIP IN... / Two or four weeks. Selective clerkship in a specific area of pathology and laboratory medicine. Prerequisite: Satisfactory completion of year two of the medical curriculum.

985 PROBLEMS IN PATHOLOGY / Credit 1 or more. Special problems in pathology. Prerequisite: Year one of the medical curriculum or approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Special topics in advanced pathology. Prerequisite: Year one of the medical curriculum or approval of department head.

991 RESEARCH / Credit 1 or more. The interest of the student and the supervising faculty member determines the specific nature of the research. Prerequisites: Completion of years one and two of the medical curriculum or approval of department head.

992 CLERKSHIP / Credit 2 to 8. Application of knowledge learned in MPAT 923 and 924 in the hospital laboratory setting. Prerequisite: First two years of the medical curriculum.

## Pediatrics (MPED)

921 INTRODUCTION TO PEDIATRICS / Credit 3. Principles of pediatrics; normal physiological and psychosocial development of the newborn through adolescence. Prerequisite: Satisfactory completion of year one of the medical curriculum.

982 CORE CLERKSHIP IN PEDIATRICS / Pediatrics under supervision of the faculty through participation in routine and emergency inpatient (ward and nursery) and outpatient pediatric care. The student performs histories and physicals, learns problem-solving techniques, and participates in conferences, seminars and rounds. Prerequisite: Satisfactory completion of year two of the medical curriculum.

983 ELECTIVE CLERKSHIP IN... / 4 weeks. Elective clerkship in a specific area of pediatrics. Prerequisite: Satisfactory completion of year three of the medical curriculum.

991 RESEARCH / Original clinical and/or laboratory investigation in a specific area of pediatrics. Prerequisite: Approval of department head.

## Psychiatry and Behavioral Science (MPSY)

911 WORKING WITH PATIENTS / Credit 2. Physical, psychological and sexual aspects of human development. Illustrative cases presented by practicing physicians. Prerequisite: Admission to medical curriculum.

941 INTRODUCTION TO CLINICAL PSYCHIATRY / Credit 3. Overview of psychiatric diagnosis in accordance with the Diagnostic and Statistical Manual of Mental Disorders; management and treatment of psychiatric disorders. Prerequisite: Completion of year one of the medical curriculum.

982 CORE CLERKSHIP IN PSYCHIATRY / Clinical psychiatry, with patient evaluation on the inpatient and outpatient services under supervision of the clinical faculty, participation in seminars, conferences, hospital and emergency room consultations, and in psychological and psychometric evaluations. Prerequisite: Satisfactory completion of year two of the medical curriculum.

983 ELECTIVE CLERKSHIP IN... / Four weeks. Elective clerkship in a special area of psychiatry. Prerequisite: Satisfactory completion of year three of the medical curriculum.

985 PROBLEMS / Credit 1 or more. Special problems in psychiatry. Prerequisite: Approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Special topics in an identified area of psychiatry. Prerequisite: Approval of department head.

991 RESEARCH / Credit 1 or more. Research projects in the field of psychiatry. Prerequisite: Approval of department head.

## Radiology (MRAD)

931 PRINCIPLES OF RADIOLOGY / 18 clock hours. Methods of medical imaging; conventional radiology, ultrasound, computerized tomography, magnetic resonance imaging, interventional radiology and nuclear radiology, and application of these methods to specific clinical problems. Prerequisite: Satisfactory completion of year two of the medical curriculum.

983 ELECTIVE CLERKSHIP IN … / Two or four weeks. Elective clerkship in a specific area of radiology. Prerequisite: Satisfactory completion of year three of the medical curriculum.

985 PROBLEMS / Directed study of selected problems in radiology. Prerequisite: Approval of department head.

## Surgery (SURG)

982 CORE CLERKSHIP IN SURGERY / Clinical surgery with workup of patients and participation with the clinical faculty in preoperative evaluation, operative procedure and postoperative care. Participation in clinical rounds, conferences, emergency room and formal classroom activity. Prerequisite: Satisfactory completion of year two of the medical curriculum.

983, 984 ELECTIVE CLERKSHIP IN … / Two or four weeks. Elective clerkship in a specific area of surgery. Prerequisite: Satisfactory completion of year three of the medical curriculum.

991 RESEARCH / Original clinical and/or laboratory investigation in a specific area of surgery. Prerequisite: Approval of department head.

# Course Descriptions
# Graduate School of Biomedical Sciences

## Baylor College of Dentistry

*Biomedical Sciences*

5126 RESPONSIBLE CONDUCT IN BIOMEDICAL RESEARCH / A discussion of issues relating to ethical conduct and research. Offered spring semester of even years.
Dechowz—0.5 sem. hr.

5127 SCANNING ELECTRON MICROSCOPY AND ASSOCIATED TECHNIQUES / Principles and methods of scanning electron microscopy. Technical instruction includes tissue preparation, critical point drying, freeze fundamentals and microscope maintenance.
Spears—2 sem. hrs.

5190 SEMINAR: CURRENT ISSUES IN SCIENCE / Guest lectures, workshop lectures and discussion includes topics of current interest to program faculty and students and of general interest in the biomedical sciences.
Faculty—1 sem. hr.

5205 ORAL HISTOLOGY / Origin and development of the dental tissues and their related structures. Current publications and research reports are used to provide students with an opportunity to investigate some phase of active interest to them and their anticipated future interest in practice.
Diekwisch—1 sem. hr.

5208 MICROBIOLOGY I / Introduction to basic microbiology with emphasis on oral and medical microbes, taxonomy and microbial physiology. Taught in conjunction with dental curriculum. Additional readings and discussion for graduate students.
Berry—3 sem. hrs.

5210 MICROBIOLOGY LABORATORY / Introduction to classical laboratory methods of microbial staining, microscopy, isolation and cultivation. Taught in conjunction with 5208.
Berry—1 sem. hr.

5229 THE USE AND CARE OF ANIMALS IN RESEARCH AND TRAINING / Overview of the use and care of laboratory animals. Includes discussion of regulations and ethical issues.
Bellinger—1 sem. hr.

5243 ONCOLOGY/ Overview of oncological processes and diseases with special emphasis on the orofacial region.
Binnie/Miller—1 sem. hr.

5245 INFLAMMATION AND WOUND HEALING / Cellular and molecular processes of inflammation and wound healing, especially as they apply to tissues of the oral region.
Staff—2 sem. hrs.

5251 IMMUNOLOGY I / Update on the principles of immunology with an emphasis on oral aspects and related diseases.
Newman—2 sem. hrs.

5252 IMMUNOLOGY II / Application of immunology in clinical and laboratory diagnosis; mechanisms of immunologic disorders. Laboratory demonstrations.
Newman—1 sem. hr.

5253 BACTERIAL PATHOGENESIS: A MOLECULAR APPROACH / Emphasis is placed on parasitic interactions between selected oral and non-oral pathogenic bacteria and humans. The lectures and readings deal with mechanisms of bacterial pathogenesis on a molecular level, along with a classical interpretation of bacterial pathogenesis.
Berry—1 sem. hr.

5260, 5261
5262 RESEARCH AND SCIENTIFIC COMMUNICATION I, II, III / Extension of student's comprehension of the research process from initiation of a research topic to the presentation of findings introducing traditional as well as innovative approaches to oral health research. Sequence also includes experimental design and basic statistics.
Buschang/Jones—1 sem. hr.

5263 SENSORY NEUROBIOLOGY AND PAIN / An overview of the various sensory systems is explored with the primary emphasis on the processing of pain and temperature information from the craniofacial complex.
Hutchins—1 sem. hr.

5265 NEUROBIOLOGY OF OROFACIAL DEVELOPMENT / Course provides developmental neurobiology concepts to examine how neural factors may influence growth, development and aging of the orofacial region.
Mbiene—1 sem. hr.

5269 ADVANCED GROWTH AND DEVELOPMENT / Normal prenatal growth and development. Patterns and mechanisms of growth and maturation.
Buschang/Svoboda—1 sem. hr

5270 ADVANCED DEVELOPMENTAL BIOLOGY AND EMBRYOLOGY / Basic process and mechanisms of embryonic development and morphogenesis in vertebrates; homeobox gene expression, epithelial mesenchymal interactions; neural crest migration, interactions and derivatives; gene expression in bone and tooth formation. Prerequisite: 5603 or equivalent.
Diekwisch—1 sem. hr.

5274 SPECIAL PROBLEMS IN POSTNATAL CRANIOFACIAL GROWTH AND DEVELOPMENT I / Growth, development, adaptation and aging of craniofacial structures and tissues (especially skeletal); somatic growth and development; clinical implications; theories of craniofacial development.
Faculty—1 sem. hr.

5278 CARTILAGE BIOLOGY / This course familiarizes the student with the biology of cartilaginous tissues, with emphasis on the structure and metabolism of the chondrocyte and its matrix. Implications for biomedical properties of the tissue and for development of degenerative changes are explored.
Hinton/Svoboda—1 sem. hr.

5279 THE TMJ: GROWTH, DEVELOPMENT AND ADAPTATION / Review of the structure and characteristics of the tissues comprising the temporomandibular joint, as well as alterations taking place during prenatal development and postnatal maturation. Current views regarding local environmental determinants of joint adaptation and of the possibilities of growth alteration are presented.
Hinton—1 sem. hr.

5301 NEUROSCIENCE / Lectures and laboratory sessions on gross and microscopic anatomy of the human central and peripheral nervous system. Neurophysiology of the central nervous system, peripheral nerves, special sense, autonomics and clinical mediation.
Hutchins—2 sem. hrs.

5306 GENERAL BIOCHEMISTRY I / Chemistry, function and occurrence of the principal organic materials in the human, together with a discussion of enzymology and carbohydrate and lipid metabolism.
Miller—2 sem. hrs.

5307 GENERAL BIOCHEMISTRY II / Intermediary metabolism of protein, protein synthesis, nucleic acid metabolism and biochemical endocrinology.
Miller—2 sem. hrs. Prerequisite: 5306 or equivalent.

5312 APPLIED MEDICAL PHYSIOLOGY / Basic physiology of the cardiovascular, respiratory and renal systems. Each area is expanded to include physiology problems seen clinically as they relate to the dental intern.
Bellinger—2 sem. hrs. Prerequisite: 5611 or equivalent.

5324 ADVANCED BIOSTATISTICS / Advanced biostatistical methods, including multivariate and longitudinal analysis; computer simulations; applications in craniofacial biology. Prerequisites: CS 5222 and 5122 or equivalent.
Buschang—2 sem. hrs.

5341 TECHNIQUES IN CELL AND MOLECULAR BIOLOGY / Principal methods of cellular/molecular investigation of proteins and nucleic acids, including immunocytochemistry, western blotting, northern/southern blotting, radioimmunoassay, *in situ* hybridization, polymerase chain reaction, intracellular recording and fluorescence confocal microscopy. Prerequisite 5340 or equivalent.
Svoboda—2 sem. hrs.

5350 ORAL MICROBIOLOGY / The environment of the mouth is described and its relation to the endogenous and exogenous oral microbiota; relationship between disease and bacterial species; discussion of species differences; molecular mechanisms of bacterial pathogenesis; and host response to oral microbes. Prerequisites: 5208, 5209, 5210 or equivalent.
Staff—3 sem.hrs.

5360 ADVANCED NEUROSCIENCE / Advanced concepts of neuroscience are presented with in-depth coverage of membrane and system function. Prerequisite: 5301 or equivalent.
Hutchins/Wong—1 sem. hr.

5376 EVOLUTIONARY AND FUNCTIONAL MORPHOLOGY / Comparative anatomy and evolution of craniofacial structure, with emphasis on current techniques of electrophysiology, kinesiology and musculoskeletal biomechanics of orofacial function.
Dechow—1 sem. hrs.

5377 BIOLOGY OF BONE AND MINERALIZED TISSUES / Overview of modern studies of bone structure, function and adaptation with specific relevance for the craniofacial region.
Dechow/Opperman—1 sem. hr.

5402 GENERAL HISTOLOGY / General histology and microscopic anatomy of the four basic tissues. Laboratory study of electron micrographs and prepared slides is employed.
McIntosh—3 sem. hrs.

5431 PHYTOCHEMICALS IN FRUITS AND VEGETABLES TO IMPROVE HUMAN HEALTH (THROUGH TTVN) / This course will update research information on phytochemicals and describe the increasing role of phytochemicals in the prevention of chronic disease. The student acquires knowledge in a variety of different disciplines, including agriculture, food science, nutrition, biology, chemistry, medicine and toxicology.
Miller—3 sem. hrs.

5462 ENDOCRINOLOGY / This course surveys endocrine physiology with a special emphasis on the control of growth. The course includes several laboratory sessions on endocrine-related molecular biology, fluid collection for hormone assays and assay techniques for hormones and related compounds. Prerequisites: 5611 and 5340 or equivalent.
Bellinger—3 sem. hrs.

5603 GROSS ANATOMY / Conceptual and functional basis for understanding macroscopic structure of the human body utilizing laboratory dissection of human cadavers. Regional anatomy of the back, thorax, upper limb and head is emphasized.
Spears—4 sem. hrs.

5611 MAMMALIAN PHYSIOLOGY / Basic physiology principles of cells, muscle, nerve, blood, heart, circulation, respiration, digestion, excretion and central nervous system in maintaining homeostasis. Classical laboratory experiments are used to demonstrate these principles.
Williams—4 sem. hrs.

# Course Descriptions

## Graduate School of Biomedical Sciences

5V04 HEAD AND NECK ANATOMY / Special emphasis on surgical anatomy and distribution of nerves and vasculature of particular interest in the field of dentistry.
Hutchins—1.5 sem. hrs.

5V40 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES I / A general survey intended to provide background information concerning the methods and theory of modern cellular/molecular biology. This lays the groundwork for more advanced study, aids those interested in incorporating cellular/molecular approaches into their research work and enables one to read, understand and evaluate current scientific literature. Prerequisites: 5208 or equivalent; 5306, 5307 or equivalent.
Svoboda—2 sem. hrs.

5V42 CELLULAR AND MOLECULAR BIOLOGY OF ORAL AND CRANIOFACIAL TISSUES II / Processes of epithelial-mesenchymal interaction as related to odontogenesis, amelogenesis, dentinogenesis; collagen formation, intracellular and extracellular calcium homeostasis; plaque and calculus; and wound healing.
Svoboda—2 sem. hrs.

5V71 PRENATAL CRANIOFACIAL DEVELOPMENT / Normal prenatal growth and development of the craniofacial region; processes and mechanisms of palatal development; maxillomandibular development; factors influencing sutural development. Prerequisite: 5270.
Opperman—variable

5V72 CRANIOFACIAL ANOMALIES / Abnormal development of the craniofacial region, with emphasis on the definition and recognition of genetic defects in somatic development (syndromology), dysmorphology, embryonic disruptions and malformation; epidemiological aspects of syndromes; postnatal growth associated with syndromes. Prerequisites: 5271 and 5273.
Carlson—variable

5V73 ADVANCED HUMAN CRANIOFACIAL DEVELOPMENT AND GROWTH / Detailed investigation of the basic processes and mechanisms of postnatal growth and adaptation of the craniofacial region. This course emphasizes the areas of controversy surrounding current understanding of the factors influencing postnatal craniofacial growth and form; the adaptive capabilities of growth and form; the adaptive capabilities of craniofacial tissues; the effect of altered function on craniofacial growth and form; and the influence of treatment on craniofacial growth and form. Also considered are theories of craniofacial growth.
Carlson—variable

5V75 PHYSICAL GROWTH AND MATURATION / Pattern and mechanisms of postnatal growth and maturation.
Buschang—variable

5V81 SEMINAR: CURRENT ISSUES IN BONE AND MINERALIZED TISSUE BIOLOGY / Topics of current importance in bone and mineralized tissue biology.
Dechow—1 sem. hr.

5V91, 5V92 SPECIAL TOPICS IN BIOMEDICAL SCIENCES / Reading and discussion of current literature pertinent to topic of seminar. Presentation of papers on selected topics is required for all students. May be used for multiple courses in any one semester.
Faculty—variable

5V93, 5V94, 5V95 DIRECTED READINGS / Individualized courses for single students involve in-depth study of specific topics in the biomedical sciences.
Faculty —variable

5V96, 5V97 RESEARCH AND SPECIAL PROBLEMS / Concentrated investigation in any area of biomedical sciences. This course may be used for individualized laboratory rotations or research.
Faculty —variable

5V98 THESIS RESEARCH AND PREPARATION OF MASTER'S THESIS
Faculty—variable

5V99 DISSERTATION / No credit will be given for this course. It is used by students after achieving candidacy for research and preparation of Ph.D. dissertation
Faculty—variable

### *Relevant Courses Available at Other Institutions in the Metroplex**

| | | |
|---|---|---|
| BMS5630 | Classical and Molecular Genetics | UTD |
| BMS5631 | Eukaryotic Molecular and Cell Biology | UTD |
| BMS5632B | Biochemistry/Proteins and Nucleic Acids | UTD |
| MS5633 | Molecular Biology | UTD |
| BMS5634 | Cell Biology | UTD |
| BMS5V35 | Methods in Molecular and Cell Biology | UTD |
| BMS5V36 | Topics in Molecular Biology | UTD |
| CMB5096 | Cellular and Molecular Biology | UTSW |
| AE1312 | Statistics | UTA |
| AE2312 | Dynamics | UTA |
| ME2312 | Structural Statistics | UTA |
| ME5340 | Finite Element Application | UTA |

| | |
|---|---|
| *UTA | The University of Texas Arlington |
| UTD | The University of Texas Dallas |
| UTSW | The University of Texas Southwestern Graduate School of Biomedical Sciences |

## College of Medicine

### *Medical Sciences (MSCI)*

601 PRINCIPLES OF BASIC MEDICAL SCIENCES I / (5-0). Credit 5. Molecular basis of cellular functions in human body: technologies for probing cellular functions and structures; plasma membranes and intracellular organelles; gene function; cell metabolism; cell motility and cytoskeleton. Prerequisites: BIOL 413; BICH 303 or equivalent.

602 PRINCIPLES OF BASIC MEDICAL SCIENCES II / (5-0). Credit 5. Continuation of MSCI 601. Molecular basis of cellular functions in human body: Intracellular and intracellular signaling; cell growth, division and differentation; molecular basis of immunology, neurosciences and cardiovascular sciences. Prerequisites MSCI 601 or equivalent.

605 LABORATORY SAFETY AND ETHICS / (1-1). Credit 2. The course is concerned with federal guidelines for laboratory safety, human and animal experimentation and experimental use of controlled substances. Prerequisite: Graduate classification.

610 PATHOGENESIS OF HUMAN DISEASE / (3-0). Credit 3. Molecular mechanisms of human disease processes; the main goal of the course is to provide students with an understanding of basic disease processes such as cardiovascular disease, cancer, inflammatory disease, AIDS, tuberculosis, diabetes, Alzheimer's disease and spinal cord injury. Prerequisite: Approval of instructor.

611 EXPERIMENTAL DESIGN FOR BIOMEDICAL SCIENCE / (3-0). Credit 3. Students learn about the principles of experimental design. By the end of the course, the student should be able to incorporate appropriate design features into their own experiments and critically evaluate the experimental literature for design flaws and inappropriate use of statistics. Prerequisite: Undergraduate or graduate statistics 3 hours.

612 CURRENT TOPICS IN CELL SIGNALING / (3-0). The course provides an overview of intracellular signal transduction pathways utilized by various classes of growth factor, cytokine, integrin and G-protein coupled receptors. The course also will provide a clear understanding of the importance of these pathways in regulating cell growth, differentiation, apoptosis and other cellular processes, both under normal physiologic conditions as well as diseases.

681 SEMINAR / (1-0). Credit 1. Research presentations in areas of current interest in the medical sciences. Prerequisite: Graduate classification in appropriate field.

685 DIRECTED STUDIES / Credit 1 to 6 each semester. Limited investigation in fields other than those chosen for thesis or dissertation. Prerequisite: Approval of instructor.

687 PROFESSIONALISM AND ETHICS / (1-1). Credit 1. Students learn about professionalism and ethics in the medical sciences.

689 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topics in an identified area of medical sciences. May be repeated for credit. Prerequisite: Approval of instructor.

690 THEORY OF MEDICAL SCIENCES RESEARCH / (2-0). Credit 2. Design of research experiments in various fields of medical sciences; evaluation of end results with the aid of examples taken from current scientific literature. Prerequisite: Approval of instructor.

691 RESEARCH CREDIT / Credit 1 or more. Research for thesis or dissertation. Prerequisite: Approval of supervisory professor in chosen field.

695 FRONTIERS IN MEDICAL SCIENCES RESEARCH / (2-0). Credit 2. Present status of research in a variety of significant medical sciences fields. Content depends on the availability of visiting lecturers who are selected because of distinguished international recognition in their field of research. May be repeated for credit. Prerequisite: Graduate classification in appropriate fields.

### *Neurosciences and Experimental Therapeutics (NEXT)*

601 ADVANCED NEUROSCIENCES / (1-2). Credit 2. Details of mammalian nervous system, including humans; focus on organization of functional neural systems and their integrative action; use of original research papers. Prerequisites: MANA 922 and approval of instructor.

603 NEUROPSYCHOPHARMACOLOGY / (4-0). Credit 4. Pharmacology as it relates to behavior and the central nervous system. Prerequisites: MPHM 923, 924 and 925 or equivalents.

604 SPECIAL REGIONAL HUMAN DISSECTIONS / Credit 1 to 3 each semester. Dissection of special region with more detail than in MANA 901; histological, neural and gross anatomical material utilized. Prerequisites: MANA 901 and approval of instructor.

605 MOLECULAR MECHANISMS OF DRUG AND TOXIN ACTION I / (4-0) Credit 4. Introduction to the major tools and concepts of pharmacology. This is a two part series (see MPHM 606). By the end of these courses, the student will understand how selectivity of drug action is determined by pharmacological principles and will have a scientific basis for a rational approach to the study of drug actions and side effects. Prerequisite: Approval of coordinator.

606 MOLECULAR MECHANISMS OF DRUG AND TOXIN ACTION II / (4-0). Credit 4. Survey of ocular drugs, overview of molecular signaling mechanisms and selected topics in developmental neuropharmacology. Prerequisite: Permission of coordinator.

607 MOLECULAR MECHANISMS OF DRUG AND TOXIN ACTION III / (4-0). Credit 4. Interaction of drugs and toxins with neurotransmitter systems with primary emphasis on mechanisms involving receptor function that impacts central nervous system integration. Prerequisite: Approval of coordinator.

608 METHODS IN NEUROHISTOLOGY / (1-2). Credit 2. Instruction in anesthetization, perfusion of animals; removal of neural tissues; histological processing, staining of tissues, including immunohistochemistry. Prerequisites: MANA 911 and approval of instructor.

609 INTRACELLULAR SIGNALING / Credit 1-2. Introduction to signaling pathways inside cells that mediate multi-step cascades following cell surface receptor activation and how these pathways are influenced by drugs. Prerequisite: Approval of coordinator.

610 ORGAN-SPECIFIC TOXICOLOGY / (1-0). Credit 1. Introduction to critical mechanisms of toxic injury of organ systems with emphasis on liver, kidney, lung, central nervous system and reproductive tract and overview of classic toxicants. Prerequisite: Approval of coordinator.

621 TEACHING GROSS ANATOMY / (3-8). Credit 2. Provides teaching and supervisory experience for graduate students; instructs students in teaching and supervising medical students in Gross Anatomy (MANA 901); student(s) observe in the laboratory and present at least one lecture. Prerequisites: Completion of MANA 901 with a grade of "B" or better and approval of course coordinator.

622 TEACHING MEDICAL HISTOLOGY / (2-4). Credit 1. Provides teaching and supervisory experience for graduate students; instructs students in teaching and supervising medical students in Microscopic Anatomy (MANA 911); student(s) observe in the laboratory and present at least one lecture. Prerequisite: Taken and passed MANA 911.

623 TEACHING IN MEDICAL NEUROSCIENCE / (5-3). Credit 2. Assist in the teaching of Medical Neuroscience (MANA 922), to include lecture(s), laboratories and examination setup and proctoring. Prerequisites: MANA 922, approval of instructor, and taken and passed neurosciences.

681 SEMINAR / Credit 1. Focus will be on critical scientific thinking. Emphasis placed on oral communications, scientific writing and grant preparation. Prerequisite: Graduate student in medicine. Approval of instructor.

685 DIRECTED STUDIES / Credit 1-6 each semester. Limited investigation in fields other than those chosen for thesis or dissertation. Prerequisite: Approval of instructor.

689 SPECIAL TOPICS IN ... / Credit 1 to 4. Selected topics in an identified area of pharmacology and toxicology. May be repeated for credit when topics vary. Prerequisite: Approval of the instructor.

### *Molecular and Cellular Medicine (MCMD)*

625 NUCLEIC ACID-PROTEIN INTERACTIONS / (1-0). Credit 1. Mechanisms of nucleic acid-protein interactions involved in fundamental biochemical processes such as DNA replication and rearrangement, transposition, transcription, RNA splicing and translation; original research articles presented focusing on experimental approaches, interpretation of results and overall significance. Prerequisite: Approval of instructor. Cross-listed with BICH 625.

671 MACROMOLECULAR FOLDING AND DESIGN / (1-0). Credit 1. The Macromolecular Folding and Design Journal Club is to serve as a mechanism for oral dissemination of current knowledge regarding the structure and function of biological macromolecules. Prerequisite: Approval of the instructor. Cross-listed with BICH 671 and CHEM 671

672 BIOLOGICAL MEMBRANES / (1-0). Credit 1. Seminar-based course examining recent discoveries in the structure, function and assembly of biological membranes; students give an oral presentation on current literature in molecular biology, biochemistry and/or biophysics. Prerequisite: Approval of the instructor. Cross-listed with BICH 672.

674 PROTEIN FOLDING AND STABILITY / (1-1). Credit 1. Selected topics from recent literature in the general areas of protein folding, structure and stability. Prerequisite: Approval of the instructor. Cross-listed with BICH 674.

675 MOLECULAR PATHOGENESIS / (1-0). Credit 1. Oral presentations and discussions from current literature in the general area of the molecular mechanisms involved in disease. May be taken 12 times. Prerequisite: Approval from instructor.

681 SEMINAR / Credit 1. Focus will be on critical scientific thinking. Emphasis placed on oral communications, scientific writing and grant preparation. Prerequisite: Graduate student in medicine. Approval of instructor.

685 DIRECTED STUDIES / Credit 1-6 each semester. Limited investigation in fields other than those chosen for thesis or dissertation. Prerequisite: Approval of instructor.

689 SPECIAL TOPICS IN ... / Credit 1 to 4. Selected topics in an identified area of biochemistry and genetics. May be repeated for credit when topics vary. Prerequisite: Approval of the instructor.

### *Microbial and Molecular Pathogenesis (MMPA)*

601 MICROBIAL PATHOGENESIS OF HUMAN DISEASE / (3-0). Credit 3. Principles of microbe-host interactions at the molecular level. Selected medically important infectious diseases serve as paradigms for understanding how multiple pathogenic mechanisms contribute to disease. Prerequisite: Permission of instructor.

602 IMMUNOREGULATION / (3-0). Credit 3. In-depth exploration of the genetic, cellular and molecular mechanisms by which humoral and cellular immune responses are regulated; regulatory T cell circuits, molecules (interleukins, lymphokines), isotypic and idiotypic regulation, hormonal effects, immunoregulatory defects, experimental manipulation of immunoregulatory networks. Prerequisites: VTMI 649 or BIOL 610 and approval of instructor.

607 APPLIED EPIDEMIOLOGY / (3-3). Credit 4. Application of epidemiologic concepts to the study of disease occurrence; descriptive epidemiologic methods in the study of diseases. Prerequisite: Graduate classification. Cross-listed with VAPH 607.

663 MOLECULAR BIOLOGY OF ANIMAL VIRUSES / (3-0). Credit 3. In-depth studies of the biochemistry and replication strategies of animal viruses and molecular mechanisms of pathogenesis for selected viral systems. Prerequisite: Graduate classification in virology, molecular biology, biochemistry or approval of the instructor. Cross-listed with VTMI 663.

681 SEMINAR / Credit 1. Focus will be on critical scientific thinking. Emphasis placed on oral communications, scientific writing and grant preparation. Prerequisite: Graduate student in medicine. Approval of instructor.

685 DIRECTED STUDIES / Credit 1-6 each semester. Limited investigation in fields other than those chosen for thesis or dissertation. Prerequisite: Approval of instructor.

689 SPECIAL TOPICS IN ... / Credit 1 to 4. Selected topics in an identified area of microbial and molecular pathogenesis. May be repeated for credit when topics vary. Prerequisite: Approval of the instructor.

### *System Biology and Translational Medicine (SBTM)*

601 METHODS IN MOLECULAR AND CELL BIOLOGY / (3-3). Credit 4. Fundamental laboratory techniques used to investigate cellular and subcellular structure and function; cell culture and isolation; light microscopy (brightfield, phase, DIC); fluorescence microscopy; confocal and multiphoton microscopy; atomic force microscopy; protein isolation, concentration and quantification; gel electrophoresis; immunoprecipitation; agarose gel electrophoresis; northern, southern and western blotting; transfections and plasmid preps; polymerase chain reaction; microarray technology. Prerequisites: Graduate classification in SBTM or medical sciences and approval of course coordinator.

602 THEORY OF MOLECULAR AND CELL BIOLOGY / (2-0). Credit 2. Equivalent to lecture component of SBTM 601. No laboratory. Prerequisites: Graduate classification and approval of course coordinator.

603 CARDIOVASCULAR SCIENCE/ (3-0). Credit 3. Molecular basis of cardiomyocyte, endothelial and vascular smooth muscle functions; structure and function of heart and vasculature; cardiovascular mechanics; local, hormonal and nervous control mechanisms; integrative behavior of cardiovascular system; cardiovascular pathobiology. Prerequisites: MSCI 601 & 602 or equivalent and approval of course coordinator.

604 ADVANCED CARDIOVASCULAR BIOLOGY I / (4-0). Credit 4. Biology of cardiogenesis, vasculogenesis, lymphangiogenesis and hematopoiesis; functions of heart, and blood and lymph vascular systems; integrated molecular and cellular mechanisms that regulate cardiovascular network. Prerequisite: SBTM 603 or VTPP 910 & 912 and MSCI 601 & 602 and approval of course coordinator.

606 ADVANCED CARDIOVASCULAR BIOLOGY II / (4-0). Credit 4. Interactions of the heart and vascular system including intrinsic, neural and humoral control systems; molecular genetics and pathophysiology of cardiovascular system during the development of diseases; gene therapy approaches in cardiovascular biology. Prerequisites: SBTM 604 and approval of course coordinator.

608 BONE BIOLOGY / (2-0). Credit 2. Introduction to the discipline of bone; discussion includes all aspects of bone biology. Prerequisite: Graduate classification in SBTM or medical sciences, or approval of instructor.

681 SEMINAR / Credit 1. Focus will be on critical scientific thinking. Emphasis placed on oral communications, scientific writing and grant preparation. Prerequisite: Graduate student in medicine. Approval of instructor.

685 DIRECTED STUDIES / Credit 1-6 each semester. Limited investigation in fields other than those chosen for thesis or dissertation. Prerequisite: Approval of instructor.

689 SPECIAL TOPICS IN ... / Credit 1 to 4. Selected topics in an identified area of system biology and translational medicine. May be repeated for credit when topics vary. Prerequisite: Approval of the instructor.

# Course Descriptions
# Irma Lerma Rangel College of Pharmacy

The Texas A&M Health Science Center Irma Lerma Rangel College of Pharmacy offers the Doctor of Pharmacy program leading to the Pharm.D. degree. The students enrolled in this program are exposed to a core professional curriculum that includes the biomedical sciences; pharmaceutical sciences; social, behavioral and administrative pharmacy sciences; and pharmacy practice.

The curriculum, which is offered through 146 semester credit hours (SCH), is organized in such a way that the student progresses through the pharmaceutical sciences and clinical sciences didactic and laboratory course work into summative experiential rotations. This total includes 102 SCH of the Core Curriculum (required courses), six (6) hours of elective classes and thirty-eight (38) SCH of clinical-experiential, including two (2) hours of Pharmacy Grand Rounds. The fourth year of the curriculum is devoted exclusively to Advanced Pharmacy Practice Experiences and Pharmacy Grand Rounds, where the knowledge gained and skills developed in the first three years are greatly enhanced and expanded. The primary goal of the program is to provide a comprehensive pharmacy education in a stimulating environment to prepare students for the practice of pharmacy as competent, caring, ethical professionals dedicated to the provision of optimal pharmaceutical care.

No student may enroll in any course listed below until they are a fully registered student in the HSC-Rangel College of Pharmacy. For students entering the first professional year (P1), this requires that all pre-pharmacy course work has been completed and the college's Admissions Committee has accepted the student. Advancement to the subsequent professional years (P2, P3 and P4) is determined by successful completion of all designated prerequisites as well as all prescribed course work for that year. Students with unsatisfactory performance in any course will be inhibited from progressing and required to retake deficiencies until satisfactory performance is achieved.

Courses that comprise the Core Curriculum of the HSC-COP curriculum leading to the Doctor of Pharmacy degree are described below. The core includes both required and elective course work. The courses below are listed by year and consist of didactic, laboratory, practice experience (introductory and advanced) and post-experiential offerings. Each course is shown with designations of pre- and/or corequisites where applicable.

## Curricular Changes

The HSC-COP program is subject to ongoing evaluation as mandated by the Accreditation Council for Pharmacy Education (ACPE). The Accreditation/Self-Study Committee, a standing faculty/student committee, follows the *Guidelines for Self-Study* from ACPE. It should be noted that these guidelines call for ongoing assessment rather than point-in-time assessment of program elements. This committee reports to the dean, who is responsible for taking action on the findings and recommendations of the committee. Proposals for curricular modification emanating from these self-study processes are carefully deliberated upon by the entire faculty. While the curriculum and program of study detailed within this document were accurate at the time of printing, the college reserves the right to make modifications without advance notice.

## Course Credits

The learning format of the class governs the number of Semester Credit Hours (SCH) a particular course is given. The following guidelines were used to make these determinations.

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| Didactic Courses: | 1 x 50 minutes = | 1 Semester Credit Hour |
| Seminar Courses: | 2 x 50 minutes = | 1 Semester Credit Hour |
| Laboratory Courses: | 3 x 50 minutes = | 1 Semester Credit Hour |
| Recitation Courses: | 4 x 50 minutes = | 1 Semester Credit Hour |

## First Professional Years (P1) Courses

600 DEAN'S HOUR / (0-0). Credit 0. The theme of the Dean's Hour is to involve students in the college's leadership and strategic initiatives and engage them in academic excellence. It allows them to provide input into programmatic issues. This course also provides an opportunity for students to participate in reflective thought and writing. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall and spring semesters.

FORUM, STUDENT PORTFOLIOS AND PROFESSIONAL DEVELOPMENT SEQUENCE. The Forum, Student Portfolios and Professional Development Sequence is offered each semester throughout the first three years of the program. This series is comprised of four components: the Forum, Professionalization Progression, Professional and Leadership Development, and Student Portfolios. These sections are designed to encourage reflection on personal and professional goals, reinforce knowledge and skills taught in didactic course work, and strengthen the appreciation for life-long learning. Students are exposed to leaders within the profession, reputable practitioners from various practice settings, leading researchers and scientists, and other renowned individuals who discuss career opportunities, latest research results and the practice of pharmacy.

601 FORUM/STUDENT PORTFOLIOS/PROFESSIONAL DEVELOPMENT I / (0-0). Credit 1. The Forum, Student Portfolios and Professional Development course builds on the course description of this sequence (see above). It is offered over two semesters. Students earning a satisfactory grade for their fall semester activities receive an "IP" grade until the course concludes at the end of the spring semester. Student portfolios are due each semester before the beginning of Assessment Week. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall and spring semesters.

602 CORE RECITATION (P1) / (0-0). Credit 0. Core Recitation provides an opportunity for students to go beyond the scheduled class interaction with their teachers/facilitators in order to further their knowledge, skills and abilities. It is a time dedicated to reviewing, in a different format, and clarifying material previously presented in another core course. The technique utilized may be discussion groups, workshops, case study presentations, review sessions or other non-didactic teaching method. This course also provides an opportunity for students to participate in reflective thought and writing. It is offered both semesters, and the one-hour recitation blocks are scheduled in advance through the Office of Academic Affairs. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall and spring semesters.

PATIENT CARE AND INTRODUCTORY PHARMACY PRACTICE EXPERIENCES SEQUENCE. The collective Patient Care Sequence and Introductory Pharmacy Practice Experiences (IPPE) explore the pharmacist's responsibility for ensuring optimal therapeutic outcomes for patients they serve and the scientific foundation of pharmacy practice. This series consists of two Patient Care courses, four IPPE modules, a Clinical Pharmacokinetics Course and the Pharmaceutical Care Lab (Dispensing). Throughout this combined series, a Top 200 and new drug exploration helps the student learn the essential information of the most commonly prescribed and most recently approved medications. It presents a coordinated approach to enhancing critical thinking, problem-solving and decision-making skills.

605 IPPE I: INTRODUCTORY PHARMACY PRACTICE EXPERIENCES / (1-0). Credit 1. This course introduces the student to the foundational concepts and attitudes, balanced with real-world observation, necessary to understand the practice of pharmaceutical care, the essence of being a professional and the challenges of applying these ideals. The expected outcomes from completion of this sequence are enhanced critical-thinking proficiency, expanded problem-solving ability, better decision-making, strong sense of professionalism and values, positive practice philosophy, good documentation proclivity, and an appreciation of the need for life-long learning. These outcomes are accomplished through substantial, organized early experiences that provide patient contact and reinforce knowledge and skills taught in didactic course work and encourage reflection. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: PHAR 657 Pharmacy Law and Ethics; PHAR 673 Self Care and Integrative Medicine. Offered: Fall semester.

606 IPPE II: INTRODUCTORY PHARMACY PRACTICE EXPERIENCES / (1-0). Credit 1. This class focuses on the application of pharmaceutical care principles, pharmaceutical knowledge, professionalism and values, and professional techniques to solve prescription problems. These outcomes are accomplished through substantial, organized early experiences that provide patient contact and reinforce knowledge and skills taught in didactic course work and encourage reflection. The course also includes the Rx for Change curriculum (Clinician-Assisted Tobacco Cessation), which is a comprehensive tobacco cessation training program that equips pharmacy students with knowledge and skills for assisting patients with quitting. Emphasis is also placed on the continual use and development of pharmaceutical calculations skills and medical Spanish. Prerequisites: PHAR 605 IPPE I, PHAR 672 Intro to Patient Care. Corequisites: PHAR 657 Pharmacy Law and Ethics, PHAR 673 Self Care and Integrative Medicine. Offered: Spring semester.

PRINCIPLES OF DRUG ACTION SEQUENCE. The Principles of Drug Action Sequence is a two-course series that provides an introduction to and integrates the presentation of pathophysiological, pharmacological and medicinal chemistry general principles. The fundamental mechanisms of the human disease process, including manifestation, diagnosis and treatment, are covered. It focuses on the chemistry of natural and synthetic drug entities, their physiochemical properties, methods of synthesis, sources, derivatives, modes of biotransformation, and structure-activity relationships. These courses lay the groundwork by developing an understanding of the basic pharmacologic concepts of therapeutics, receptor theory, drug metabolism and drug interactions.

610 PRINCIPLES DRUG ACTION I / (2-0). Credit 2. This course introduces the basic principles of pathophysiology, drug action and discusses chemical properties, stability, solubility, mechanisms of action and structure-activity relationships of the major pharmacological classes of therapeutic agents in general terms. The course covers an introduction to pathology, pathophysiology (cell injury, inflammation, cell repair), pharmacology (receptor theory, second messengers, signal transduction, principles of ADME, dose response curve, pharmacodynamic basis of drug interactions, basics of drug metabolism) and medicinal chemistry (functional groups, drug discovery, drug design, structure-activity relationships, hydrophilic-lipophilic considerations, chemical pathways of metabolism, acid-base properties, stereochemistry, receptor binding interactions, kinetics of binding). Prerequisite: Admission to Doctor of Pharmacy Program. Corequisites: PHAR 627 Biochemistry, PHAR 672 Intro to Patient Care (for case studies). Offered: Fall semester.

611 PRINCIPLES DRUG ACTION II / (2-0). Credit 2. The second of a two-class sequence builds on the course description of the Principles of Drug Action Sequence (see above). Specifically, it covers general pathophysiology through a broad overview of the major diseases that are seen in organ systems (detailed pathophysiological mechanisms are covered in the Integrated Pharmacotherapy Sequence courses), the pharmacology and medicinal chemistry of adrenergic and cholinergic agonists and antagonists, and cytochrome p450 metabolism. Prerequisite: PHAR 610 Principles Drug Action I. Corequisite: None. Offered: Spring semester.

626 HUMAN PHYSIOLOGY / (4-0). Credit 4. This course provides core knowledge of the physiology of the human body required in order to understand normal body function and acquire the ability to analyze and interpret the immediate and long-term compensatory responses to common disease states. It emphasizes the structure and function of major body systems: integumentary, muscular skeletal, cardiovascular, lymphatic, respiratory, digestive, nervous, endocrine, urinary, reproductive, and body fluid and electrolytes. Basic and applied terminologies, as well as the basic morphology of systems, are discussed. Biochemical and biophysical principles of cellular and membrane function are discussed. Relevance to clinical states and drug action are presented when appropriate. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall semester.

627 BIOCHEMISTRY / (3-0). Credit 3. This course provides an introduction to basic concepts in biochemistry. The focus is on the structure and function of vitamins, carbohydrates, proteins, hormones and lipids, as well as bioenergetics and major catabolic pathways at the cellular level. This course establishes the biochemical basis for cell structure and emphasizes an integrated approach to the understanding of cellular metabolism; provides a biochemical, genetic and molecular basis for understanding disease and drug functioning; and examines the mechanisms for genetic information flow in prokaryotic and eukaryotic cells. Common metabolic pathways of drug, enzyme induction and metabolism dose regulation are presented. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: PHAR 610 Principles Drug Action I. Offered: Fall semester.

628 RESEARCH METHODS/BIOSTATICS / (2-0). Credit 2. This course introduces students to basic statistical concepts and analytical methods and is designed to expose students to the fundamentals of research design and methodology. The primary goals are to familiarize students with general methodologic approaches used in experimental design and epidemiology, research terminology, statistical testing of data, investigator's responsibilities, the ethical considerations, the protection of human subjects and Institutional Review Boards. It covers the fundamentals of data sets and the evaluation of statistical results by employing examples of the clinical application of statistics currently available in statistical packages. Students develop and write a research proposal that encompasses these basic principles. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisites: PHAR 658 Pharmacoepidemiology. Offered: Spring semester.

641 PHARMACEUTICAL CALCULATIONS / (2-0). Credit 2. This course requires the application of basic mathematics and quantitative reasoning to pharmaceutical calculations essential to compounding and dispensing. Emphasis is on dosage calculations, dosage requirements, and compounding of formulations and parenterals. It covers basic pharmaceutical calculations, including measurement, the metric system and conversion factors, aliquots, sensitivity, dilutions, percentages, ratio strength, reducing and enlarging formulas, dilution and concentration, isotonic solutions, electrolyte solutions, density, specific gravity and specific volume, rate of flow, radiopharmaceuticals, body mass index, and nutritional labeling. Common mathematical processes that a pharmacist may encounter in professional practice are covered. Interpretation of the prescription, including Latin abbreviations, is discussed. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall semester.

642 PHARMACEUTICS I (W/LAB) / (3-1). Credit 4. This course provides students with a basic understanding of the physical-chemical and biological properties of pharmaceutical products and application of this knowledge to dosage form design, formulation, performance and drug delivery systems. It emphasizes how these factors affect the stability, kinetics, bioavailability and bioequivalence of drugs in dosage forms. It also focuses on the theory, technology, formulation, evaluation and dispensing of aqueous and non-aqueous liquids, suspensions, emulsions, semisolids, and topical dosage forms. The laboratory portion of the course involves students in the preparation and evaluation of dosage forms. Prerequisite: PHAR 641 Pharmaceutical Calculations. Corequisite: None. Offered: Spring semester.

656 HEALTH CARE SYSTEMS/PUBLIC HEALTH / (2-0). Credit 2. This course provides an introduction to the structure, organization, delivery, regulation and financing of the American health care system. Students are exposed to the basic principles of public health, the public health delivery system and an introduction to the history of pharmacy. The students learn about the pharmacist's role as a public health professional and how we, as the most accessible, approachable and accepted health professional, can improve the public's health. Pharmacy, its role and responsibilities within the health care system, and its interaction with other health occupations are discussed. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall semester.

657 PHARMACY LAW AND ETHICS / (3-0). Credit 3. This course presents the application of ethical principles to pharmacy practice. It serves as a primer on the basics of pharmaceutical and medical ethics. Additionally, pharmacy law is covered as it relates to practice under federal, state and local regulations of drugs, devices and daily activities. Emphases include discussions on value systems, patient respect and confidentiality, right-to-know issues, moral responsibility, informed consent, and the control of narcotics, poisons and other controlled substances. Principles of ethical thinking and role of formal codes of professional conduct are discussed in the context of resolving conflicting ethical principals. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: PHAR 606 IPPE II. Offered: Spring semester.

658 PHARMACOEPIDEMIOLOGY / (2-0). Credit 2. This course introduces the application of principles of epidemiology to the study of drug use and outcomes in large populations necessary to understand and apply statistics to decision-making and patient care. Assignments are designed to develop the student's skills in applying these concepts to literature evaluation and clinical problem solving. These concepts include frequency and probability, central tendency, normal population and sampling distributions, hypothesis testing, and an introduction to inferential statistics. After completion of this course, students should be able to utilize epidemiology tests and terms and discuss considerations important to screening for latent disease and unwanted effects. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: PHAR 628 Research Methods/Biostatics. Offered: Spring semester.

671 CLINICAL COMMUNICATIONS / (2-0). Credit 2. This course provides an introduction to the principles of effective communication, with a particular focus on health-related interactions, using simulated practice and peer assessment. The goal of this course is to develop skills and strategies that enable students to develop effective communication techniques in small group settings and in formal presentations to peers, health care professionals and patients. Approaches such as empathy, nonverbal communications and listening are covered. Emphasis is placed on developing professional patient-centered communication and counseling skills and providing useful information to patients, caregivers and fellow health professionals. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall semester.

672 INTRO TO PATIENT CARE / (2-0). Credit 2. This course introduces the concepts of caring for patients and pharmaceutical care. It presents the fundamentals of constructing SOAP notes, the patient's medical chart, methods for evaluating case studies, documenting patient care activities, and the structure, development and use of pharmaceutical care plans. Emphasis is placed on ways of collecting, organizing and evaluating information for the purpose of rendering decisions that improve patient quality of life through case studies building on the SOAP format of therapy review and basic clinical skills. Students are trained to think critically and to use group study to maximize learning. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisites: PHAR 605 IPPE I, PHAR 610 Principles Drug Action I (because of cases). Offered: Fall semester.

673 SELF CARE AND INTEGRATIVE MEDICINE / (3-0). Credit 3. This course is designed to familiarize the student with the principles and theories of self care and nonprescription medications, herbal remedy products, vitamins, nutritional supplements, and homeopathic products commonly found in community pharmacy practice. It covers the pharmacology and potential disease states in which these drugs are utilized, self-administration techniques and considerations in selection of a product. Emphasis is placed on the problem-solving processes involved in the therapeutic evaluation, rational use and recommendation of treatment to patients. A very strong emphasis is placed on patient care and patient counseling. Prerequisites: PHAR 605 IPPE-I, PHAR 610 Principles Drug Action I, PHAR 626 Human Physiology and PHAR 672 Intro to Patient Care. Corequisite: PHAR 606 IPPE-II. Offered: Spring semester.

685 INDEPENDENT STUDY / Variable Credit. This course provides an opportunity for students to work with individual faculty mentors on research projects of variable scope. Activities could include library, laboratory and/or survey-type research, assistance with syllabus development for future elective courses, or other activities agreed on between the student and mentor. Not graded, offered as “S/U” option only. Can be repeated twice. Prerequisite: Permission of instructor and department chair. Corequisite: None. Offered: Fall and spring semesters

## Second Professional Year (P2) Courses

700 DEAN’S HOUR / (0-0). Credit 0. The theme of the Dean’s Hour is to involve students in the college's leadership and strategic initiatives and engage them in academic excellence. It allows them to provide input into programmatic issues. This course also provides an opportunity for students to participate in reflective thought and writing. Prerequisite: P2 standing. Corequisite: None. Offered: Fall and spring semesters.

701 FORUM/STUDENT PORTFOLIOS/PROFESSIONAL DEVELOPMENT II / (1-0). Credit 1. The second Forum, Student Portfolios and Professional Development course builds on the course description of this sequence. Student portfolios are due each semester before the beginning of Assessment Week. One of the required elements for a passing grade is passing of the Comprehensive Benchmark Assessment Protocol given just prior to the start of classes (for P2 and P3 years). Students also gain experience with oral and written communications as they present and discuss their experiences as part of the class. Prerequisite: P2 standing. Corequisite: None. Offered: Fall and spring semesters.

702 CORE RECITATION (P2) / (0-0). Credit 0. Core Recitation provides an opportunity for students to go beyond the scheduled class interaction with their teachers/facilitators in order to further their knowledge, skills and abilities. It is a time dedicated to reviewing, in a different format, and clarifying material previously presented in another core course. The technique utilized may be discussion groups, workshops, case study presentations, review sessions or other non-didactic teaching method. This course also provides an opportunity for students to participate in reflective thought and writing. It is offered both semesters, and the one-hour recitation blocks are scheduled in advance through the Office of Academic Affairs. Prerequisite: P2 standing. Corequisite: None. Offered: Fall and spring semesters.

705 IPPE III: INTRODUCTORY PHARMACY PRACTICE EXPERIENCES / (1-0). Credit 1. This class presents the concepts of personal lifestyle choices and the corresponding medical consequences. One of the most important therapeutic interventions involved in the treatment of many chronic diseases is lifestyle modification. Students learn and practice techniques to encourage patients to make healthier choices and personal changes in integrating the physical, mental, social and spiritual dimensions of health. These outcomes are accomplished through substantial, organized Introductory Pharmacy Practice Experiences that provide patient contact and reinforce knowledge and skills taught in didactic course work and encourage reflection. Prerequisite: PHAR 606 IPPE II, HIPAA training, Blood-Borne Pathogens training. Corequisite: None. Offered: Fall semester.

706 IPPE IV: INTRODUCTORY PHARMACY PRACTICE EXPERIENCES / (1-0). Credit 1. This class includes coverage of cultural competency, health literacy and eliminating health disparities. This course is designed to provide the knowledge and sensitivity needed to communicate and intervene effectively in a variety of psychosocial situations with different patient populations. Patient education and communication, cultural and social awareness, and sensitivity issues are presented. Studies of disparities in health care consistently demonstrate that racial and ethnic minorities tend to receive a lower quality of health care than non-minorities, even when access-related factors, such as status, income and patients' insurance, are controlled. Prerequisite: PHAR 705 IPPE III. Corequisite: None. Offered: Spring semester.

INTEGRATED PHARMACOTHERAPY (IPT) SEQUENCE. The IPT sequence is an integrated approach to presenting the areas of pathophysiology, pharmacology, medicinal chemistry and pharmacotherapeutics as they relate to disease state management. It is an eight-course, longitudinal progression over two years. It builds on the general principles of pathophysiology, pharmacology and medicinal chemistry presented in the Principles of Drug Action Sequence. Additionally, these courses provide an introduction to the pharmacist's role in wellness promotion. There is also a Clinical Skills Lab, which is designed to provide an opportunity for the student to learn and practice skills necessary for the management of patients with specific conditions or needs.

710 IPT I: ELECTROLYTES, ACID-BASE, AND NUTRITION / (2-0). Credit 2. This course introduces the fundamentals of homeostasis and covers the pathophysiology, clinical evaluation and management of electrolytes, fluids, acid-base balance and nutritional support. The physiological theories of metabolic support in various disease states are presented. It presents the pathophysiology, pharmacology, medicinal chemistry, pharmacotherapy and clinical trial evidence as they relate to renal conditions. Students incorporate their knowledge, attitudes and skills in a variety of ways in order to manage electrolyte, fluid, acid-base, nutritional and renal disorders by establishing and employing rational treatment, formulating an individualized pharmacotherapeutic plan for a given patient and providing parameters to monitor progress of the regimens. Prerequisite: PHAR 611 Principles Drug Action II. Corequisites: PHAR 711 IPT II, PHAR 714 IPT Recitation/Rounds I, PHAR 777 Sterile Products/IV Admixtures. Offered: Fall semester.

711 IPT II: CARDIOVASCULAR DISEASES / (4-0). Credit 4. This course introduces the students to the physiology, pathophysiology, pharmacology, medicinal chemistry and pharmacodynamics of cardiovascular agents, as well as management (evaluation, treatment, monitoring and follow-up) of patients with common cardiovascular disorders. This course also presents clinical trial evidence as it relates to cardiology. Emphasis is placed on hypertension, angina and myocardial infarction, arrhythmias, heart failure, venus thromboembolism, hyperlipidemia, cardiovascular accident, peripheral vascular disease, and the drugs used to treat these conditions. The Clinical Skills Lab segment of this course is designed to provide the student with skills necessary for the management of critically ill patients. Prerequisite: PHAR 611 Principles Drug Action II. Corequisites: PHAR 710 IPT I, PHAR 714 IPT Recitation/Rounds I. Offered: Spring semester.

712 IPT III: ENDOCRINOLOGY AND METABOLIC DISEASES / (3-0). Credit 3. This course presents the pathophysiology, pharmacology, medicinal chemistry, pharmacotherapy and clinical trial evidence as they relate to endocrine function and dysfunction and metabolic diseases. Students incorporate their knowledge, attitudes and skills in a variety of ways in order to manage these diseases by establishing and employing rational treatment, formulating an individualized pharmacotherapeutic plan for a given patient and providing parameters to monitor progress of the regimens. Emphasis is placed on diabetes, contraception, infertility, corticosteroids, thyroid, osteoporosis, menopause and the drugs used in these conditions. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I, PHAR 711 IPT II. Corequisite: PHAR 715 IPT Recitation/Rounds II. Offered: Spring semester.

713 IPT IV: NEUROLOGY AND PAIN MANAGEMENT / (3-0). Credit 3. This course presents the pathophysiology, pharmacology, medicinal chemistry, pharmacotherapy and clinical trial evidence as they relate to neurological diseases and pain management. Emphasis is placed on seizures, pain management, Parkinson's and Alzheimer's diseases, migraine headaches, muscle relaxants, neuromuscular blocking agents, and local anesthetics. The Clinical Skills Lab segment of this course is designed to provide the student with skills necessary for pain management and palliative care. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I, PHAR 711 IPT II. Corequisite: PHAR 715 IPT Recitation/Rounds II. Offered: Spring semester.

IPT RECITATION/ROUNDS SEQUENCE. The IPT Recitation/Pharmacy Rounds Sequence provides an environment that permits students to integrate the information presented in both the Principles of Drug Action and the Integrated Pharmacotherapy Sequences through the evaluation and presentation of pertinent case studies. It is a four-course, longitudinal, case-based discussion series over two years of the professional curriculum (P2 and P3 years) that parallels the subject matter being covered in the IPT courses being offered concomitantly. Patient case studies are used to present real disease management scenarios with emphasis on critical thinking, problem-solving and decision-making skills.

714 IPT RECITATION/ROUNDS I / (0-1). Credit 1. The first of a four-class sequence builds on the course description of the IPT Recitation/Pharmacy Rounds Sequence (see above). Specifically, it covers the principle therapies associated with fluid, electrolyte and acid-base disturbances, cardiovascular diseases, renal conditions, and enteral and parenteral nutrition. Patient education regarding the issues surrounding their conditions and drug therapy are also identified and addressed. Students are responsible for participation in drug use decisions and devising rational pharmacy care plans (therapeutic strategies) and optimal drug dosage regimens, as well as determining appropriate parameters for outcome monitoring and assessment techniques for safety and efficacy. Prerequisite: PHAR 611 Principles Drug Action II. Corequisites: PHAR 710 IPT I, PHAR 711 IPT II, PHAR 776 Patient Assessment. Offered: Fall semester.

715 IPT RECITATION/ROUNDS II / (0-1). Credit 1. The second of a four-class sequence builds on the course description of the IPT Recitation/Pharmacy Rounds Sequence (see above). Specifically, it covers the principle therapies associated with endocrinology, metabolic diseases, neurology and pain management. Patient education regarding the issues surrounding their condition and drug therapy are also identified and addressed. Students are responsible for participation in drug use decisions and devising rational pharmacy care plans (therapeutic strategies) and optimal drug dosage regimens, as well as determining appropriate parameters for outcome monitoring and assessment techniques for safety and efficacy. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I, PHAR 711 IPT II, PHAR 776 Patient Assessment. Corequisites: PHAR 712 IPT III, PHAR 713 IPT IV, PHAR 742 Basic Pharmacokinetics/Biopharmaceutics. Offered: Spring semester.

726 MICROBIOLOGY/IMMUNOLOGY / (3-0). Credit 3. This course covers immunological responses and the host-parasite interaction in infectious diseases. It integrates the basic concepts of the immune response to infectious agents and other triggers and their roles in disease, as well as the principles of medical microbiology. The pathogenic properties and diseases of medically important species of bacteria, fungi, protozoa, helminthes and viruses are described. A basic knowledge of microbial taxonomy, growth, metabolism, reproduction and genetic variation is covered in sufficient detail for the student to understand interactions between host and pathogenic microorganisms. This course also covers basic immunology and principles relating to the immune response. Prerequisite: P2 standing. Corequisite: None. Offered: Spring semester.

741 PHARMACEUTICS II / (3-0). Credit 3. This second course in pharmaceutics is a continuation of the study of pharmaceutical heterogeneous dosage forms, including powders, capsules, tablets and sterile products. This course is designed to help students to understand physicochemical and biological factors, which affect the stability, kinetics, bioavailability and bioequivalence of drugs in dosage forms. It also focuses on the theory, technology, formulation, evaluation and dispensing of solid, semi-solid dosage forms and novel drug delivery systems. Prerequisite: PHAR 642 Pharmaceutics I. Corequisite: None. Offered: Fall semester.

742 BASIC PHARMACOKINETICS/BIOPHARMACEUTICS / (3-0). Credit 3. This course introduces the principles of biopharmaceutics and pharmacokinetics. It covers the basic principles of absorption, distribution, metabolism and elimination of drugs from the body. The quantitative relationship between dose and effect is developed as a framework with which to interpret measurements of drug concentrations in biological fluids. The interaction among physiology, mathematics and pharmacokinetic theory are explored and applied to pharmacy practice. Students learn how to calculate and interpret pharmacokinetic parameters, assess factors that affect drug disposition, design and adjust drug dosage regimens, as well as predict and explain the mechanism(s) involved in drug interactions. Prerequisite: PHAR 741 Pharmaceutics II. Corequisite: None. Offered: Spring semester.

756 PHARMACY MANAGEMENT / (2-0). Credit 2. This course is designed to introduce the role of management activities within the health care system. The purpose is to expose students to the functions of a manager, administration principles, and a variety of management theories, techniques and tactics that are used by pharmacists to deliver patient-centered pharmaceutical care services in an efficient manner. It presents skills for analyzing problems involving time, equipment, dollar and human resources in a health care environment. Emphasis is on developing problem-solving abilities within a management framework. It focuses on financial aspects of pharmacy operations and third-party reimbursement systems for pharmacy goods and services. Prerequisite: P2 standing. Corequisite: None. Offered: Spring semester.

776 PATIENT ASSESSMENT (W/LAB) / (1-2). Credit 3. This course introduces the student to patient physical assessment and is designed to develop knowledge of data collection, interpretation and evaluation of a patient's physical state. Additional techniques of patient interviewing, charting, medication profiling and advisement are also covered. It presents the physical examination principles of selected organ systems, which are followed by laboratory sessions whereby students practice learned techniques. Objective Structured Clinical Examinations skills are developed in the students and used as evaluation benchmarks. Clinical monitoring skills are also emphasized, including database collection, medication history and assessment of drug therapy based on the laboratory data. Prerequisite: P2 standing. Corequisite: None. Offered: Spring semester.

777 STERILE PRODUCTS/IV ADMIXTURES (LAB) / (0-1). Credit 1. This course is a laboratory designed for the student to apply pharmaceutical principles and to develop proficiency when compounding selected formulations and employing aseptic techniques. It provides an introduction of the organization and administration of an admixture program and admixture techniques. Laboratory exercises include performance of aseptic technique, preparation of small and large volume IV admixtures, safe handling of chemotherapy, knowledge of other sterile products, quality assurance, and documentation. In conjunction with content in IPT I, the calculation and preparation of enteral and parenteral feedings are performed. Prerequisite: PHAR 641 Pharmaceutical Calculations and PHAR 642 Pharmaceutics I. Corequisite: PHAR 710 IPT I. Offered: Fall semester.

778 DRUG LITERATURE EVALUATION AND PATIENT DRUG EDUCATION (W/LAB) / (2-1). Credit 3. This course is designed to introduce students to drug information resources and informatics. Concepts such as drug literature evaluation, drug regulations, medication use evaluations and monograph preparation are emphasized. Students are trained in the systematic approach of retrieving and critically evaluating literature related to providing pharmaceutical care to patients. Principles and methods of drug education are presented and discussed, with emphasis on actual development and implementation of specific informational materials and education programs. Information on educational psychology, learning theories, adult literacy and health education provide the foundation for applications to medical and non-medical drug education programs. Prerequisites: PHAR 628 Research Methods/Biostatistics, PHAR 658 Pharmacoepidemiology, PHAR 710 IPT I: Electrolytes, Acid-Base, and Nutrition. Corequisite: None. Offered: Spring semester.

## Third Professional Year (P3) Courses

800 DEAN'S HOUR / (0-0). Credit 0. The theme of the Dean's Hour is to involve students in the college's leadership and strategic initiatives and engage them in academic excellence. It allows them to provide input into programmatic issues. This course also provides an opportunity for students to participate in reflective thought and writing. Prerequisite: Admission to Doctor of Pharmacy Program. Corequisite: None. Offered: Fall and spring semesters.

801 FORUM/STUDENT PORTFOLIOS/PROFESSIONAL DEVELOPMENT III / (1-0). Credit 1. The third Forum, Student Portfolios and Professional Development course builds on the course description of this sequence. Student portfolios are due each semester before the beginning of Assessment Week. One of the required elements for a passing grade is passing of the Comprehensive Benchmark Assessment Protocol given just prior to the start of classes (for P2 and P3 years). Students also gain experience with oral and written communications as they present and discuss their experiences as part of the class. Prerequisite: P3 standing, HIPAA training, Blood-Borne Pathogens training. Corequisite: None. Offered: Fall and spring semesters.

802 CORE RECITATION (P3) / (0-0). Credit 0. Core Recitation provides an opportunity for students to go beyond the scheduled class interaction with their teachers/facilitators in order to further their knowledge, skills and abilities. It is a time dedicated to reviewing, in a different format, and clarifying material previously presented in another core course. The technique utilized may be discussion groups, workshops, case study presentations, review sessions or other non-didactic teaching method. This course also provides an opportunity for students to participate in reflective thought and writing. It is offered both semesters, and the one-hour recitation blocks are scheduled in advance through the Office of Academic Affairs. Prerequisite: P3 standing. Corequisite: None. Offered: Fall and spring semesters.

810 IPT V: PSYCHIATRY AND ADDICTION / (3-0). Credit 3. This course presents the pathophysiology, pharmacology, medicinal chemistry, pharmacotherapy and clinical trial evidence as they relate to psychiatry and addiction. Emphasis is placed on addictions treatment, depression, anxiety and insomnia, psychosis, schizophrenia, bipolar disorder, eating disorders, attention deficit hyperactive disorder, obsessive compulsive disorder, and the drugs used in these conditions. Additional emphasis is given to understanding alcohol, tobacco and other drugs (ATOD) problems so that students can recognize them and refer patients for appropriate therapy. Students also review the principles of general anesthesia. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I, 713 IPT IV. Corequisites: PHAR 814 IPT Recitation/Rounds III, PHAR 875 Clinical Pharmacokinetics. Offered: Fall semester.

811 IPT VI: GI, HERBALS, PULMONARY, RHEUMATIC, AND MISCELLANEOUS / (4-0). Credit 4. This course presents the pathophysiology, pharmacology, medicinal chemistry, pharmacokinetics, pharmacotherapy and clinical trial evidence as they relate to musculoskeletal conditions, respiratory conditions, dermatology, vitamins and nutritional supplements, and glaucoma, gastrointestinal, genitourethral and hepatic diseases. Emphasis is placed on peptic ulcer disease, GERD, irritable bowel disease, benign prostatic hypertrophy, erectile dysfunction, incontinence, arthritis, gout, Systemic Lupus Erythematosis, asthma, Chronic Obstructive Pulmonary Disease, allergic rhinitis, other rheumatoid disorders, the drugs used to manage these conditions and

the therapies for nausea, vomiting and diarrhea. Specific emphasis is put on vitamins, nutritional supplements, herbals remedies and other dietary supplements. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I. Corequisites: PHAR 814 IPT Recitation/Rounds III, PHAR 875 Clinical Pharmacokinetics. Offered: Fall semester.

812 IPT VII: INFECTIOUS DISEASES / (5-0). Credit 5. This course presents the pathophysiology, pharmacology, medicinal chemistry, pharmacotherapy and clinical trial evidence as they relate to anti-infectives. Students incorporate their knowledge, attitudes and skills in a variety of ways in order to manage infectious diseases by establishing and employing rational treatment, formulating an individualized pharmacotherapeutic plan for a given patient and providing parameters to monitor progress of the regimens. Emphasis is placed on organ-based infections and the drugs used to treat these conditions. Clinical resistance and its impact on therapy are also covered. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I, PHAR 726 Microbiology/Immunology, PHAR 875 Clinical Pharmacokinetics. Corequisite: PHAR 815 IPT Recitation/Rounds IV. Offered: Spring semester.

813 IPT VIII: ONCOLOGY AND TRANSPLANT / (2-0). Credit 2. This eighth of an eight-class sequence builds on the course description of the IPT Sequence (see under P2 course listings). This course presents the pathophysiology, pharmacology, medicinal chemistry, pharmacotherapy and clinical trial evidence as they relate to neoplastic diseases and organ transplantation. Students incorporate their knowledge, attitudes and skills in a variety of ways in order to manage related diseases by establishing and employing rational treatment, formulating an individualized pharmacotherapeutic plan for a given patient and providing parameters to monitor progress of the regimens. Emphasis is placed on the most common carcinomas, supportive and palliative care, solid organ transplants, and the drugs used in these situations. Students also review bone marrow transplant therapy. The Clinical Skills Lab segment of this course is designed to provide the student with skills necessary for the management of patients. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I. Corequisite: PHAR 815 IPT Recitation/Rounds IV. Offered: Fall semester.

814 IPT RECITATION/ROUNDS III / (0-1). Credit 1. The third of a four-class sequence. Specifically, it covers the principle therapies associated with psychiatry, addiction treatment, pulmonary conditions, gastrointestinal diseases, rheumatology and inflammatory conditions, and genitourethral diseases, as well as more detail on vitamins and nutritional supplements. Patient education regarding the issues surrounding their conditions and drug therapy are also identified and addressed. Students are responsible for participation in drug use decisions and devising rational therapeutic strategies and optimal drug dosage regimens, as well as determining appropriate parameters for outcome monitoring and assessment techniques for safety and efficacy. Prerequisite: PHAR 715 IPT Recitation/Rounds II. Corequisites: PHAR 810 IPT V, PHAR 811 IPT VI, PHAR 875 Clinical Pharmacokinetics. Offered: Fall semester.

815 IPT RECITATION/ROUNDS IV / (0-1). Credit 1. The fourth of a four-class sequence builds on the course description of the IPT Recitation/Pharmacy Rounds Sequence (see under P2 course listings). Specifically, it covers the principle therapies associated with infectious diseases, oncology, supportive care and organ transplantation. Patient education regarding the issues surrounding their conditions and drug therapy are also identified and addressed. Students are responsible for participation in drug use decisions and devising rational pharmacy care plans (therapeutic strategies) and optimal drug dosage regimens, as well as determining appropriate parameters for outcome monitoring and assessment techniques for safety and efficacy. Prerequisites: PHAR 814 IPT Recitation/Rounds III, PHAR 875 Clinical Pharmacokinetics. Corequisites: PHAR 812 IPT VII, PHAR 813 IPT VIII. Offered: Spring semester.

841 TOXICOLOGY AND POISON MANAGEMENT / (2-0). Credit 2. This course deals with clinical toxicology of common agents ingested in overdoses, including practical management principles and a review of current poison information systems and their clinical use. It provides an overview of basic concepts in clinical toxicology, including the diagnosis and treatment of common poisonings. Emphasis is placed on the basic concepts of patient-oriented toxicology. After completion of this course, students will have been exposed to critical problem-solving skills in toxicology, including patient interviewing techniques, differential diagnosis of poisoning, rational therapeutic plans for toxicological problems and patient monitoring parameters. Prerequisites: PHAR 611 Principles Drug Action II, PHAR 710 IPT I. Corequisite: PHAR 875 Clinical Pharmacokinetics. Offered: Fall semester.

842 PHARMACOGENOMICS AND BIOTECHNOLOGY / (3-0). Credit 3. This course presents the principles of biotechnology and pharmacogenomics as they relate to the pharmaceutical sciences and pharmacy practice. Topics covered include recombinant DNA technology, recombinant proteins and oligonucleotides, monoclonal antibodies, the Human Genome Project and its implications for the future of medicine and pharmacy. It also presents gene-expression regulation at the level of DNA, RNA and protein synthesis. The meaning of human genetic variation, single nucleotide polymorphisms, and the implications for ethically-based medicine and prescriptions are discussed, as well as individual ethnic genetic variation and its applications in response to certain pharmacologic interventions or therapeutics. Prerequisite: P3 standing. Corequisite: None. Offered: Spring semester.

856 PHARMACOECONOMICS / (2-0). Credit 2. This course presents fundamental concepts of health outcomes research and pharmacoeconomic analysis and provides a basic framework to optimize health care resource allocation. Principals of measuring and analyzing costs and outcomes plus techniques used to evaluate them across drug treatments are discussed. Various interactive group assignments are included to illustrate the methodologies discussed in lecture. The course also reviews current practice guidelines for pharmacoeconomic evaluation and describes “real world” contexts in which pharmacoeconomic research is conducted. Prerequisite: PHAR 756 Pharmacy Management. Corequisite: None. Offered: Spring semester.

871 PHARMACEUTICAL CARE LAB - DISPENSING / (0-2). Credit 2. This laboratory experience simulates the actual practice of pharmacy in both retail and institutional settings. Students learn the fundamentals of processing and filling a prescription or doctor's drug order and gain experience in compounding medications, recommending over-the-counter medications, and counseling and educating patients on dosage forms and drug therapy. This course emphasizes the important roles of the pharmacist in drug therapy management, including evaluating patient medication profiles, monitoring patient outcomes, disease state management, and the pharmacist as a health educator and drug information specialist. The application of appropriate communication and computer skills in conjunction with these activities are stressed. Prerequisite: PHAR 706 IPPE IV. Corequisite: PHAR 875 Clinical Pharmacokinetics. Offered: Fall semester.

872 ADVANCED PATIENT CARE AND COUNSELING / (2-0). Credit 2. The phenomena and occurrence of drug effects (drug-taking experiences) are examined, integrating information from both pharmaceutical and social sciences to explore how and why drugs are discovered and used. Historical and cross-cultural examples are employed in this advanced study of the nature and meaning of drug-taking experiences and their influence on drug-taking behaviors. Focus is on an in-depth examination of the primary models of behavior change relative to public health, health education, preventive health, health promotion and pharmacological practice. Students then use their new knowledge towards catering to the individual needs of the patient in a practice setting. Prerequisites: PHAR 871 Pharmaceutical Care Lab, PHAR 875 Clinical Pharmacokinetics. Corequisite: None. Offered: Spring semester.

875 CLINICAL PHARMACOKINETICS (W/LAB) / (2-1). Credit 3. This course is designed to provide an understanding of and practice in using clinically applicable pharmacokinetic formulas and the assumptions that are involved with their use in therapeutic drug monitoring. The primary objectives of the course are to present basic therapeutic principles and unique problems associated with drug therapy in the general population and with special populations. This course places great emphasis on the pharmacotherapeutic decision-making process involved with vulnerable populations. Using a case study and lecture format with clinical laboratory sessions, topics include geriatrics, pediatrics, pregnancy and lactation, multicultural, and indigent population issues. Prerequisites: PHAR 742 Basic Pharmacokinetics/Biopharmaceutics, PHAR 706 IPPE IV. Corequisites: PHAR 814 Recitation/Rounds III, PHAR 871 Pharmaceutical Care Lab. Offered: Fall semester.

# Course Descriptions

**Irma Lerma Rangel College of Pharmacy**

## Electives

There are two elective options from which students may choose. They can take two (2) semester hours of elective course work during the spring of their P2 year (total SCH = 19) and two (2) semester hours of elective course work during both the fall and spring semesters of their P3 year. The second alternative involves students taking three (3) semester hours of elective course work during both the fall and spring semesters of their P3 year. Students choose from a list of electives offered each semester. Please refer to the Electives Course Description Document (to be developed).

## Fourth Professional Year (P4) Courses

804 GRAND ROUNDS I: MIDPOINT REFLECTIONS / (1-0). Credit 1. This course is held near the midpoint of Advanced Pharmacy Practice Experiences (APPEs) after the fourth rotation is complete. It is designed to provide students with the opportunity to reflect on their skills and knowledge progress, complete and turn in the final report of the Student Research Project to their faculty advisors, mentor and network with the lower-level students, prepare and plan for post-graduate opportunities such as residencies and graduate school, and provide time to regenerate and review material in areas the student feel strengthens his/her weaknesses (from the student portfolio). Prerequisite: Completion of four APPEs. Corequisite: None. Offered: Fall semester.

805 GRAND ROUNDS II: CAPSTONE / (1-0). Credit 1. This post-experiential course is designed to provide students with the opportunity to ponder the relationship between their didactic and experiential course work, interact with faculty regarding possible career paths, mentor and network with the lower-level students, present the results of special projects and patient case studies, and provide time to regenerate and reflect. Each student must make a Patient Care Presentation as a culminating exercise. Finally, a review of drugs by category is provided, as well as an opportunity to participate in curricular review courses. Prerequisite: Completion of all APPEs. Corequisite: None. Offered: Spring semester.

## Pharmacy Practice Experiences

INTRODUCTORY PHARMACY PRACTICE EXPERIENCES (IPPE). The early experiential curricular components are designed to provide students with a variety of practice experiences in different settings during the first three professional years. The purpose of these Introductory Pharmacy Practice Experiences (IPPEs) is to give the opportunity to care for various types of patients and their illnesses. The IPPEs may also be an integral part of some courses other than the four IPPE classes. They are meant to build toward the Advance Pharmacy Practice Experiences and to expose students consistently to activities, in a graded fashion, as allowed by law, which are expected to enable growth in the student's ability to achieve our professional competencies. These activities are planned to expose the students to practice settings in which pharmacists work as partners with patients, physicians, nurses, other health care professionals and administrators.

ADVANCED PHARMACY PRACTICE EXPERIENCES (APPE). The advanced practice experiential requirements are designed to provide students with a wide variety of clinical experiences in different settings and the opportunity to care for various types of patients and their illnesses. The desired outcome of these practical encounters is to provide students with the tools necessary to apply the knowledge received from didactic instruction and early practice experiences to the “real-life” patient care settings under the tutelage of a knowledgeable practitioner.

Advanced Pharmacy Practice Experiences (APPEs) begin in the summer semester after the P3 year. Students must satisfactorily complete all didactic course requirements, pass the P3 Comprehensive Benchmark Assessment, and acceptably complete both the HIPAA and blood-borne pathogens training in order to begin their APPEs. During the fourth professional year, each student must complete four (4) required rotations in specified areas (adult internal medicine, ambulatory care, hospital/health system, pharmacy and community practice) and two (2) rotations selected from the elective rotations list, such as drug information, special populations (pediatrics, geriatrics, psychiatry), hospital, surgery, critical care, nutrition, rural health, women's health, academic, research (toxicology, drug delivery systems, drug development, social and behavioral sciences), regulatory, professional society, industry, others. Each rotation is a six-week intensive, hands-on encounter. Rotations are scheduled based on student preference (when possible), site and preceptor availability, and performance.

## REQUIRED Advanced Pharmacy Practice Experiences

Students must complete four required Advanced Pharmacy Practice Experiences.

876 APPE: ADULT INTERNAL MEDICINE / (0-6). Credit 6. This rotation is designed to provide the student substantial exposure and experience in the comprehensive treatment and inpatient management of the disease states of adult patients that are admitted to the hospital or other institutionalized setting with common acute or chronic conditions (e.g., hypertension, asthma, congestive heart failure, diabetes or infectious diseases). In addition, students utilize problem-solving skills, develop therapeutic plans, monitor lab values, and assess for drug interactions and adverse drug reactions while tracking patients through completion of their therapy. Prerequisite: P4 standing. Corequisite: None.

877 APPE: AMBULATORY CARE / (0-6). Credit 6. This experience is designed to give students preparation in treating patients in a general or specialized outpatient setting that are typically not seriously ill. Focus is placed on the medication management of specific diseases (such as hypertension, diabetes, asthma, etc.) or the general care of patients with chronic conditions. Students utilize problem-solving skills, patient medication counseling and therapeutic monitoring, as well as address interaction, side effects and compliance issues in the care of these patients. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

878 APPE: COMMUNITY PRACTICE / (0-6). Credit 6. This pharmacy practice experience exposes students to the daily clinical activities of the community pharmacy setting, with the focus placed upon a patient care approach. Students learn the goals of clinical intervention and the steps necessary to execute effectively those interventions. Students engage in evaluating and solving drug-related problems, in interacting with the patient, and acting as a primary health care source are stressed. Prerequisite: P4 standing. Corequisite: None.

879 APPE: HOSPITAL/HEALTH SYSTEM PHARMACY / (0-6). Credit 6. The purpose of this pharmacy practice experience is to gain an understanding of the various aspects of health-system pharmacy services.This includes, but is not limited to, provision of products, clinical pharmacy services, and pharmacy management issues. Students should approach the rotation with the understanding that the ultimate goal in all health-system pharmacies is improving patient care. Prerequisite: P4 standing. Corequisite: None.

## ELECTIVE Advanced Pharmacy Practice Experiences

Rotations in elective topics are designed to expose students to additional areas of pharmacy practice that parallel their interests and/or allow for the beginning of specialization. Students will be required to complete three elective APPEs. Opportunities are expected to be available in the following topics:

826 APPE: RESEARCH / (0-6). Credit 6. This rotation allows the student to observe and participate in the research pharmacist's role. Emphasis is placed on how to conduct experiments, analyze data and discuss results. The student continues to build his/her knowledge base in the discipline of the preceptor and gains practical experience in research. Students on this rotation also review journal articles, write a synopsis to further develop their medical writing skills and orally present journal articles. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

827 APPE: INDUSTRY / (0-6). Credit 6. This rotation allows the student to observe and participate with a pharmacist in the pharmaceutical industry. Emphasis is placed on learning about the industry's role in patient care, where pharmacists can contribute and career opportunities. The student continues to build his/her knowledge base in the discipline of the preceptor. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

870 APPE: ADMINISTRATION / (0-6). Credit 6. This rotation allows the student to observe and participate in the administrative pharmacist's role. Emphasis is placed on how to prepare schedules, assign workloads, check inventory and assess employees. The student continues to build his/her knowledge base in the discipline of the preceptor and gains practical experience in researching and preparing administrative materials. Students on this rotation also review journal articles in the area of administration, write a synopsis to further develop their medical writing skills and orally present journal articles. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

880 APPE: CRITICAL CARE / (0-6). Credit 6. This pharmacy practice experience is designed to give students preparation in treating patients in a critical care setting. Focus is placed on the medication management of patients in critical condition. Students utilize problem-solving skills, patient medication counseling, therapeutic monitoring, as well as address interaction, side effects and compliance issues in the care of these patients. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

881 APPE: DRUG INFORMATION / (0-6). Credit 6. This rotation allows the student to serve as a primary provider of drug information in a structured environment that possesses both the resources and the faculty expertise in clinical information management and dissemination. Emphasis is placed on how to receive drug information requests, design and execute a systematic search strategy, assimilate the information retrieved, and formulate and communicate an appropriate response. Students on this rotation also prepare drug monographs and journal articles to further develop their medical writing skills and will orally present journal articles and drug reviews. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

882 APPE: ACADEMIA / (0-6). Credit 6. This rotation allows the student to observe and facilitate the academic pharmacist's role. Emphasis is placed on how to prepare lectures, assignments and assess students. The student continues to build his/her knowledge base in the discipline of the preceptor and gains practical experience in researching and preparing educational materials. Students on this rotation also review journal articles, write a synopsis to further develop their medical writing skills and orally present journal articles. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

883 APPE: EXTENDED CARE / (0-6). Credit 6. This experience provides students with the opportunity to learn how to treat illnesses that commonly afflict patients who are housed in an extended-care facility. Students will learn the different treatment options and regimens utilized in this patient population and take into consideration the different pharmacokinetic properties, dosing principles and therapeutic drug monitoring required of this population. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

884 APPE: GERIATRICS / (0-6). Credit 6. The geriatric rotation provides students with the opportunity to learn how to treat illnesses that commonly afflict older patients. Students will learn the different treatment options and regimens utilized in this patient population and take into consideration the different pharmacokinetic properties, dosing principles and therapeutic drug monitoring required of this population. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

885 APPE: PEDIATRICS / (0-6). Credit 6. The pediatric rotation provides students with the opportunity to learn how to treat acute and chronic illnesses that commonly afflict infant and child patients. Students learn the different treatment options and regimens utilized in this patient population and take into consideration the different pharmacokinetic properties, dosing principles and therapeutic drug monitoring of children. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

886 APPE: PHARMACOKINETICS / (0-6). Credit 6. This rotation allows the student to serve as a primary provider of pharmacokinetic information in a structured environment that possesses both the resources and the faculty expertise in this area. Emphasis is placed on how to review pertinent laboratory data, analyze specific patient parameters, calculate the appropriate dosing regimen, and formulate and communicate an appropriate response. The student continues to build his/her knowledge base of available drug information resources and gains practical experience in critically evaluating those resources as they relate to pharmacokinetics. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

887 APPE: REHABILITATION / (0-6). Credit 6. This experience provides students with the opportunity to learn how to treat illnesses that commonly afflict patients who are undergoing rehabilitation. Students will learn the different treatment options and regimens utilized in this patient population and take into consideration the different pharmacokinetic properties, dosing principles and therapeutic drug monitoring required of this population. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

888 APPE: RURAL HEALTH / (0-6). Credit 6. This rotation exposes students to the daily clinical activities of the pharmacist practicing in a rural health setting, with the focus placed upon a patient care approach. Students learn the goals of clinical intervention and the steps necessary to execute effectively those interventions. Evaluating and solving drug-related problems, patient interaction and acting as a primary health care source are stressed. Prerequisite: P4 standing. Corequisite: None. Offered: Summer, fall and spring semesters.

# Course Descriptions
# School of Rural Public Health

## Environmental and Occupational Health

PHEO 500 INTRODUCTION TO ENVIRONMENTAL AND OCCUPATIONAL HEALTH / Credit 3. Overview of nature and magnitude of environmental and occupational disease; sources of exposure, methods of monitoring and modeling exposure; review of target organs and potential effects of specific chemicals; discussion of workplace hazards and monitoring programs. Satisfactory/Unsatisfactory grade options only; course available only to non-degree seeking or Option 1 certificate-seeking students.

PHEO 600 PRINCIPLES OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH / Credit 3. Overview of nature and magnitude of environmental and occupational disease; sources of exposure, methods of monitoring and modeling exposure; review of target organs and potential effects of specific chemicals; discussion of workplace hazards and monitoring programs.

PHEO 601 PRINCIPLES OF BASIC MEDICAL SCIENCES / Credit 5. Review of cellular and biochemical functions in human body; technologies for probing cellular functions and structures; plasma membrane, internal membranes and intracellular organelles; gene function; cell metabolism; cell motility and cytoskeleton. Prerequisites: Undergraduate biology and biochemistry or equivalent. Cross-listed with MSCI 601.

PHEO 605 CHEMICAL HAZARD RISK ASSESSMENT / Credit 3. Chemical and biological methods for testing hazardous chemicals and complex mixtures; chemical analysis; microbial bioassays; developmental toxicity; enzyme induction; mammalian cell culture. Prerequisite: Graduate classification. Cross-listed with VAPH 605.

PHEO 610 BASIC ENVIRONMENTAL TOXICOLOGY / Credit 3. Examines basic concepts of toxicology in environmental and occupational surroundings. Distribution, absorption, metabolism and elimination of toxicants are discussed. Mechanisms of injury for various classes of toxicants following exposure to toxic chemicals are explored at the systemic, organ and cellular level. Prerequisites: College-level biology and chemistry.

PHEO 611 OCCUPATIONAL EPIDEMIOLOGY / Credit 3. The epidemiologic evaluation of human hazards in the workplace and the environment; issues in the design and critical review of epidemiologic studies in the determination of effects of chemicals, heavy metals, and radiation on human health resulting from occupational and environmental exposures. Prerequisites: PHEB 600 and SENG 680 or approval of instructor.

PHEO 614 BIODEGRADATION AND BIOREMEDIATION / Credit 3. Processes affecting the biodegradation of organic chemicals in the environment; assessment of the utility of various remedial procedures, including biodegradation and bioremediation in site specific situations; methods of site assessment and quantitative risk characterization. Prerequisite: Organic chemistry or approval of instructor. Cross-listed with AGRO 614.

PHEO 615 ENVIRONMENTAL MEASUREMENT / Credit 3. Theory and practice of analytical methods used in the study of environmental sciences; data quality of objectives, instrumental and wet chemical techniques used in measurement of environmental quality parameters and contaminants. Prerequisites: College-level chemistry or approval of instructor.

PHEO 618 FOOD TOXICOLOGY / Credit 3. Introduces students to principles and methods related to the safety of our food supplies, including chemical and microbiological basis of contamination. Prerequisites: College-level biology and chemistry. Cross-listed with VAPH 618.

PHEO 620 ENVIRONMENTAL/OCCUPATIONAL CASE STUDIES / Credit 3. Considers the basic methodology of conducting case studies; using major episodes of environmental/occupational exposures examines methods of monitoring exposures and establishing causation. Emphasis on failure analysis, dosimetry and study design, results of health studies and risk assessments, and legal, political, economic, social and ethical ramifications.

PHEO 625 ENVIRONMENTAL MICROBIOLOGY / Credit 3. Survey of selected infectious diseases, organized by modes of transmission. Role of environmental factors in etiology, epidemiology and control of these diseases. Principles of environmental transport, factors engendering epidemics, models for predicting disease outbreaks and managing them proactively. Special topics include emerging infectious diseases, antibiotic resistance, biological terrorism and bioremediation.

PHEO 630 ENVIRONMENTAL/OCCUPATIONAL DISEASES / Credit 3. Identification, evaluation and quantification of risk factors for environmental and occupational diseases, using classic and current examples of exposures involving chemical, physical and biologic agents. Selection of appropriate design and groups. Exposure assessment, including biomarkers and molecular dosimetry. Genetics, gender, age, socioeconomic and other factors affecting susceptibility. Prerequisite: College-level mathematics.

PHEO 640 INDUSTRIAL HYGIENE / Credit 3. Considers methods to measure and reduce workplace hazards; evaluation of engineering controls and personal protective equipment; includes potential chemical, physical, ergonomic and biological exposures. Review of major legislation affecting workplace environment.

PHEO 641 INSTRUMENTATION OF INDUSTRIAL HYGIENE / Credit 3. Evaluation of environmental stress factors present in man-machine-environment systems. Introduction to quantitative and qualitative instrumentation used in industrial hygiene. Development of in-depth evaluation techniques as a precursor to the design of engineering controls. Prerequisite (or concurrent): PHEO 640.

PHEO 642 EVALUATION & CONTROL OF THE OCCUPATIONAL ENVIRONMENT / Credit 3. Detection, evaluation and control of chemical, physical and biological agents prevalent in manufacturing, construction and mercantile operations. Evaluation procedures and control technology emphasized. Guest speakers and field trips to local industry.

PHEO 643 ACOUSTICS AND NOISE CONTROL / Credit 3. Physical, physiological and psychological aspects of noise; evaluation and control of the noise problem in the work environment and community. Source, path and level of noise; acoustical properties of materials; damage-risk criteria for hearing; and criteria for noise and vibration in communities, building and vehicles. Prerequisite (or concurrent): PHEO 640.

PHEO 645 HEALTH & SAFETY AT HAZARDOUS WASTE SITES / Credit 3. Course covers OSHA compliance issues related to the protection of personnel engaged in on-site remediation activities. Students who satisfactorily complete the course meet the requirements for initial training under 20 CFR 1910.120 (HAZWOPER) and receive a certificate. Hands-on activities/workshops in the areas of personal protective equipment selection and use, sources of chemical information, decontamination procedures, air monitoring equipment, materials handling, and health and safety planning. Lab fee required.

PHEO 650 RISK ASSESSMENT I / Credit 3. Introduction to the general methodology of Quantitative Risk Assessment; introduction to methods of modeling exposure and selection of toxicity values, as well as risk characterization. Students utilize case studies to learn the general methods of risk assessment; also reviews the importance of and methods for risk communication and management.

PHEO 651 RISK ASSESSMENT II / Credit 3. Provides an in-depth understanding of the methods of exposure assessment and risk characteristics; experience with software packages for exposure modeling and risk calculations; reviews the concepts of risk management and risk communication. Prerequisite: PHEO 650.

PHEO 655 HUMAN FACTORS AND BEHAVIOR-BASED SAFETY / Credit 3. Basic understanding of the theory and practice of human factors as well as discussion on behavior-based safety. Topics are presented within the framework of humans as functioning systems. Prerequisite: Approval of instructor.

PHEO 660 CLINICAL OCCUPATIONAL MEDICINE / Credit 3. Overview of occupational medicine for health care professionals. Considers issues such as diagnosis and treatment of chemical exposures; development of causation in association with presentation of specific health effects. Prerequisite: Training in one of the health sciences or equivalent degree, or permission of instructor.

PHEO 670 REGULATIONS OF OCCUPATIONAL SAFETY AND HEALTH / Credit 3. Evaluation and assessment of the various regulations that pertain to the occupational safety and health arena. Focus is on description and evaluation of the intent and requirements of regulations as well as their use and interpretation in industry. Prerequisite: Approval of instructor.

PHEO 673 METABOLIC AND DETOXICATION MECHANISMS / Credit 3. Studies the role of metabolism in activation and inactivation of toxic chemicals. Topics include bioactivation of chemicals that produce selective system toxicity, chemical mechanisms of carcinogenesis, DNA damage and repair, mechanisms of cell injury, biomarkers and evaluation of chemical structure in predicting toxicological hazard. Prerequisite: Introductory biochemistry and permission of the instructor. Cross-listed with VTPP 673.

PHEO 676 GENETIC AND MOLECULAR TOXICOLOGY / Credit 3. Mechanisms of toxicant-induced target organ toxicity with emphasis on molecular control of mammalian and cell growth differentiation. Prerequisite: Graduate course in cell biology and biochemistry. Cross-listed with VTPP 676.

PHEO 678 ERGONOMICS I: PREVENTION AND CONTROL OF LOW BACK PAIN / Credit 3. Fundamental topics upon which models for the prevention and control of low back pain are constructed. Focus is on ergonomic assessment, design and improvement, including biomechanics, anthropometry, strength assessment and implementation of controls. Prerequisite: Approval of instructor.

PHEO 679 ERGONOMICS II: PREVENTION AND CONTROL OF DISTAL UPPER EXTREMITY DISORDERS / Credit 3. Fundamental topics upon which models for the prevention and control of distal upper extremity disorders are constructed. Focus is on topics including human anatomy, neurophysiology, electrophysiology and worker capacity evaluation. Prerequisite: Approval of instructor.

PHEO 681 SEMINAR IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH / Not for credit. Provides an opportunity for new students to become familiar with departmental research activities. First-year students describe proposed research; second-year students present results from original research. Students also discuss thesis proposal preparation. May be repeated.

PHEO 682 INDUSTRIAL AND SYSTEM SAFETY / Credit 3. Course covers general concepts and techniques of safety upon which more detailed and advanced applications may be based. In addition, concepts will include current system safety analysis techniques, failure mode and effect and fault tree analysis, as well as economic analysis for presentation of alternative solutions for problem solving. Prerequisite: Approval of instructor.

PHEO 684 PRACTICUM / Credit 3-6. Field placement experience in which students work closely with a departmental faculty member and (an) appropriate field professional(s), applying skills and techniques acquired through course work. Prerequisite: Approval by student's academic advisor. Satisfactory/Unsatisfactory grade option only.

PHEO 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHEO 686 DIRECTED RESEARCH / Credit 1-3. Student research initiative not within the scope of a thesis or dissertation. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grade option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHEB 689 SPECIAL TOPICS IN EPIDEMIOLOGY AND BIOSTATISTICS / Credit 1-4. Revolving topics seminar in an area of specialization within the department. May be repeated for credit. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHEO 691 THESIS / Credit 1-6. Research for master's thesis. Prerequisite: Approval of the student's academic advisor and department head. May be repeated for credit. Satisfactory/Unsatisfactory grade option only.

*Offerings in collaboration with other units*

SRPH 640 PUBLIC HEALTH INFORMATICS / Credit 3. Use of computing programs and technology to collect and identify information for public health practice. Decision-support systems, various ethical issues, use of technology to communicate effectively within a variety of arenas (e.g., professional, administrative, public) and conducting online queries to obtain data from already-defined data repositories.

SRPH 690 THESIS DEVELOPMENT / Credit 3. Course helps students prepare a thesis proposal including writing a literature review, developing hypotheses and/or research questions and appropriate research design, and obtaining IRB approval. Students are expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic advisor.

# Course Descriptions

**School of Rural Public Health**

## Epidemiology and Biostatistics

PHEB 500 INTRODUCTION TO EPIDEMIOLOGY / Credit 3. An overview intended to familiarize students with the basic principles and applications of epidemiological concepts in the study of disease occurrence in populations. Satisfactory/Unsatisfactory grade options only; course available only to non-degree seeking or Option 1 certificate-seeking students.

PHEB 502 INTRODUCTION TO BIOSTATISTICS / Credit 3. An introduction to statistical issues in public health, including basic probability, significance levels and confidence intervals, interpretation of public health data, and specific statistical techniques such as regression, analysis of variance, nonparametric techniques and categorical data. Satisfactory/Unsatisfactorygrade options only; course available only to non-degree seeking or Option 1 certificate-seeking students.

PHEB 600 FUNDAMENTALS OF EPIDEMIOLOGY / Credit 3. An overview intended to familiarize students with the basic principles and applications of epidemiological concepts in the study of disease occurrence in populations.

PHEB 602 BIOSTATISTICS I / Credit 3. An introduction to statistical issues in public health, including basic probability, significance levels and confidence intervals, interpretation of public health data, and specific statistical techniques such as regression, analysis of variance, nonparametric techniques and categorical data.

PHEB 603 BIOSTATISTICS II / Credit 3. A second course in biostatistical methods that emphasizes linear models and designed experiments. Designed for students wishing a deeper understanding of topics introduced in PHEB 602. Prerequisite: PHEB 602.

PHEB 605 FUNDAMENTALS OF BIOSTATISTICS / Credit 3. The course includes the fundamentals of maximum likelihood estimation, hypothesis testing, confidence intervals and small sample inferences. Other topics include probability distributions, Bayes theorem and distributions of functions of random variables. Prerequisite: PHEB 602.

PHEB 607 SAMPLE SURVEY METHODOLOGY / Credit 3. The purpose of this course is to prepare students to examine the unified set of concepts, principles and methodologies that govern sample survey methodology. It is designed to build on a foundation of coherent survey concepts and foster the understanding of the principles and methods of sampling theory, survey design, analysis and interpretation. This course is designed for epidemiology track and other public health students requiring a more thorough knowledge of the concepts and methods used in survey research. This course stresses survey designs, methodological issues and analytic methods as they relate to conduct of surveys.

PHEB 609 CATEGORICAL DATA ANALYSIS / Credit 3. This course will introduce the basic theory and applications of methods used to analyze categorical data. The theory will be covered but the emphasis will be on selecting appropriate analysis strategies, analyzing data and interpreting results of those analyses. No background in calculus or matrix algebra is required. Prerequisites: PHEB 602 and PHEB 603 (or STAT 651 and STAT 652).

PHEB 610 EPIDEMIOLOGIC METHODS I / Credit 3. An intensive introduction to epidemiological concepts and methods for students in the epidemiology concentration and others who will collaborate in – or be required to – interpret the results of epidemiological studies. Emphasis is placed on calculation and interpretation of crude and adjusted data, measures of association, and study design. Prerequisites: PHEB 600 and STAT 652 or concurrent enrollment.

PHEB 611 EPIDEMIOLOGIC METHODS II / Credit 3. In-depth treatment of key methodological and analytic topics in epidemiology. Emphasis on study design and implications for data analysis, such as confounding, model selection and effect modification. Analytic techniques using logistic regression and stratified analysis will be emphasized. Prerequisites: PHEB 610 and STAT 652 or permission of instructor.

PHEB 612 DATA MANAGEMENT/COMPUTING / Credit 3. An introduction to the principles of data management, techniques in designing and implementing databases for large data systems, techniques for communicating between computing environments, and introduction to statistical software. Prerequisite: PHEB 600.

PHEB 613 PUBLIC HEALTH EPIDEMIOLOGICAL METHODS / Credit 3. Application-oriented course to familiarize students with methods useful for epidemiological work in public health settings, including analysis of incidence and mortality surveillance data, measurements of risk on a population level, analysis of space-time variations and group correlations, and overview of program evaluation theory and techniques. Prerequisite: STAT 652, either PHEB 600 or permission of instructor.

PHEB 619 INFECTIOUS DISEASE EPIDEMIOLOGY / Credit 3. Principles and practices of epidemiology appropriate for the study of communicable diseases. Course focuses on methodology, public health concerns, patterns of transmission and newly discovered infectious diseases. Prerequisite: Either PHEB 600 or permission of the instructor.

PHEB 620 CANCER EPIDEMIOLOGY / Credit 3. A review of the principles and methods used in cancer epidemiology. The course focuses on cancer etiology and control, with emphasis on race/ethnicity and urban/rural differences in cancer incidence and mortality. Prerequisite: Either PHEB 600 or permission of the instructor.

PHEB 621 CARDIOVASCULAR DISEASE EPIDEMIOLOGY / Credit 3. Review of principles, issues and methods in the epidemiology of cardiovascular disease. This course also considers determinants and strategies for prevention. Prerequisite: PHEB 600 or permission of the instructor.

PHEB 622 REPRODUCTIVE AND PERINATAL EPIDEMIOLOGY / Credit 3. Epidemiology of major reproductive health outcomes, including infertility, fetal loss, birth weight, congenital malformations and infant mortality. Review of current knowledge of determinants of these outcomes. Prerequisite: PHEB 600 or permission of the instructor.

PHEB 623 OCCUPATIONAL EPIDEMIOLOGY / Credit 3. Injuries and illnesses exact a large human and economic toll on workers. This course describes the magnitude of workplace injuries and illnesses, examines methods used to identify risk factors, and examines the role of academia, industry, and public health practice in understanding and controlling these conditions from an epidemiological perspective. Prerequisite: PHEB 600.

PHEB 624 SOCIAL EPIDEMIOLOGY / Credit 3. This course entails an exploration and examination of the social determinants and distribution of physical and mental health outcomes. These determinants include socioeconomic inequalities, stress and social organization. The course focuses on the development and evaluation of testable hypotheses concerning the relationship between social conditions and health. Prerequisite: PHEB 600.

PHEB 625 MOLECULAR EPIDEMIOLOGY / Credit 3. Exploration of recent developments in molecular epidemiology, which includes molecular markers of environmental exposures, genetic markers of susceptibility, hormonal components of carcinogenesis and applications to risk assessment. Prerequisite: PHEB 610 and strong preparation in the biological sciences.

PHEB 626 OCCUPATIONAL AND ENVIRONMENTAL EPIDEMIOLOGY (3-0). This course involves the examination of occupational and environmental exposures related to disease and injury. Topics covered include general methods used in occupational and environmental epidemiology, exposure assessment, surveillance, and the relation of occupational and environmental exposure to adverse reproductive outcomes, cancer, diseases and the ergonomic-related outcomes. Prerequisite: PHEB 600 and PHEB 602 or equivalent.

PHEB 684 PRACTICUM / Credit 3-6. Field placement experience in which students work closely with a departmental faculty member and (an) appropriate field professional(s) applying skills and techniques acquired through course work. Prerequisite: Approval by student's academic advisor. Satisfactory/Unsatisfactory grade option only.

PHEB 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHEB 686 DIRECTED RESEARCH / Credit 1-3. Student research initiative not within the scope of a thesis or dissertation. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHEB 689 SPECIAL TOPICS IN EPIDEMIOLOGY AND BIOSTATISTICS / Credit 1-4. Revolving topics seminar in an area of specialization within the department. May be repeated for credit. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHEB 690 EPIDEMIOLOGIC PROPOSAL DEVELOPMENT / Credit 3. This course describes the components of a National Institutes of Health grant application, including the scientific, budgetary, and human subjects aspects of the proposal. Students develop an epidemiologic research proposal utilizing these guidelines. In a mock study section, the students also serve as reviewers for colleagues' proposals. Prerequisite: PHEB 600, and either PHEB 602 or STAT 651.

PHEB 691 THESIS / Credit 1-6. Research for master's thesis. Prerequisite: Approval of the student's academic advisor and department head. May be repeated for credit. Satisfactory/Unsatisfactory grade option only.

*Offerings in collaboration with other units*

SRPH 640 PUBLIC HEALTH INFORMATICS / Credit 3. Use of computing programs and technology to collect and identify information for public health practice. Decision-support systems, various ethical issues, use of technology to communicate effectively within a variety arenas (e.g., professional, administrative, public) and conducting online queries to obtain data from already-defined data repositories.

SRPH 690 THESIS DEVELOPMENT / Credit 3. Course helps students prepare a thesis proposal including writing a literature review, developing hypotheses and/or research questions and appropriate research design, and obtaining IRB approval. Students are expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic advisor.

*Offerings in collaboration with other units (Texas A&M University)*

STAT 604 SPECIAL PROBLEMS IN STATISTICAL COMPUTATIONS AND ANALYSIS / Credit 3. Computer algorithms for programming; statistical analysis, efficient uses of existing statistical computer programs, generation of random numbers and statistical variables, programming of simulation studies; selected topics in statistical analysis not covered in STAT 601 or 652. Prerequisites: CPSC 201 and STAT 601, or concurrent enrollment in STAT 610 and 641.

STAT 607 SAMPLING / Credit 3. Planning, execution and analysis of sampling from finite populations; simple, stratified, multistage and systematic sampling; ratio estimates. Prerequisite: STAT 601 or STAT 651 or concurrent enrollment in STAT 641.

STAT 610 THEORY OF STATISTICS I / Credit 3. Brief introduction to probability theory; distributions and expectations of random variables, transformations of random variables and order statistics; generating functions and basic limit concepts. Prerequisite: MATH 409 or concurrent enrollment in MATH 409.

STAT 611 THEORY OF STATISTICS II / Credit 3. Theory of estimation and hypothesis testing; point estimation, interval estimation, sufficient statistics, decision theory, most powerful tests, likelihood ratio tests, chi-square tests. Prerequisite: STAT 610 or equivalent.

STAT 641 THE METHODS OF STATISTICS I / Credit 3. An application of the various disciplines in statistics to data analysis; introduction to statistical software; demonstration of interplay between probability models and statistical inference. Prerequisite: MATH 222 or MATH 304 or equivalent.

STAT 642 THE METHODS OF STATISTICS II / Credit 3. Design and analysis of experiments; scientific method; graphical displays; analysis of nonconventional designs and experiments involving categorical data. Prerequisites: STAT 610 and STAT 641.

STAT 643 BIOSTATISTICS I / Credit 3. Bioassay for quantitative and qualitative responses; statistical analysis of contingency tables, including effect estimates, matched samples and misclassification. Prerequisites: STAT 602 and STAT 642.

STAT 644 BIOSTATISTICS II / Credit 3. Generalized linear models; survival analysis with emphasis on non-parametric models and methods. Prerequisite: STAT 643 or permission of the instructor.

STAT 651 STATISTICS IN RESEARCH I / Credit 3. A non-calculus exposition of the concepts, methods and usage of statistical data analysis, t-tests, analysis of variance and linear regression.

STAT 652 STATISTICS IN RESEARCH II / Credit 3. Concepts of experimental design, individual treatment comparisons, randomized blocks and factorial analysis, multiple regression, chi-square tests and a brief introduction to covariance, non-parametric methods and sample surveys. Intended for graduate students in other disciplines. Prerequisite: STAT 651.

STAT 653 ADVANCED TOPICS IN ANOVA AND REGRESSION / Credit 3. Regression analysis, simple, multiple and curvilinear; orthogonal polynomials; analysis of non-orthogonal and incomplete experiments by least squares methods; computer methods for least squares problems. Intended for graduate students in other disciplines. Prerequisite: STAT 601 or STAT 652.

STAT 659 APPLIED CATEGORICAL DATA ANALYSIS / Credit 3. Introduction to analysis and interpretation of categorical data using ANOVA/regression analogs; includes contingency tables, loglinear models, logistic regresion; use of computer software such as SAS, GLIM, SPSSX. Prerequisite: STAT 601, 641 or 652 or equivalent.

# Course Descriptions

**School of Rural Public Health**

## Health Policy and Management

PHPM 501 INTRODUCTION TO RURAL PUBLIC HEALTH SYSTEMS / Credit 3. An introduction to the field of public health and to rural health conditions, issues, professions, organizations and policies relevant to the health of rural communities. Satisfactory/Unsatisfactory grade options only; course available only to non-degree seeking or Option 1 certificate-seeking students.

PHPM 505 FUNDAMENTALS OF HEALTH POLICY AND MANAGEMENT / Credit 3. An examination of key health policy and management issues. This course introduces the student to knowledge in the major areas of health management such as finance, planning, operations, human resources and information systems. Satisfactory/Unsatisfactory grade options only; course available only to non-degree seeking or Option 1 certificate-seeking students.

PHPM 601 RURAL PUBLIC HEALTH SYSTEMS / Credit 3. An introduction to the field of public health and to rural health conditions, issues, professions, organizations and policies relevant to the health of rural communities.

PHPM 605 INTRODUCTION TO HEALTH POLICY AND MANAGEMENT / Credit 3. An examination of key health policy and management issues. This course introduces the student to knowledge in the major areas of health management such as finance, planning, operations, human resources and information systems.

PHPM 614 STRATEGIC PLANNING AND MARKETING I / Credit 3. This course offers an introduction to strategic planning and management in health services organizations. Processes and formats employed in strategic planning and marketing are presented and applied in case studies and a final project. Elements of market assessment, environmental analysis and strategy development are presented and applied to course practices. Prerequisite: PHPM 605.

PHPM 615 STRATEGIC PLANNING AND MARKETING II / Credit 3. This course builds upon strategic planning and marketing concepts introduced in PHPM 614. It provided an overview of marketing and how it can be applied effectively to health care organizations. The course covers the history of health care marketing, basic marketing concepts and tools, the process of developing and managing a marketing plan, and the nature of health care markets and consumers. Prerequisites: PHPM 605 and PHPM 614,

PHPM 616 MANAGEMENT OF HUMAN RESOURCES / Credit 3. An introduction to the range of human resources issues facing the health delivery system administrator from benefits to grievances and human resources management in health organizations. Course also covers personnel practices such as job analysis and description, recruitment, selection and compensation in various health delivery system settings. Prerequisite: PHPM 601.

PHPM 617 HEALTH CARE QUALITY EVALUATION AND UTILIZATION MANAGEMENT / Credit 3. Overview of evolving health delivery system quality mechanisms and approaches for maximizing quality control in health care organizations. Includes concepts and practices of quality assessment, control and improvement, and accreditation and outcome analysis in service delivery systems. Prerequisites: PHPM 601, PHPM 605, STAT 651 or STAT 652, PHEB 600.

PHPM 618 PROGRAM EVALUATION IN HEALTH CARE MANAGEMENT / Credit 3. Course provides an overview of the utility of evaluation in policy planning and program management. Intent is to prepare the student to be an educated consumer of evaluation information, rather than a true evaluation researcher. Prerequisites: PHPM 601, PHPM 605.

PHPM 619 ORGANIZATION THEORY AND APPLICATIONS IN THE STUDY OF HEALTH SERVICES / Credit 3. An examination of theoretical frameworks employed in the study of health care systems as formal organizations and interorganizational arrangements. Prerequisites: PHPM 601, PHPM 605.

PHPM 621 SEMINAR IN INTERORGANIZATIONAL RESEARCH / Credit 3. Health services research in interorganizational relations includes applications of theories such as social exchange, transaction costs, resource dependence, organization ecology, political, economic and institutional theory; and their applications to community health networks, integrated delivery systems, and complex market and/or public policy approaches to health services. Prerequisite: PHPM 619 or SOC 635 or MGMT 634.

PHPM 623 HEALTH DELIVERY SYSTEMS FINANCING / Credit 3. Course is designed as an overview of health financing and techniques for financial management in health services settings, blending theory and practice through lecture, discussion and case analysis. This course also examines major sources of public and private health services funding. Prerequisites: PHPM 601, PHPM 605.

PHPM 624 MANAGERIAL ACCOUNTING / Credit 3. Assumes basic understanding of accounting principles. Students are exposed to complex reporting and billing requirements tied to the fiscal monitoring of health delivery systems in private and public settings. Includes introduction to financial accounting, cost accounting, budgeting, pricing, capital expenditure and financing. Prerequisites: PHPM 601, PHPM 605, PHPM 623.

PHPM 629 ORGANIZATIONAL ASSESSMENT & DEVELOPMENT / Credit 3. This course provides skills needed to support collaborative processes in diagnosing organizational needs and problems and introducing innovative structures, processes, and other changes to enhance organizational responsiveness and accountability.

PHPM 631 HEALTH INFORMATION MANAGEMENT SYSTEMS / Credit 3. Course introduces computer-based information systems, architectures and applications in the management of health services organizations. It addresses systems designs, data management systems, data access and communications, and the implications of expanding technological capacities for information management systems. Prerequisites: PHPM 601, PHPM 605.

PHPM 633 HEALTH LAW & ETHICS / Credit 3. Course covers torts, contract law, corporate liability, malpractice, key federal and state regulations, and records management relative to health care. Important health case law is discussed. Ethical considerations are discussed as they relate to the law and management of health delivery systems. Prerequisites: PHPM 601, PHPM 605.

PHPM 640 HEALTH POLICY AND POLITICS / Credit 3. This course examines public and private sector institutions responsible for health policy development at the national and state levels, the interaction of national and regional health systems to create and implement rural health policies, and public programs providing health coverage, particularly those targeting rural residents. Prerequisite: PHPM 601.

PHPM 641 HEALTH POLICY ANALYSIS AND POLICY FORMATION / Credit 3. An examination of the policy implementation process, with an emphasis on the role of interest groups, bureaucracies and the courts in the implementation of health policies; analysis of effective policy implementation and design and factors contributing to that, as well as factors associated with failed implementation. Prerequisite: PHPM 601 or PHPM 605.

PHPM 643 COMPARATIVE HEALTH CARE DELIVERY SYSTEMS / Credit 3. The course provides an overview of varying international models of health and health care delivery systems. Strengths and weaknesses and relative costs are considered. Implications for rural populations are highlighted.

PHPM 645 CRITICAL ISSUES IN HEALTH POLICY / Credit 3. Overview of how U.S. national and state health policy is formulated and considers competing interests in the political process. Considerable emphasis placed on the unique needs of special interest groups from the financially disadvantaged to special needs populations, ethnic and other minorities and rural populations. Prerequisites: PHPM 601, PHPM 640.

PHPM 646 HEALTH SYSTEMS AND THE AGING / Credit 3. Overview of the current U.S. infrastructure designed to provide health services to the aging. Includes federal and illustrative state policies that affect the health of the older citizens and the systems designed to meet their health care needs.

PHPM 647 LONG-TERM CARE POLICY AND MANAGEMENT / Credit 3. Examination of health policy and management in provision of care for the aged and other chronic care populations. Includes instruction on access, use, market issues, quality of services and cost containment. Prerequisites: PHPM 601, PHPM 605.

PHPM 649 AMBU LATORY CARE POLICY & MANAGEMENT / Credit 3. An examination of public policies and management practices related to the management practices appropriate to operation of rural health clinics, public health clinics and physician offices. Pre requisites: PHPM 601, PHPM 605.

PHPM 652 HEALTH CARE REIMBURSEMENT / Credit 3. Study of reimbursement policies and practices of public and private third party payers, and self-insured employers. In addition, the course presents an overview of the impact these difference payers have on health providers, including incentives, quality and access to care. Prerequisites: PHPM 601, PHPM 605.

PHPM 654 INTRODUCTION TO MANAGED CARE / Credit 3. Introduces key dimensions in the management of utilization, cost, and quality of care as reflected in health maintenance organizations, preferred provider organizations, and other organized approaches to combining elements of the insurance process and risk-sharing with the organization and delivery of health services. Prerequisites: PHPM 601, PHPM 605.

PHPM 661 INTRODUCTION TO HEALTH ECONOMICS / Credit 3. Provides basic concepts in economic theory and analysis applied to health care delivery in the United States. Course addresses supply and demand issues for health services, reimbursement systems and health insurance. Course addresses issues in health delivery in a competitive market and public sector involvement. Prerequisite: PHPM 601.

PHPM 665 PROPOSAL WRITING & GRANTS MANAGEMENT / Credit 3. Introduction to skills needed to successfully develop proposals for funding in health care and social services. Focuses on best methods used by community-based organizations to develop public and private funding applications, develop and maintain relationships with the funding agency, and assess implications of applying for and managing grants. Prerequisite: PHPM 601.

PHPM 668 APPLIED HEALTH SERVICES RESEARCH I / Credit 1. Focus on developing a complete grant proposal, from review of actual request to developing a grant proposal, including budget, budget narrative and research plan. Attention is given to the human subjects/Institutional Review Board process. Students integrate their own research into the grant writing process presented in the course. Prerequisites: PHPM 671 and PHPM 672.

PHPM 669 APPLIED HEALTH SERVICES RESEARCH II / Credit 1. Focus on the administration of a funded research project. Students are taken through the implementation of a funded health services research project and the process of diseminating research results through the submission of publications and conference presentations. Prerequisite: PHPM 668.

PHPM 670 HEALTH POLICY EVALUATION / Credit 3. Comprehensive examination of approaches to evaluate health policies and programs. Includes both discussion of analytical methods and design issues. Prerequisite: PHPM 601, PHPM 640, STAT 651.

PHPM 671 INTRODUCTION TO HEALTH SERVICES RESEARCH / Credit 3. Examines issues pertaining to health care access, cost and quality across multiple health care settings. Prerequisites: PHPM 601, PHPM 605.

PHPM 672 HEALTH SERVICES RESEARCH METHODS / Credit 3. Introduces multidisciplinary approaches to conducting health services research. Course focuses on both primary and secondary data analysis for the purpose of understanding the quality and effectiveness of various health delivery systems and the policy implications for the health of citizenry. Prerequisites: PHPM 601, PHPM 671, STAT 652.

PHPM 674 SECONDARY ANALYSIS OF HEALTH DATA / Credit 3. Support secondary data analysis opportunities in health services research. Includes introduction to available databases, mechanisms of access, health policy issues that can be addressed through secondary data analysis, and data cleaning and analytical techniques necessary to examine key health policy issues. Prerequisites: PHPM 601, PHPM 671, PHPM 672, STAT 652.

PHPM 675 SURVEY RESEARCH METHODS / Credit 3. Key elements in the design and execution of population and organizational surveys. Prerequisites: PHPM 671 and PHPM 672.

PHPM 680 HEALTH SYSTEMS LEADERSHIP / Credit 3. Provides opportunity to integrate essential content presented in health policy and management curriculum by assessing issues confronted by health service organizations leaders and employing tools acquired in prior courses to address the issues. Prerequisites: PHPM 601, PHPM 605, PHPM 614, PHPM 617, PHPM 623, PHPM 624, PHPM 640, PHPM 661.

PHPM 684 PRACTICUM / Credit 3-6. Field placement experience where students work closely with a departmental faculty member and (an) appropriate field professional(s) applying skills and techniques acquired through course work. Prerequisite: Approval by student's academic advisor. Satisfactory/Unsatisfactory grade option only.

PHPM 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHPM 686 DIRECTED RESEARCH / Credit 1-3. Student research initiative not within the scope of a thesis or dissertation. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHPM 689 SPECIAL TOPICS IN HEALTH POLICY AND MANAGEMENT / Credit 1-4. Revolving topics seminar in an area of specialization within the department. May be repeated for credit. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHPM 691 THESIS / Credit 1-6. Research for master's thesis. Prerequisite: SRPH 690 and approval of the student's academic advisor and department head. May be repeated for credit. Satisfactory/Unsatisfactory grade option only.

PHPM 695 DOCTORAL CAPSTONE / Credits 3 – 9. Doctoral dissertation or equivalent project(s). Satisfactory/Unsatisfactory grade option only.

*Offerings in collaboration with other units:*

SRPH 640 PUBLIC HEALTH INFORMATICS / Credit 3. Use of computing programs and technology to collect and identify information for public health practice. Decision-support systems, various ethical issues, use of technology to communicate effectively within a variety arenas (e.g., professional, administrative, public) and conducting online queries to obtain data from already-defined data repositories.

SRPH 690 THESIS DEVELOPMENT / Credit 3. Course helps students prepare a thesis proposal including writing a literature review, developing hypotheses and/or research questions and appropriate research design, and obtaining IRB approval. Students are expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic advisor.

## Social and Behavioral Health

PHSB 503 INTRODUCTION TO SOCIAL AND BEHAVIORAL HEALTH / Credit 3. An overview of theories and principles focusing on social and behavioral determinants of health, the social-ecological approach to the examination of health and health behaviors, social patterns of health behavior, and an introduction to health promotion and public health interventions. Satisfactory/Unsatisfactory grade options only; course available only to non-degree seeking or Option 1 certificate-seeking students.

PHSB 603 SOCIAL AND BEHAVIORAL DETERMINANTS OF HEALTH / Credit 3. An overview of theories and principles focusing on social and behavioral determinants of health, the social-ecological approach to the examination of health and health behaviors, social patterns of health behavior, and an introduction to health promotion and public health interventions. Intended for non-majors.

PHSB 604 SOCIAL ECOLOGY AND HEALTH BEHAVIOR / Credit 3. Social determinants of health behavior, social organization and stressors on human health, social-ecological approach to the examination of health behaviors, social patterning of disease and health behavior, basic theories of health behavior and communication, public health program diffusion and implementation. Intended for majors only; permission of instructor required for non-majors.

PHSB 605 SOCIAL AND BEHAVIORAL RESEARCH METHODS / Credit 3. Overview of quantitative and qualitative methods used by public health professionals, advantages and limitations of different methods, mechanisms for gathering data in a community setting, techniques for managing and analyzing data, and strategies for presenting information to community members. Prerequisite: PHEB 602 or equivalent, or permission of instructor.

PHSB 610 COMMUNITY ORGANIZATION AND ASSESSMENT / Credit 3. The nature of both formal and informal organizations and their strategic place in community organization. The nature of community; communities as systems and nonsystems; relationships between health, community and healthy communities. Analysis and application of assessment models. Field-based community and/or organizational analysis required. Prerequisites: PHSB 603 or PHSB 604, or permission of instructor.

PHSB 611 PROGRAM PLANNING / Credit 3. Use of theory and evidence in planning public health interventions, appropriate objective development, integration of levels of intervention, consolidation of intervention strategies into coherent program design, program implementation, diffusion and institutionalization. Prerequisite: PHSB 604 or permission of the instructor.

PHSB 612 PUBLIC HEALTH INTERVENTIONS / Credit 3. Examination of the conceptualization and theoretical foundation, design, implementation, and effectiveness of specific public health interventions at the individual, interpersonal, organizational, community, and policy levels for addressing particular chronic or infectious diseases (specific focus may vary by semester). Prerequisite: Either PHSB 603 or PHSB 604, or permission of the instructor.

PHSB 613 PROGRAM EVALUATION / Credit 3. Study of program evaluation techniques. The course focuses on issues relevant to the assessment and evaluation of health promotion interventions and examines the social context of program evaluation and a variety of epistemological orientations. Prerequisite: Either PHSB 603 or PHSB 604; PHSB 605; PHSB 611 (or concurrent).

PHSB 618 SOCIAL ANTHROPOLOGY AND PUBLIC HEALTH / Credit 3. Study of the cultural influences on personal and community health. Application of cultural factors and their impact on program development and implementation also is explored.

PHSB 635 COMMUNITY HEALTH DEVELOPMENT / Credit 3. The theory and practice of community development for health; a comparative study of community development models in diverse communities. Analysis of how to create systematic and sustainable community change related to health and healthy communities, with attention to rural, minority and underserved communities. Prerequisite: Either PHSB 603 or PHSB 604; PHSB 610; or permission of instructor.

PHSB 636 HEALTH COMMUNICATION STRATEGIES / Credit 3. Overview and application of theories related to attitude and behavior change, message design, and principles of mass media and interpersonal channel selection for health messages. Students gain experience in developing communication plans for a community agency. Prerequisite: Either PHSB 603 or PHSB 604, or permission of instructor.

PHSB 637 PRINCIPLES OF HEALTH PROGRAM MANAGEMENT / Credit 3. This course prepares the student with knowledge and skills to assume a role in the management of health promotion programs. The course covers management theory, leadership, organizational assessment, planning, decision-making, organizational structure, budgeting, marketing and human resource management.

PHSB 638 SEMINAR ON ALCOHOL, TOBACCO AND OTHER DRUGS / Credit 2-3. In-depth study of public health issues and concerns related to alcohol, tobacco and other drug use. Includes overview of contributing causative and mediating factors of drug use and theory-based prevention and intervention strategies and programs. Prerequisite: PHSB 604 or permission of the instructor.

PHSB 670 DOCTORAL SEMINAR I / Credit 3. This seminar is the first of a two-course sequence examining the historical and conceptual bases of public health and health education; ideological and ethical implications for public health research, policy and programs; theoretical basis for public health interventions; and models of practice. Prerequisites: Enrollment is limited to students in the Department of Social and Behavioral Health doctoral program or by permission of instructor. Satisfactory/Unsatisfactory grade option only.

PHSB 671 DOCTORAL SEMINAR II / Credit 3. This seminar is the second of a two-course sequence examining the historical and conceptual bases of public health; implications for public health research, policy and programs; theoretical basis for public health interventions; and models of practice. Prerequisites: PHSB 670 or permission of instructor.

PHSB 684 PRACTICUM / Credit 3-6. Field placement experience where students work closely with a departmental faculty member and appropriate field professional(s) applying skills and techniques acquired through course work. Prerequisite: Approval by student's academic advisor. Satisfactory/Unsatisfactory grade option only.

PHSB 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHSB 686 DIRECTED RESEARCH / Credit 1-3. Student research initiative not within the scope of a thesis or dissertation. Prerequisite: Approval by student's academic advisor. May be repeated for a maximum of six credits. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHSB 689 SPECIAL TOPICS IN SOCIAL AND BEHAVIORAL HEALTH / Credit 1-4. Revolving topics seminar in an area of specialization within the department. May be repeated for credit. Satisfactory/Unsatisfactory grading option or standard grading option to be determined by the instructor and applied to all students registered for the course. Grading option will be determined prior to the first class day, outlined in the course syllabus and not be altered once the course has begun.

PHSB 691 THESIS / Credit 3-6. Research for master's thesis. Prerequisite: Approval of student's academic advisor and department head. Satisfactory/Unsatisfactory grade option only.

*Offerings in collaboration with other units:*

SRPH 640 PUBLIC HEALTH INFORMATICS / Credit 3. Use of computing programs and technology to collect and identify information for public health practice. Decision-support systems, various ethical issues, use of technology to communicate effectively within a variety of arenas (e.g., professional, administrative, public) and conducting online queries to obtain data from already-defined data repositories.

SRPH 690 THESIS DEVELOPMENT / Credit 3. Course helps students prepare a thesis proposal including writing a literature review, developing hypotheses and/or research questions and appropriate research design, and obtaining IRB approval. Students are expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic advisor.

# Faculty

# Faculty Listings

## Baylor College of Dentistry

The use of the word "adjunct" identifies part-time basic science and clinical faculty..

**Abdellatif, Hoda M.** Assistant Professor, Public Health Sciences. B.D.S., University of Alexandria; M.P.H., University of Michigan; Ph.D. University of Michigan.

**Abraham, Celeste M.** Assistant Professor, Periodontics. B.S., University of Maryland; D.D.S., Howard University; M.S. and Certificate in Oral Pathology, University of Michigan.

**Adams, Terry B.** Adjunct Assistant Professor, Orthodontics. B.A., Texas Tech University; D.D.S., University of Missouri, M.S.D., Baylor College of Dentistry.

**Ajlouni, Khaldoun** Adjunct Assistant Professor, Restorative Sciences, DDS, Jordan University; Certificate in Prosthodontics, Marquette University

**Ajlouni, Raed** Assistant Professor, General Dentistry. B.D.S. Jordan University of Science and Technology; Certificate, Clinical Oral Pathology; Certificate, Operative Dentistry; M.S. The University of Iowa; Diplomate, American Board of Operative Dentistry Associate.

**Alexander, C. Moody** Adjunct Professor, Orthodontics. B.A., Texas Tech University; D.D.S., University of Texas Health Science Center at Houston; M.S., Ibid.; Diplomate, American Board of Orthodontics.

**Alexander, James M.** Adjunct Assistant Professor, Orthodontics. B.S., Texas Tech University; D.D.S., Baylor College of Dentistry; M.S., Ibid.

**Alexander, R.G.** Adjunct Professor, Orthodontics. B.A., Texas Tech University; D.D.S., University of Texas Health Science Center at Houston; M.S.D., Ibid.; Diplomate, American Board of Orthodontics.

**Alexander, Roger E.** Professor, Director, Undergraduate Surgery Training and Clinics, Oral and Maxillofacial Surgery. D.D.S., Marquette University; Certificate in Oral and Maxillofacial Surgery, U.S. Navy; Diplomate, American Board of Oral and Maxillofacial Surgery.

**Al-Hashimi, Ibtisam H.** Professor, Periodontics. B.D.S., Diploma Oral Surgery, University of Baghdad (Iraq); M.S., Ph.D., State University of New York at Buffalo.

**Allen, E. Pat** Adjunct Professor, Periodontics. B.S., Southern Methodist University; D.D.S., Baylor College of Dentistry; Certificate in Periodontics, Ibid.; Ph.D., Baylor University.

**Alvarez, Martha** Assistant Professor, Pediatric Dentistry. D.D.S., Instituto de Ciencias de la Salud CES, Medellin-Colombia; Certificate in Pediatric Dentistry, Baylor College of Dentistry.

**Anderson, Maria A.** Adjunct Assistant Professor, Pediatric Dentistry. B.S., M.S., Baylor College of Dentistry.

**Arcoria, Charles J.** Associate Professor, Executive Director of Continuing Education and Alumni Relations, Restorative Sciences. B.A., Case Western Reserve University; D.D.S., Baylor College of Dentistry; M.B.A., University of Dallas.

**Ashworth, Stanley** Assistant Professor, General Dentistry. B.A., North Texas State University; D.D.S., Baylor College of Dentistry.

**Attaway, H. Eldon** Adjunct Associate Professor, Orthodontics. D.D.S., Baylor College of Dentistry; M.S.D., University of Nebraska; Diplomate, American Board of Orthodontics.

**Baker, Frank L.** Assistant Professor, General Dentistry. D.M.D., University of Louisville. Certificate in Prosthodontics, Martin Army Hospital.

**Ball, John D.** Adjunct Assistant Professor, Restorative Sciences, B.S., University of Missouri-Kansas City; D..D.S., University of Missouri Kansas City; Certificate in Prosthodontics, VAMC Houston

**Barnes, James B.** Adjunct Associate Professor. B.S., Southern Methodist University; D.D.S., Baylor College of Dentistry, Certificate in Periodontics, Ibid.

**Barrington, Craig** Adjunct Associate Professor, Endodontics. B.S., University of Texas at San Antonio; D.D.S., University of Texas Health Science Center at San Antonio Dental School.

**Barrington, Jennifer** Adjunct Assistant Professor, General Dentistry. B.S., University of Texas at San Antonio; D.D.S., University of Texas Health Science Center Houston Dental Branch.

**Barta, Marc W.** Adjunct Assistant Professor, Dental Jurisprudence, Restorative Sciences; B.F.A., Southern Methodist University; J.D., University of Texas at Austin.

**Bartlett, Leanna** Assistant Professor, Public Health Sciences. B.A., M.Ed., East Texas State University.

**Baumann, Todd** Adjunct Assistant Professor, Restorative Sciences, DDS, Baylor College of Dentistry; Certificate in Prosthodontics, Baylor College of Dentistry

**Beach, M. Miles.** Assistant Professor, Periodontics. B.S., St. Peters College; D.M.D., College of Medicine and Dentistry of New Jersey; M.S., University of Texas Health Science Center; Certificate in Periodontics, Wilford Hall USAF Medical Center; M.B.A., University of Cincinnati; Diplomate, American Board of Periodontology.

**Beatty, Robert C.** Adjunct Assistant Professor, General Dentistry. B.S., St. Bonaventure University; D.D.S., SUNY at Buffalo School of Dental Medicine.

**Bell, Colin S.** Adjunct Professor, Oral and Maxillofacial Surgery. B.A., Southern Methodist University; D.D.S., Baylor College of Dentistry; M.S.D., Baylor University; Diplomate, American Board of Oral and Maxillofacial Surgery.

**Bellinger, Larry L.** Associate Dean, Research and Graduate Studies, Regents Professor, Biomedical Sciences. B.S., Ph.D., University of California, Davis.

**Beninger, Christine K.** Assistant Professor,Restorative Sciences. B.S., University of Southern California; D.D.S., University of Southern California.

**Benson, Byron W**. Professor and Director, Oral and Maxillofacial Radiology, Diagnostic Sciences. D.D.S., University of Iowa; Certificate in Diagnostic Sciences and M.S., University of Texas Health Science Center at San Antonio; Diplomate, American Board of Oral Medicine; Diplomate, American Board of Oral and Maxillofacial Radiology.

**Benton, Elain** Instructor, Public Health Sciences. B.S., Texas Woman's University.

**Berry, Charles W.** Associate Dean, Academic Affairs; Professor, Biomedical Sciences. B.A., Hendrix College; M.S., Louisiana Tech University; Ph.D., Baylor University.

**Bettis, Robert** Adjunct Assistant Professor, Restorative Sciences. D.D.S., Baylor College of Dentistry.

**Bitouni, Anneta** Assistant Professor, Public Health Sciences. D.D.S., School of Dentistry of the National and Kapodistrian University of Athens; M.S., Department of Biomedical Sciences, Baylor College of Dentistry.

**Boley, Jimmy C.** Adjunct Assistant Professor, Orthodontics. B.A., Texas Christian University; D.D.S., Baylor College of Dentistry; M.S., University of Missouri at Kansas City.

**Bolin, Kenneth A.** Assistant Professor, Public Health Sciences. D.D.S., University of Texas Health Science Center at San Antonio; M.P.H., University of Texas School of Public Health; Diplomate, American Board of Dental Public Health.

**Bolouri, Ali** Professor, Restorative Sciences. D.M.D., Tehran University (Iran); D.D.S., University of Tennessee; Certificate in Prosthodontics, Emory University; Diplomate, American Board of Prosthodontics.

**Boltchi, Farhad** Adjunct Assistant Professor, Periodontics. D.D.S., Medical University of Hanover (Germany); Certificate in Periodontics, Baylor College of Dentistry; M.S., Baylor University.

**Bookatz, Barnett N.** Adjunct Associate Professor, Periodontics. B.S, Tulane University; D.D.S., Baylor College ofDentistry; M.S.D., Baylor University.

**Brooks, Ernestine** Director, Student Development; Associate Professor, Restorative Sciences. B.S., M.A., University of Alabama, Birmingham; D.D.S., Baylor College of Dentistry; Certificate in Advanced Education in General Dentistry, Ibid.

**Bryan, Burt** Adjunct Assistant Professor, Restorative Sciences, B.S., Texas A&M; D.D.S., Baylor College of Dentistry.

**Budinskaya, Oksana** Assistant Professor, Oral Diagnosis, Diagnostic Sciences. B.S., D.D.S., Medical Academy in Omsk City, Russia.

**Burkhart, Nancy** Adjunct Assistant Professor, Periodontics. Ed.D., North Carolina State University; B.S., Dental Hygiene, Fairleigh Dickinson University

**Buschang, Peter H.** Professor, Orthodontics. B.A., M.A., Ph.D., University of Texas at Austin.

**Cai, Zhuo (John)** Assistant Professor, Biomaterials Science. D.D.S., M.S., Beijing Medical University; M.S., Ph.D., The Ohio State University; Certificate in Orthodontics, Baylor College of Dentistry.

**Campbell, Patricia R.** Associate Professor, Clinic Coordinator, Caruth School of Dental Hygiene. A.S., B.S., University of Southern Indiana; M.S., Old Dominion University.

**Campbell, Phillip M.** Assistant Professor, Clinic Director, B.A., University of Texas; M.A., Southwest Texas State University; D.D.S., Baylor College of Dentistry; M.S.D., Baylor College of Dentistry Orthodontics.

**Carlson, David S.** Vice President for Research and Graduate Studies, Texas A&M University System Health Science Center; Regents Professor, Biomedical Sciences. B.A., M.A., Ph.D., University of Massachusetts.

**Ceen, Richard F.** Professor, Graduate Program Director, Orthodontics. B.S., University of Tennessee; D.D.S., Ibid.; Certificate in Orthodontics, Columbia University.

**Cheng, Linda L.** Assistant Professor, Restorative Sciences. B.A., Baylor University; D.D.S., Baylor College of Dentistry; AEGD Certificate, Baylor College of Dentistry.

**Cheng, Yi-Shing Lisa** Assistant Professor, Pathology, Diagnostic Sciences. D.D.S., M.S., Kaohsiung Medical University, Taiwan; M.S., Ph.D., Baylor University; Certificate in Oral and Maxillofacial Pathology, Baylor College of Dentistry.

**Cho, Jun Young** Associate Professor, Periodontics. D.D.S., Seoul National University (South Korea); Certificate in Periodontics, Baylor College of Dentistry.

**Chu, Stephen** Adjunct Assistant Professor, Orthodontics. B.S.E.E., University of Texas; D.D.S., University of Texas at San Antonio; M.S., Baylor College of Dentistry.

**Clemetson, Jonathan C.** Adjunct Assistant Professor, Diagnostic Sciences. B.S.M.T., University of North Texas; D.D.S., Baylor College of Dentistry.

**Cobb, Stanton W**. Assistant Professor, Restorative Sciences. B.S., Texas Wesleyan University; D.D.S., Baylor College of Dentistry.

**Cohlmia, Michael** Adjunct Assistant Professor, Restorative Sciences. D.D.S., Baylor College of Dentistry.

**Cole, James S.** Professor and Dean. B.S., Stephen F. Austin State University; D.D.S., Baylor College of Dentistry.

**Coleman, Gary C.** Associate Professor and Director, Oral Diagnosis, Vice Chair, Diagnostic Sciences. D.D.S., M.S., University of Iowa; Diplomate, American Board of Oral and Maxillofacial Radiology.

**Collins, Monte K.** Adjunct Assistant Professor, Orthodontics. B.S., University of Texas at Arlington; D.D.S., M.S.D., Baylor College of Dentistry; Diplomate, American Board of Orthodontics.

**Cope, Jason** Adjunct Assistant Professor, Orthodontics. B.A., Southern Methodist University; D.D.S., Ph.D., Baylor College of Dentistry.

**Craig, Kathleen R.** Associate Adjunct Professor, Endodontics. D.D.S., University of California San Francisco; Certificate and M.S., Baylor College of Dentistry; Diplomate American Board of Endodontics.

**Craig, Mark A.** Adjunct Assistant Professor, Oral and Maxillofacial Surgery. B.A., University of Texas; D.D.S., Baylor College of Dentistry; M.D., Louisiana State University School of Medicine. Dilomate, American Board of Oral and Maxillofacial Surgery.

**Cramer, George H.** Assistant Professor, Restorative Sciences. B.S., Hardin-Simmons; D.D.S., Baylor College of Dentistry.

**Crane, Stephen L.** Assistant Professor, Public Health Sciences. B.A., Southern Methodist University; D.D.S., Baylor College of Dentistry.

**Crosby, Douglas R.** Adjunct Associate Professor, Orthodontics. B.A., University of Texas at Austin; D.D.S., Baylor College of Dentistry; M.S.D., University of North Carolina; Diplomate, American Board of Orthodontics.

**Crump, Brad** Adjunct Assistant Professor, Periodontics. B.S., D.D.S., Baylor University; M.S., Certificate in Periodontology, University of Nebraska.

**Cueva, Marco** Assistant Professor, Periodontics. D.D.S., Federal University of Parana, Brazil; M.S., Certificate of Periodontics, Baylor College of Dentistry.

**D'Souza, Rena** Professor and Chair, Biomedical Sciences. D.D.S., University of Texas Health Science Center, Houston; Ph.D., University of Texas Health Science Center Graduate School of Biomedical Sciences, Houston.

**Dahl, Eugene W**. Adjunct Associate Professor, Restorative Sciences. B.S., Kent State University; D.D.S., Ohio State University; Certificate in Prosthodontics, The University of Texas Health Science Center at Houston; Diplomate, American Board of Prosthodontics.

**Davis, Mila L.** Adjunct Assistant Professor, Pediatric Dentistry. D.D.S., Columbia University School of Dental and Oral Surgery; Certificate in Pediatric Dentistry, New York Presbyterian Hospital.

**Dechow, Paul C.** Director, Graduate Program, Professor, Biomedical Sciences. B.A., University of Pennsylvania; Ph.D., University of Chicago.

**DeWald, Janice P**. Professor, Director, Caruth School of Dental Hygiene. B.S., D.D.S., University of Iowa; M.S., Baylor University.

**Dobbins, Michael L.** Assistant Professor, Restorative Sciences. D.D.S., Baylor College of Dentistry.

**Dumbrigue, Herman** Associate Professor, Assistant Director, Advanced Education in General Dentistry. D.D.M., University of Philippines; Prosthodontic Certificate, University of California, San Francisco; Maxillofacial Prosthetics Certificate, University of Iowa Hospitals and Clinics; Diplomate, American Board of Prosthodontics.

**Ellis III, Edward E.** Adjunct Professor, Biomedical Sciences. B.S., University of Toledo; D.D.S., University of Michigan; M.S. in Oral Surgery, Ibid.

**Ezzo, Paul** Assistant Professor, Biomedical Sciences. D.D.S., Baylor College of Dentistry; Certificate in Periodontics, Ph.D., University of Texas Health Science Center, San Antonio.

**Fanous, Ramsey N.** Adjunct Assistant Professor, Oral and Maxillofacial Surgery. B.B.A., Baylor University; D.D.S., Baylor College of Dentistry; Certificate in Oral and Maxillofacial Surgery, University of Wisconsin.

**Feng, Jian (Jerry)** Professor, Biomedical Sciences. M.D., University of Qindao; M.S., University of Qindao; Ph.D., University of Connecticut.

**Fleury, Alexandre AP**. Assistant Professor, Endodontics. D.D.S., University of Sao Paulo, Brazil; M.S., University of Pennsylvania.

**Flint, Diane J.** Assistant Professor, Oral & Maxillofacial Radiology, Diagnostic Sciences. B.S., University of Iowa; D.D.S., Baylor College of Dentistry.

**Franco, Pedro F.** Adjunct Assistant Professor, Oral and Maxillofacial Surgery. D.D.S., Pontificia Universidad Javeriana, Bogota (Colombia), Certificate in Oral and Maxillofacial Surgery, Ibid.

**Frohberg, Uwe** Associate Professor, Oral and Maxillofacial Surgery. M.D., D.M.D., University of Duesseldorf (Germany); Certified, American Board of Oral and Maxillofacial Surgery, European Board of Oro-Maxillofacial Surgery, and German Board of Oral & Maxillofacial Surgeons.

**Frysh, Howard** Adjunct Associate Professor, General Dentistry. D.D.S., Baylor College of Dentistry; B.D.S., University of Witwatersrand (South Africa).

**Fox, Eric** Adjunct Assistant Professor, Caruth School of Dental Hygiene. B.S., Texas Woman's University; M.S., Baylor College of Dentistry.

**Galbreath, Anne** Adjunct Assistant Professor, Restorative Sciences, B.S., Vanderbilt University; D.D.S., Baylor College of Dentistry.

**Gandini Jr., Luiz G.** Adjunct Assistant Professor, Orthodontics. M.S.D., University State of Sao Paulo-UNESP; Ph.D., University State of Sao Paulo-UNESP, Araraquara, School of Dentistry.

**Gannaway, Mark E.** Assistant Professor, Restorative Sciences, B.A., Texas Tech University; D.D.S., Baylor College of Dentistry.

**Garcia, Alejandra** Adjunct Assistant Professor, Caruth School of Dental Hygiene. B.S., Baylor College of Dentistry.

**Garcia, Luis** Adjunct Assistant Professor, Restorative Sciences. D.D.S., Baylor College of Dentistry.

**Garcia-Penna, Frank** Adjunct Assistant Professor, Restorative Sciences. B.S., Tulane University; D.D.S., Baylor College of Dentistry.

# Faculty Listings

## Baylor College of Dentistry

**Geller, Mark S.** Assistant Adjunct Professor, Orthodontics. B.A., University of Oklahoma; D.D.S., M.S.D., Baylor College of Dentistry; Diplomate, American Board of Orthodontics.

**Genecov, Edward R.** Adjunct Professor, Orthodontics. B.A., University of Texas at Austin; D.D.S., Baylor College of Dentistry; Certificate in Orthodontics, Columbia University; Diplomate, American Board of Orthodontics.

**Genecov, Jeff S.** Adjunct Assistant Professor, Orthodontics. B.A., University of Texas at Austin; D.D.S., M.S., Baylor College of Dentistry.

**Glickman, Gerald N.** Professor, Chair, Director, Graduate Programs, Endodontics. B.S., Ohio State University; M.S., University of Kentucky; D.D.S., The Ohio State University College of Dentistry; Certificate in General Practice Residency, University of Florida College of Dentistry; Certificate in Restorative Dentistry, University of Michigan School of Dentistry; Certificate in Endodontics, Northwestern University Dental School; M.B.A., Southern Methodist University; J.D., Texas Wesleyan School of Law; Diplomate, American Board of Endodontics.

**Gonzales Jr., Angel** Adjunct Assistant Professor, General Dentistry. B.A., Baylor University; M.S., Baylor University; D.D.S., Baylor College of Dentistry; General Practice Residency, VA Medical Center.

**Gonzalez, Marianela** Assistant Professor, Oral and Maxillofacial Surgery. D.D.S., Central University of Venezuela; M.S., Baylor College of Dentistry.

**Goodman, John T**. Adjunct Associate Professor, Restorative Sciences. B.S., University of Texas at Arlington; D.D.S., Baylor College of Dentistry; Certificate in Prosthodontics, William Beaumont Army Medical Center; Diplomate, American Board of Prosthodontics.

**Grattafiori, Caroline** Adjunct Assistant Professor, Caruth School of Dental Hygiene. B.S., Baylor College of Dentistry.

**Griffin, Stephen John** Director of Clinics, Clinical Affairs, Assistant Professor, Restorative Sciences. B.S., Lamar University; D.D.S., Baylor College of Dentistry.

**Griffiths, Garth R.** Adjunct Assistant Professor, Periodontics. D.D.S., M.S., Certificate in Periodontics, University of Texas Health Science Center at San Antonio; Diplomate, American Board of Periodontology.

**Griggs, Jason A.** Associate Professor, Director, Biomaterials Science Graduate Program, Biomaterials Science. B.S., M.S., Ph.D., University of Florida.

**Grogan, David M.** Assistant Professor, Oral and Maxillofacial Surgery. D.D.S., Baylor College of Dentistry; M.S.D. in Oral and Maxillofacial Surgery, Baylor College of Dentistry; Diplomate, American Board of Oral and Maxillofacial Surgery; Fellow, American Association of Oral and Maxillofacial Surgeons.

**Gutmann, Marylou S.** Professor, Director, Graduate Dental Hygiene Program, Caruth School of Dental Hygiene. A.S., University of Bridgeport; B.S., M.A., University of Maryland.

**Hale, David S.** Assistant Professor, Pediatric Dentistry, M.S.D., Baylor University, Waco, Texas; D.D.S., Baylor College of Dentistry; B.A., North Texas State University, Denton, Texas; Diplomat, American Academy of Pedodontics.

**Hallmon, William W.** Regents Professor, Chair, Director, Graduate Programs, Periodontics. B.S., D.M.D., University of Alabama; M.S., University of Texas Health Sciences Center, Houston; Certificate in Periodontics, Willford Hall USAF Medical Center; Diplomate, American Board of Periodontology; Fellow, American Academy of Periodontology.

**Harrel, Stephen K.** Adjunct Professor, Periodontics. B.A., Austin College; D.D.S., Baylor College of Dentistry; Certificate in Periodontics, University of Oregon; M.S., University of North Texas; Diplomate, American Board of Periodontology.

**Hayasaki, Haruaki** Adjunct Assistant Professor, Orthodontics. D.D.S., Kyushu University; Ph.D., Kyushu University Graduate School of Dentistry.

**He, Jianing** Assistant Professor, Endodontics. D.M.D., M.D.S., West China University of Medicine Sciences, Chingdu, China; Certificate in Endodontics and Ph.D., University of Connecticut School of Dental Medicine.

**Henderson II, Bryan N.** Adjunct Assistant Professor, Oral and Maxillofacial Surgery. B.B.A., University of Texas at Austin; D.D.S., Baylor College of Dentistry; Certificate in Anesthesiology, Medical College of Pennsylvania.

**Higginbottom, Frank L.** Adjunct Associate Professor, Oral and Maxillofacial Surgery, Restorative Sciences and Pharmacology. B.S., Oklahoma University; D.D.S., Baylor College of Dentistry.

**Hildebrand, Brody** Adjunct Assistant Professor, Restorative Sciences, B.A., Baylor University; D.D.S., Baylor College of Dentistry; M.S./Certificate in Prosthodontics/Orthodontics, Baylor College of Dentistry.

**Hill, Sharon D.** Adjunct Assistant Professor, Pediatric Dentistry. D.D.S., University of North Carolina-Chapel Hill; Certificate in Pediatric Dentistry, Baylor College of Dentistry; M.S. in Oral Biology, Baylor College of Dentistry.

**Hill, Van** Assistant Professor, Restorative Sciences, B.S., University of New Mexico; D.D.S., Baylor College of Dentistry.

**Hinton, Robert J.** Professor and Vice Chair, Biomedical Sciences. B.S., University of Tennessee; M.A., Ph.D., University of Michigan.

**Hirsh, Marvin** Associate Professor, Restorative Sciences. B.S., D.D.S., University of Illinois; Fellow, Academy of General Dentistry.

**Hister-Cockrell, Maiara Lisiane** Assistant Professor, Restorative Sciences and Oral/Maxillofacial Surgery. D.D.S., University of Porto Alegre; Certificate in Advanced Education in General Dentistry, Baylor College of Dentistry.

**Holt, Charles R.** Assistant Professor, Orthodontics. D.D.S., Baylor College of Dentistry.

**Holyfield, Lavern J.** Assistant Professor, Public Health Sciences, Director of Faculty Development. B.A., Grambling State University; D.D.S., Baylor College of Dentistry.

**Honeyman, Allen** Assistant Professor, Biomedical Sciences. B.S., Kansas State University; Ph.D., University of Kansas.

**Hudson, Dean A.** Associate Dean, Clinical Affairs; Associate Professor, Restorative Sciences. D.D.S., University of Texas; Certificate in Prosthodontics, Letterman Army Medical Center; Diplomate, American Board of Prosthodontics.

**Huff, Gene C.** Assistant Professor, Pediatric Dentistry. B.A., North Texas State College; B.D.S., Baylor University College of Dentistry; M.S.D., Baylor University.

**Hummel, Susan K.** Associate Professor, Restorative Sciences. B.S., D.D.S., University of Iowa; Certificate in Prosthodontics, Baylor College of Dentistry; Diplomate, American Board of Prosthodontics.

**Hunsucker, Bob C.** Adjunct Assistant Professor, General Dentistry. B.S., Texas Tech University; D.D.S., Baylor College of Dentistry.

**Hutchins, Bob** Associate Professor, Biomedical Sciences. B.S., M.B.A., Eastern Illinois University; Ph.D., Tulane University.

**Hutson, Brent B.** Assistant Professor, Restorative Sciences. B.S., Texas Tech University; D.D.S., Baylor College of Dentistry.

**Iranmehr, Mehrnaz** Adjunct Assistant Professor, General Dentistry. B.A., University of Texas at Dallas; D.D.S., Baylor College of Dentistry.

**Johnson, William B.** Adjunct Associate Professor, Endodontics. D.D.S., Baylor University; Certificate in Endodontics, Baylor College of Dentistry.

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