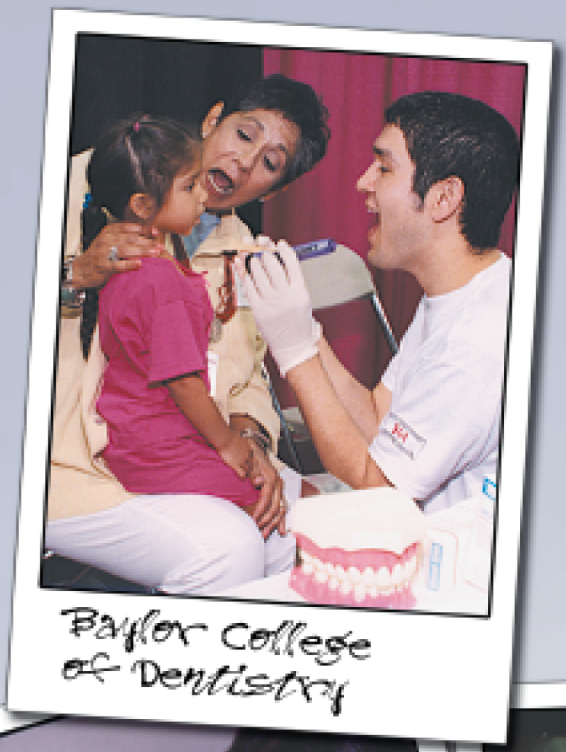
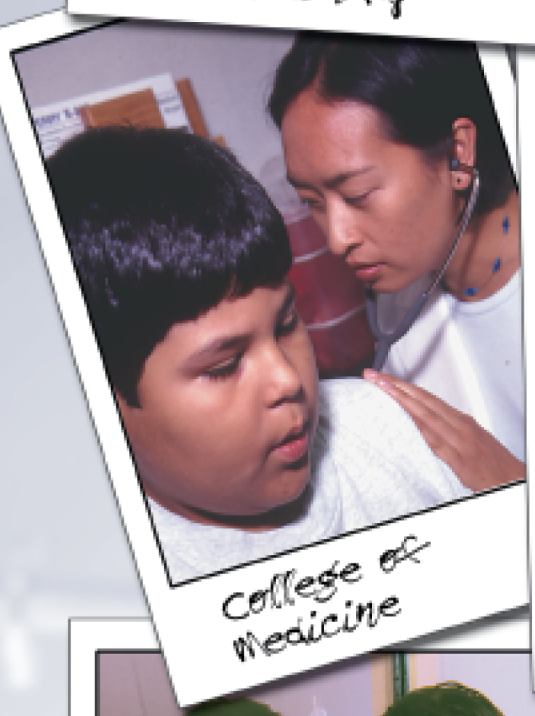
THE TEXAS A&M UNIVERSITY SYSTEM

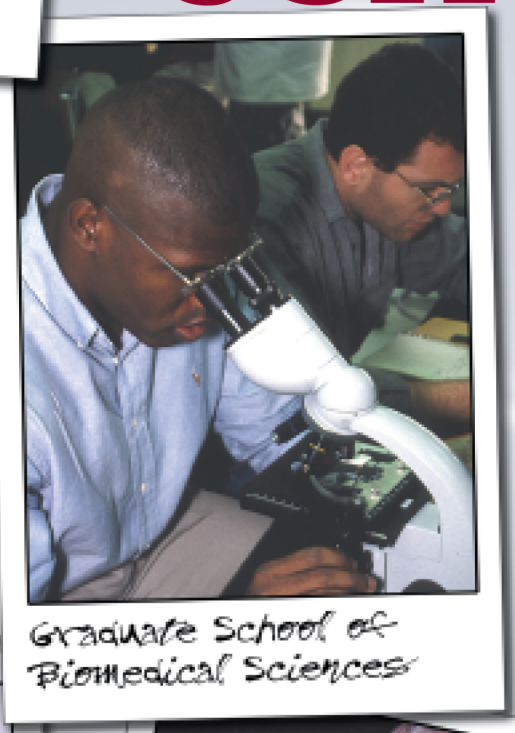
Health Science Center



Baylor College of Dentistry



College of Medicine



Graduate School of Biomedical Sciences

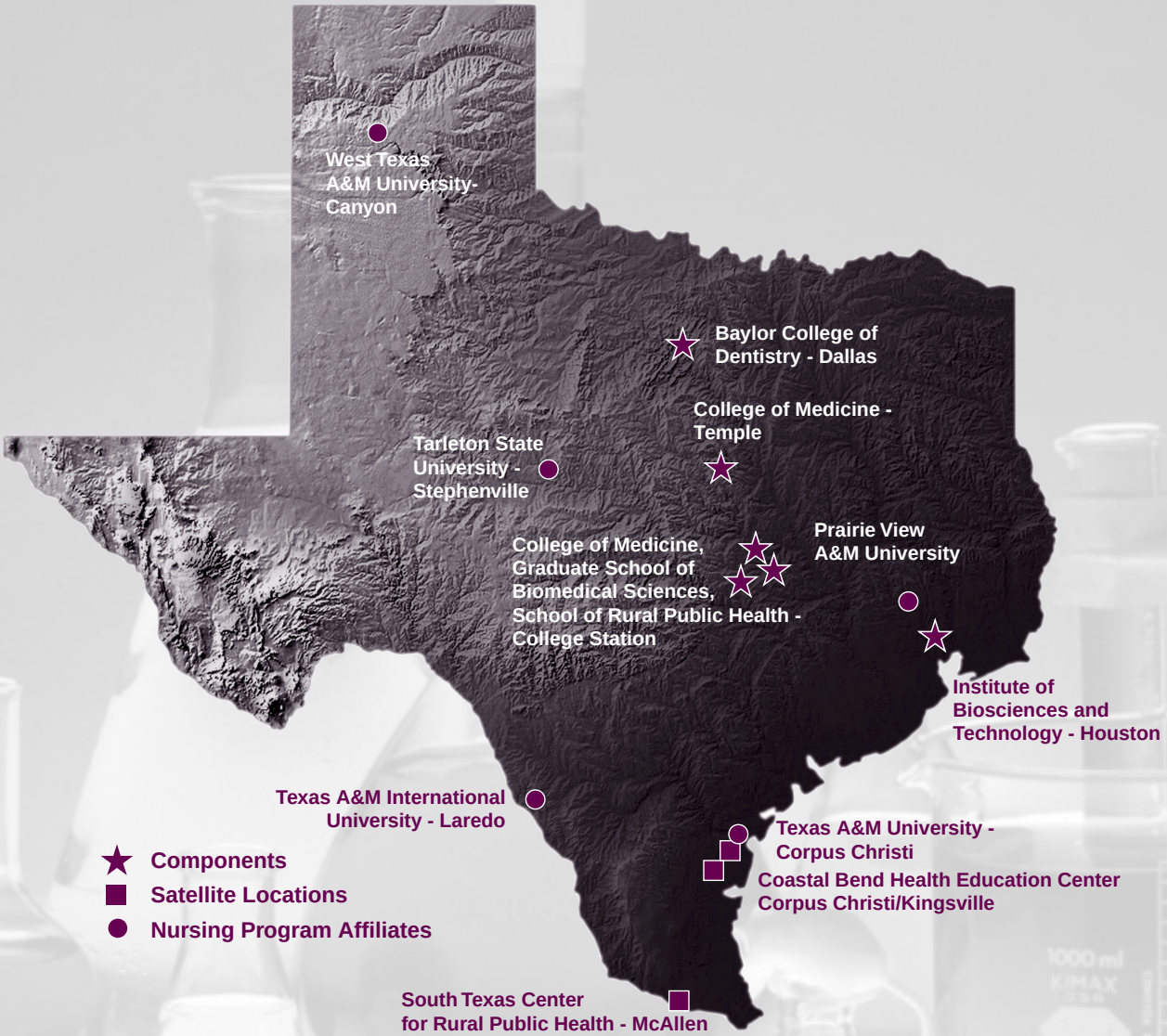
Institute of Biosciences and Technology

School of Rural Public Health

2001-2003 Catalog

The Texas A&M University System Health Science Center

Volume II



2001-2003 Catalog

THE TEXAS A&M UNIVERSITY SYSTEM 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	Nov. 1	Fall		D.D.S.	Office of Admissions and Academic Records BCD	P.O. Box 660677 Dallas, TX 75266-0677
Advanced 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. Prosthodontics	M.S./ Certificate M.D./ Certificate or Certificate	Office of Research and Advanced Education 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 Admissions and Academic Records , 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 Admissions and Academic Records, 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 Advanced Education or Department of Biomaterials Science BCD	P.O. Box 660677 Dallas, TX 75266-0677
Health Professions Education	2 yrs.	B.S., 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 Advanced Education BCD	P.O. Box 660677 Dallas, TX 75266-0677
Oral Biology (with associated speciality 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 Advanced Education or Specialty Department BCD	P.O. Box 660677 Dallas, TX 75266-0677
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	Human Anatomy & Neurobiology, Medical Biochemistry & Genetics, Medical Microbiology & Immunology, Medical Physiology & Microcirculation, Pathology & Laboratory Medicine, Pharmacology & Toxicology, Molecular and Cellular Biology	M.S. Ph.D.	Office of the Dean Graduate School of Biomedical Sciences	009 Medical Sciences Library College Station, TX 77843-1114

GRADUATE SCHOOL OF BIOMEDICAL SCIENCES (continued)								
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
Biomedical Sciences Master of Science Doctor of Philosophy	2-6 yrs.	D.D.S. degree and dental specialty training, B.S. degree in scientific discipline, competitive academic history and references	No set date	Fall	M.S.; Anatomy, Molecular and Cellular Biology, Neurosciencs, Microbiology / Immunology, Physiology / Pharmacology Ph.D.; Craniofacial Biology, Stomatology	M.S. Ph.D.	Office of Research and Advanced Education 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 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 Advanced Education or Department of Biomedical Sciences BCD	P.O. Box 660677 Dallas, TX 75266-0677
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	May 30	Fall	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	3000 Briarcrest Dr., Suite 300 Bryan, TX 77802-3000

THE TEXAS A&M UNIVERSITY SYSTEM
STUDENT TUITION AND FEES CHARGED BY THE HEALTH SCIENCE CENTER
FOR THE FALL 2001 SEMEMSTER

	BAYLOR COLLEGE OF DENTISTRY (Fee/Per)	COLLEGE OF MEDICINE (Fee/Per)	GRADUATE SCHOOL OF BIOMEDICAL SCIENCES AND SCHOOL OF RURAL PUBLIC HEALTH (Fee/Per)
TYPE OF FEE			
MATRICULATION FEE Legislative Maximum Allowed - $15.00 Statutory Authority 54.006 (a).	$15.00		
INSTALLMENT TUITION HANDLING FEE **INSTALLMENT TUITION DELINQUENCY FEE** Legislative Maximum Allowed - Cost of Service Statutory Authority 54.007(b).		$15.00/sem	$15.00/sem
GRADUATE TUITION Legislative Maximum Allowed - At least equal to but not more than twice the following minimum rates: Resident $42.00 per sch, $120.00 minimum; Nonresident: $253.00 per sch, subject to change each January by the Texas Higher Education Coordinating Board. Statutory Authority 54.008.	$84.00/res-sch $253.00/nr-sch		$84.00/res-sch $253.00/nr-sch
TUITION			
STATUTORY AND DESIGNATED TUITION ***Statutory*** General Academic. Legislative Maximum Allowed - Resident - $42.00 per sch, $120.00 minimum per semester or 12-week summer session, $60.00 minimum per 6-week summer term. Nonresident - $253.00 per sch, subject to change each January by the Texas Higher Education Coordinating Board. Statutory Authority 54.051(c),(d) and 54.0512. ***Designated*** Statutory Authority 54.0513 Legislative Maximum Allowed - $42.00 per semester credit hour for the 2001-2002 academic year. Public hearing required to increase rate.	# $84.00/res-sch $295.00/nr-sch		# $84.00/res-sch $295.00/nr-sch

TUITION (continued)			
M.D. DEGREE PROGRAM ***Statutory*** Resident - $6,550.00 per academic year; Nonresident - $19,650.00. Statutory Authority 54.051(f). ***Designated*** Statutory Authority 54.0513 Legislative Maximum Allowed- $42.00 per semester credit hours for the 2001-2002 academic year. Public hearing required to increase rate.		$6,790.00/res-aca.yr. $19,890.00/nr-aca.yr.	
D.D.S. DEGREE PROGRAM ***Statutory*** Resident - $5,400.00 per academic year; Nonresident - $16,200.00. Statutory Authority 54.051(g) and 54.051(h). ***Designated*** Statutory Authority 54.0513 Legislative Maximum Allowed- $42.00 per semester credit hours for the 2001-2002 academic year. Public hearing required to increase rate.	$6,660.00/res-aca.yr. $17,460.00/nr-aca.yr.		
LABORATORY FEES Legislative allowance: not less than $2 nor more than $30.00 for one semester or summer term in any one course, not to exceed actual cost of materials. Approval by President. Statutory Authority 54.501.	$30.00/sem-dental hyg. $30.00/sem-dental 1, 2, 3 & 4 yr.	$2.00 to $30.00	$2.00 to $30.00
GENERAL PROPERTY DEPOSITS Legislative Maximum Allowed - $10.00 per semester, $30.00 per semester in the College of Medicine. Statutory Authority 54.502.	$10.00/student	$10.00/student	$10.00/student
STUDENT SERVICES - COMPULSORY Statutory Authority 54.503 Collected to cover cost of Student Services. Maximum $150.00 per semester. Requires input to President from Student Fee Advisory Committee Statutory Authority 54.5031.	# $37.50/sem	# $11.62/sch $139.44/max $69.72/sum max	# $11.62/sch $139.44/max $69.72/sum max
SHUTTLE BUS FEE		$55.00/sem	$55.00/sem
INCIDENTAL FEES **Statutory Authority 54.504**			
APPLICATION FEE	$35.00/applic./nr $25.00/reapplic./nr	$45.00/applic.	$50.00/applic.
BINDING, COLLATING, MICROFILMING THESES AND DISSERTATIONS			$95.00/M.S. each $155.00/Ph.D. each
COMPUTER ACCESS/ COMPUTER USE	# $7.50/sch	# $8.25/sch-f/s $4.13/sch-sum	# $8.25/sch-f/s $4.13/sch-sum
COURSE AUDIT FEE	$84/sch - dental hyg. $126.00/sch - dental & grad.		
DIPLOMA/GRADUATION FEE	$75.00		

INCIDENTAL FEES (continued) Statutory Authority 54.504			
GRADUATE RECORD EXAMINATION			$6.50/each
ID CARD SECURITY SYSTEM	# $15.00/one-time only $20.00/replacement	# $5.00 initial card $12.00/replace $3.00/sem. $1.50/5 week sum1	# $5.00 initial card $12.00/replace $3.00/sem. $1.50/5 week sum1
INSTRUMENT MANAGEMENT FEE	$97.50/sem-dental hyg. $97.50/sem-dental 2,3&4 yr.		
DISTANCE EDUCATION FEE			$50.00/sem
INTERNATIONAL STUDENT APPLICATION FEE			$75.00/applic.
INTERNATIONAL STUDENT FEE	$31.50/sem		$32.00/sem $32.00/sum
KEY DEPOSIT		$1.00/sem.	$1.00/sem.
LATE PAYMENT OF TUITION FEES	$25.00	$20.00/late payment	$20.00/late payment
LATE REGISTRATION		$100.00/on/after 1st.d. $200.00/aft.offic.rpt.d. $50.00/late add fee-for course added after official rptg. date if net incr.in hrs. results	$100.00/on/after 1st.d. $200.00/aft.offic.rpt.d. $50.00/late add fee-for course added after official rptg. date if net incr.in hrs. results
LIBRARY ACCESS FEE	$4.50/sch	# $6.00/sch	# $6.00/sch
MICROSCOPE RENTAL		** $75.00/year	
REINSTATEMENT FEE		$50.00	$50.00
RETURNED CHECK	$25.00/each	$25.00/each	$25.00/each
SKULL RENTAL FEE	$25.00/one-time dental 1 yr.		
SUMMER CLINIC FEE	$275.00 - dental 3&4 yr.		
TRANSCRIPT FEE	$5.00/transcript	$5.00/reg/each $2.00/fin/each	$5.00/reg/each $2.00/fin/each
VEHICLE, PARKING, TRAFFIC Parking Fees. Statutory Authority 54.505.	Students $67.50/sem	$125.00/ 9 months	$125.00/9 months
GROUP HOSPITAL FEES Legislative Maximum Allowed - $75.00 per long semester and $20.00 per summer session. Statutory Authority 54.521.	$49.88/sem $13.30/sum Health Clinic Only	# $50.00/f/s sem $25.00/sum	# $50.00/f/s sem $25.00/sum
STUDENT CENTER COMPLEX FEES Legislative Maximum Allowed - $75.00 per long semester; $25.00 per summer session. Statutory Authority 54.521.		# $30.00/f/s sem $15.00/sum	# $30.00/f/s sem $15.00/sum

INCIDENTAL FEES (continued) Statutory Authority 54.504			
RECREATIONAL SPORTS FEE Legislative Maximum Allowed - $50.00 per long semester or 12-week summer semester. Assessed when facility available for use. Statutory Authority 54.539.		# $50.00/f/s sem $25.00/sum	# $50.00/f/s sem $25.00/sum
INTERNATIONAL EDUCATION FEE Legislative Maximum Allowed - $1.00 per semester. Statutory Authority 54.5132.		# $1.00/sem	# $1.00/sem
MEDICAL LIABILITY INSURANCE FEE	$50.00/yr dental $30.00/yr dental hyg. $75.00/yr clinical graduates	$55.00/yr	

 # Compulsory fee
**** Incremental increase proviously approved by the Board of Regents**
qch = quarter credit hour; sch = semester credit hour; sem = semester
res = resident; nr = nonresident; sum = summer session

Baylor College of Dentistry

2001-2003 Catalog

Baylor College of Dentistry

P.O. Box 660677
Dallas, Texas 75266-0677
214-828-8100
http://www.tambcd.edu

Table of Contents

Administrative Structure

Officers of Administration

James S. Cole, D.D.S.	Dean
Charles W. Berry, Ph.D.	Associate Dean, Academic Services
David S. Carlson, Ph.D.	Interim Associate Dean, Research and Advanced Education
Cindy W. Ceen	Assistant Dean, Administration
D. William Harman, B.M.E., M.A., M.A., Ph.D.	Associate Dean, Student and Alumni Services
Thomas K. Hasegawa Jr., D.D.S., M.A.	Associate Dean, Clinical Services
Susan Mitchell Jackson	Executive Director, Communications and Development
Juanna S. Moore, CPA	Associate Dean, Business Services

Academic, Student and Alumni Support Services

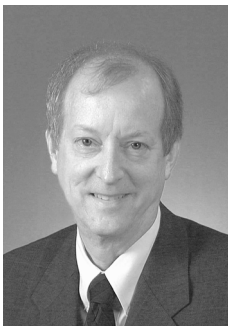
Moira Allen	Director, Student Affairs
Charles J. Arcoria, D.D.S.	Interim Director, Continuing Education
Leeanna Bartlett, M.Ed.	Director, Social Services
Marty Baylor	Director, Financial Services
Ernestine Brooks, M.A., D.D.S.	Director, Student Development, Student Services
Kay Egbert	Director, Student Aid, Student Services
Tommy W. Gage, D.D.S., Ph.D.	Director, Curriculum, Academic Services
Jack L. Long, D.D.S.	Director, Admissions and Academic Records, Student Services
Ann McCann, M.S.	Director, Assessment, Academic Services
Janet Reinwald	Director, Media Resources
Emet D. Schneiderman, M.A., Ph.D.	Executive Director, Information Technology Services
Cindy Scroggins, M.L.S.	Director, Library
Claude R. Williams, D.D.S.	Director, Community Outreach Services, Student Services
Lanelle Watkins	Assistant to the Dean, Office of the Dean

Department Chairs

Rolf G. Behrents, D.D.S., M.S., Ph.D.	Orthodontics
William H. Binnie, B.D.S., M.S.D.	Diagnostic Sciences
David S. Carlson, 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
Daniel L. Jones, D.D.S., Ph.D.	Public Health Sciences
Amp W. Miller, III, D.D.S. (acting)	Restorative 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/Pharmacology

Dean's Biography

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



In August 2000, Dr. James S. Cole was appointed dean of Baylor College of Dentistry after serving as its interim dean since December 1999. At that time, Cole had been on a leave of absence from the college from 1997 to 1999 to serve as president and treasurer of the Baylor Oral Health Foundation on a full-time basis. Since October 2000, he also has served as interim president of The Texas A&M University System Health Science Center after serving as senior adviser to the HSC president since March 1999.

Prior to his leave of absence, Cole served as the college's chief operating officer, chief financial officer and vice dean for a total of 11 years, guiding all administrative, fiscal, legal and corporate matters. In 1990, Cole, then vice president and director of computer services at BCD, assumed the additional responsibilities of serving as the college's interim president and dean for six months. Later that year, Cole was promoted to executive vice president/associate dean.

Cole first joined the college faculty in 1977 as an instructor in restorative sciences, then in 1981 accepted 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., Cole has lived in Texas for the past 50 years. After graduation from Stephen F. Austin State University in 1967, Cole served in the Navy, reaching the rank of lieutenant before his discharge in 1971. He went on to earn his doctor of dental surgery degree from Baylor College of Dentistry in 1975, and maintained a private practice before joining the BCD faculty.

Cole is a member of the American College of Dentists and the International College of Dentists. In May 1999, Cole 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. In May 2001, the Texas Legislature honored Cole for his outstanding accomplishments in academia. State Rep. Tony Goolsby of Dallas introduced the resolution, which commended Cole for his achievements in dental education.

Academic Calendar

	Academic Calendar 2001-2002
June 11-15	Registration and payment of fees for Summer Clinic for current students
June 18	Monday, SUMMER CLINIC BEGINS
June 18	Monday, QA/RM Program (D3-D4 & DH2) Clinics closed from 1-4:30 p.m.
July 2	Monday, Orientation, registration and payment of fees for entering graduate students
July 2	SUMMER GRADUATE QUARTER BEGINS
July 3	Tuesday, Graduate core courses begin
July 4	Wednesday, Independence Day Holiday
July 9-10	Monday, 9 a.m., National Board Exam Part I
July 27	Friday, SUMMER CLINIC ENDS
July 31	Tuesday, Noon, Summer quarter grades due for dental and dental hygiene courses
August 13-17	Registration and payment of tuition and fees for fall semester, graduate students
August 17	Friday, SUMMER GRADUATE QUARTER ENDS
August 13-16	Monday, Tuesday, Wednesday and Thursday 8:30 a.m., Orientation, registration and payment of tuition and fees for fall semester dental and dental hygiene students August 13 - First-year dental registration and payment of tuition and fees August 15 - Third- & fourth-year dental and junior/senior dental hygiene registration and payment of tuition and fees August 16 - Second-year dental registration and payment of tuition and fees
August 20	Monday, 8 a.m., FALL SEMESTER BEGINS
August 21	Tuesday, Noon, Summer graduate grades due
September 3	Monday, Labor Day Holiday
November	Faculty Advance, All Day (date to be announced)
November 19-23	Fall Semester Recess
November 22	Thursday, Thanksgiving Day Holiday
December 3-4	Monday and Tuesday, 9 a.m., National Board Exams Part I & II, second- and fourth-year students
December 7	Last day to submit final approved copies of thesis
December 14	Friday, FALL SEMESTER INSTRUCTION ENDS
December 17-21	Fall semester examination period
December 21	Friday, 5 p.m., Holiday recess begins
December 22	Award M.S. and Ph.D. degrees
December 25	Tuesday, Christmas Day Holiday
January 1	Tuesday, New Year's Day Holiday
January 3	Thursday, Fall semester grades due
January 7-11	Registration and payment of tuition and fees for Spring Semester
January 14	Monday, 8 a.m., SPRING SEMESTER BEGINS
January 21	Monday, Dr. Martin Luther King Jr. Day Holiday
March 4-8	Spring semester recess
March 25-26	National Board Exams Part II and Dental Hygiene
April	Student Research Day, clinic closed for dental and dental hygiene (date to be announced)
May 10	Friday, Noon, Grades due for graduating students
May 10	Last day to submit final approved copies of thesis

May 14	Tuesday, p.m., Graduation announcement for graduating students
May 17	Friday, 5 p.m., SPRING SEMESTER INSTRUCTION ENDS
May 20-24	Spring semester examination period (except graduating students)
May 24	Friday, GRADUATE SEMESTER ENDS
May 22	AWARDS CEREMONY
May 23	GRADUATION EXERCISE
May 27	Monday, Memorial Day Holiday
May 29	Tuesday, Noon, Spring semester grades due for all other students

Academic Calendar 2001-2002

June 3-7	Registration and payment of fees for Summer Clinic for current students
June 10	Monday, SUMMER CLINIC BEGINS
June 10	Monday, QA/RM Program (D3-D4 & DH2) Clinics closed from 1-4:30 p.m.
July 1	Monday, Orientation, registration and payment of fees for entering graduate students
July 1	SUMMER GRADUATE SESSION BEGINS
July 2	Tuesday, Graduate core courses begin
July 4	Thursday, Independence Day Holiday
July 15-16	Monday, 9 a.m., National Board Exams Part I
July 19	Friday, SUMMER CLINIC ENDS
July 23	Tuesday, Noon, Summer session grades due for dental and dental hygiene courses
August 12-16	Registration and payment of tuition and fees for fall semester, graduate students
August 16	Friday, SUMMER GRADUATE SESSION ENDS
August 13-16	Tuesday, Wednesday, Thursday and Friday, 8:30 a.m., Orientation, registration and payment of tuition and fees for fall semester dental and dental hygiene students August 13 - First-year dental registration and payment of tuition and fees August 15 - Third- and fourth-year dental and junior/senior dental hygiene registration and payment of tuition and fees August 16 - Second-year dental registration and payment of tuition and fees
August 19	Monday, 8 a.m., FALL SEMESTER BEGINS
August 20	Tuesday, Noon, Summer graduate grades due
September 2	Monday, Labor Day Holiday
November	Faculty Advance, All Day (to be announced)
November 25-29	Fall Semester Recess
November 28	Thursday, Thanksgiving Day Holiday
December 2-3	Monday and Tuesday, 9 a.m., National Board Exams Part I & II, second- and fourth-year students
December 6	Last day to submit final approved copies of thesis
December 13	Friday, FALL SEMESTER INSTRUCTION ENDS
December 16-20	Fall Semester examination period
December 20	Friday, 5 p.m., Holiday recess begins
December 21	Award M.S. and Ph.D. degrees
December 25	Wednesday, Christmas Day Holiday

January 1	Wednesday, New Year's Day Holiday
January 3	Friday, Noon, Fall semester grades due
January 6-10	Registration and payment of tuition and fees for spring semester
January 13	Monday, 8 a.m., SPRING SEMESTER BEGINS
January 20	Monday, Dr. Martin Luther King Jr. Day Holiday
March 10-14	Spring semester recess
March	National Board Exams Part II and Dental Hygiene (not available at time by ADA)
April	Student Research Day, clinic closed for dental and dental hygiene (date to be announced)
May 9	Last day to submit final, approved copies of thesis or dissertation for next award date
May 9	Friday, Noon, Grades due for graduating students
May 13	Tuesday, p.m., Graduation announcement for graduating students
May 16	Friday, 5 p.m., SPRING SEMESTER INSTRUCTION ENDS
May 19-23	Spring semester examination period (except graduating students)
May 23	Friday, GRADUATE SPRING SEMESTER ENDS
May 23	AWARDS CEREMONY
May 24 or 25	GRADUATION EXERCISE
May 26	Monday, Memorial Day Holiday
May 28	Wednesday, Noon, Spring semester grades due for all other students

DENTISTRY

History

Baylor College of Dentistry traces its beginnings to the State Dental College, a dental educational institution chartered by the state of Texas in 1905. 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 University System Health Science Center on Jan. 1, 1999.

Mission Statement

The mission of 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.

Goals

Baylor College of Dentistry is committed to:

1. Providing educational programs that foster professionalism, critical thinking and lifelong learning.
2. Providing quality care in an environment that is sensitive to the needs of every patient.
3. Expanding the scientific knowledge base underlying the etiology, progression, prevention and treatment of dental and craniofacial disorders.
4. Collaborating with HSC components and community partners to conduct outreach programs for the benefit of our citizens.
5. Recruiting, retaining, and developing the highest quality faculty, staff and students in an environment that values lifelong collegial relationships.
6. Improving the financial, physical and information technology resources that support the goals of the college.

Purpose

Baylor College of Dentistry is an institution dedicated to: (1) nurturing excellence in the education of students to enter the professions of dentistry and dental hygiene; (2) offering advanced educational programs in dentistry, dental hygiene, health professions education and the basic sciences; (3) providing a broad spectrum of oral health care education and service to the public; (4) offering a wide range of service and educational programs to the practicing profession; and (5) conducting research to enhance scientific understanding and expansion of knowledge in the biomedical and clinical sciences, with emphasis on the diagnosis, prevention and treatment of oral diseases. The college is nonsectarian and adheres to the principles of affirmative action and equal opportunity

BCD is committed to a leadership role in academics through creative curricular development, while acknowledging, recruiting and accommodating a diverse student body. The academic programs in the basic biomedical and clinical sciences are expected to provide a responsive environment that challenges and guides the students toward excellence in their quest for knowledge, motivates them to perform at a level commensurate with their potential, develops a profound sense of ethical concern and responsibility for others and instills in the students the spirit of an interdisciplinary/multidisciplinary approach to education, research, treatment and lifelong learning. The college is further committed to conducting outstanding graduate and postgraduate programs to provide advanced educational experiences in general dentistry, the dental specialties, dental hygiene, health professions education and the basic sciences.

Baylor College of Dentistry is committed to an environment of inquiry that encourages the collegial free exchange of ideas and stimulates faculty and students at all levels to pursue new scholarly activities. The publication of research results and advances in teaching methodologies is expected of faculty and encouraged for students, making new information

available for improvement of both the curriculum and clinical practice. Further, the college is committed to providing leadership in dental education and research at national and international levels.

BCD is committed to serving the public through its clinical and community programs by providing the highest level of oral health education and care consonant with the educational objectives of the college. Additionally, the college provides service to dental professionals as well as opportunities to broaden their knowledge and skills through continuing education programs offering the latest advances in science and technology for rapid transfer of technological and scientific advancements to the practicing community and thus to the public.

Educational Philosophy of the Predoctoral Program

The predoctoral experience at 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 judgement 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 each student. 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.

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

Baylor College of Dentistry, a component of The Texas A&M University System Health Science Center, is located in Dallas.

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 new Dallas Area Rapid Transit system. The Dallas/Fort Worth International Airport, with many major and feeder airline connections, is the busiest air terminal in the nation. Airline connections also can be made at nearby Love Field.

Baylor College of Dentistry 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 renovated 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 also is the location of Baylor University Medical Center with its five hospitals, together with other health care units. Baylor College of Dentistry is within the medical center complex, although it is a separately operated, autonomous campus of The Texas A&M University System Health Science Center.

Correspondence may be directed to the following addresses:

Baylor College of Dentistry
The Texas A&M University System 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 Baylor College of Dentistry web site at www.tambcd.edu.

Facilities

The physical facilities of 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, BCD is renovating a newly acquired building that will add 16,000 square feet to the existing campus. Occupation is planned for summer 2002.

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.

Preclinic and basic science laboratories give students valuable hands-on experience with lecture and textbook concepts. 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 increasing use of research facilities in independent studies and as part of teams comprised of both basic science and clinical investigators.

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

- Dean
- Associate Dean, Academic Services
- Associate Dean, Student Services
- 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 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.

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 volumes and 600 current journal titles. 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, HealthSTAR, CINAHL, ABI/Inform, ERIC, Periodical Abstracts and more than 1,500 full-text, on-line journals.

Instructional Computer Laboratory

The Instructional Computer Laboratory 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 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, ICL is available for self-directed learning using computer-aided instruction and other audiovisual materials. Many of the materials have been developed by 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 audiovisual materials, course manuals, publications, exhibits, table clinics and computer-assisted instruction programs. Assistance to students and faculty is available for table clinic presentations, research project posters, slide presentations and other college-related presentations.

Office of Communications and Development

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

Alumni Association

The Baylor College of Dentistry Alumni Association is a nonprofit organization comprising all dental, dental hygiene and postgraduate alumni and friends of the college. The association's purpose is to unite the alumni and friends of Baylor

College of Dentistry 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 six recognized levels of annual financial contributions to the association:

Ambassadors Club	$10,000 or more
Bradley's Club	$5,000
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 and Distinguished Alumni Award. 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.

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.

Admissions

Required Courses

A minimum of 60 semester hours is required for application. 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 (16-20 hours recommended)	8

In order to meet the minimum application requirement of 60 semester hours, students are permitted to major in the field of their choice. Some courses that have proven advantageous include biochemistry, anatomy, physiology, embryology, histology, psychology, sociology, business management, speech, foreign language, reading improvement, mechanical drawing and statistics. 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 and the only role of Baylor College of Dentistry is to provide the necessary transcripts.

BCD has affiliation agreements with several universities and colleges that accelerate entry into the first year of dental school. These cooperative arrangements allow a competitive selection of students with excellent academic backgrounds to enter a three-year program leading to acceptance to BCD.

Additional information may be accessed at the Admissions web page of Baylor College of Dentistry's web site at www.tambcd.edu/admissions/admissions.html.

Dental Admission Test

Applicants are required to complete the American Dental Association Admission Test with an acceptable score. Computer administration of the DAT is offered at your convenience through Sylvan Technology Center. A brochure explaining this testing program and an application for taking the test may be obtained from the Office of Admissions and Academic Records. Links to practice tests and additional information can be accessed at www.tambcd.edu/admissions/dental/FAQ/faq.html. It is highly desirable that this test be taken prior to submitting the application so test scores will be available to the Admissions Committee when the application is processed.

Procedure for Making Application

Baylor College of Dentistry participates in the Texas Medical and Dental Schools Application Service. 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 School Application Service for out-of-state students only. Applicants to other programs of Baylor College of Dentistry should contact the Office of Admissions and Academic Records. To apply to the program leading to the D.D.S. degree, the applicant should:

- Access full information and the on-line application at the web site for
  The Texas Medical and Dental Schools Application Service
  702 Colorado, Suite 6.400
  Austin, Texas 78701
  http://dpweb1.dp.utexas.edu/mdac/homepage.htm
- 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 Nov. 1 in year prior to desired admission.**
- Application Fees:
  TMDSAS has a variable fee based upon the number of schools for which you apply.
  Baylor College of Dentistry 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 on-line 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 web site. Processing time from submission to mailing is approximately 15 working days and may be longer during the peak period from Sept. 15 to Nov. 15.

Baylor College of Dentistry requires the submission of a secondary application in addition to the primary application. This application can be accessed from links while completing the on-line 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 Admissions and Academic Records
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 Baylor College of Dentistry, please enclose a self-addressed, stamped postcard.

To receive verification of receipt of materials at TMDSAS, check the policy published on its web site.

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 Admissions and 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 Admissions and Academic Records.

Bases for Acceptance

All applicants for admission will be considered without regard to race, color, creed, religion, national origin, sex or age. Qualified handicapped persons, capable of meeting the academic and technical standards essential to participation in the program, will receive equal consideration. The quality of scholarship is the first point of consideration. The grade point average and the Dental Admission Test 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:

- 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 secondary application is required from all applicants. This allows applicants to supply additional information about their background or factors that may have impacted their personal or academic progress. Included in these are the applicants' preparation for undergraduate studies, employment history while attending college, family educational background, leadership experience and potential for service in an area recognized as underserved by the dental profession.

Applicants will be notified of acceptance after Dec. 1 of the year prior to matriculation.

Interviews

- Processing of applications begins in May and the procedure continues until the class is filled. 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 noncognitive 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 Admissions and Academic Records and are conducted from September through January. Although an official interview is not granted to all applicants, BCD 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.

Transfer Students to the D.D.S. Curriculum

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. Transfer students are considered only in unusual circumstances.

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 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 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 veteran's benefits.

Detailed information about student aid and veteran 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 BCD. Required immunizations are included with the physical examination form.

Expenses

Tuition

The tuition for students in Baylor College of Dentistry is recommended by the administration and is set by the Texas Legislature. BCD administration sets fees within guidelines specified by the Legislature. There may be adjustments as economic conditions warrant. The following fees apply for the 2001-2002 academic year.

Resident, per semester 2001-2002	$3,330.00/semester
Nonresident, per semester 2001-2002	$8,730.00/semester
Designated tuition	$42.00/semester hour
Summer clinic fee	
(D.D.S. 3rd- & 4th-year students)	$275.00/summer session
Individual courses	
Undergraduate	
Resident	$84.00/semester hour
Nonresident	$295.00/semester hour
Graduate	
Resident	$84.00/semester hour
Nonresident	$253.00/semester hour
Audit fee	
Dental and graduate	$126.00/semester hour
Dental hygiene	$84.00/semester hour

*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 Baylor College of Dentistry. 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. For the fall semester, this would be the 52nd class day or later. For the spring semester, this would be the 55th class day or later. For the summer session, this would be the 19th class day or later. 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” shall include charges for tuition, designated tuition, health clinic, activity and parking fees (parking is the only optional fee). Other refundable charges include new textbooks and instruments and materials deemed returnable to the manufacturer and that will be required on subsequent years' book or instrument lists. Instruments and materials must be returned within 20 days following the date of the student's withdrawal. 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 director of admissions and academic records of the college.

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. Federal SLS Loan
2. Unsubsidized Federal Stafford Loan
3. Subsidized Federal Stafford Loan
4. Federal PLUS Loan
5. Federal Direct Stafford Loan
6. Federal Direct PLUS Loan
7. Federal Perkins Loan
8. Federal Pell Grant
9. FSEOG
10. Other Title IV Aid Programs
11. Other federal sources of aid
12. Other state, private or institutional aid
13. The student

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; The Texas A&M University System Health Science Center; Director of Admissions and Academic Records; 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)	$35.00
Reapplication (not refundable)	$25.00
Admission Deposit:	
Payable upon notification of acceptance as a student (not refundable if student does not enroll)	
Applied to the tuition	$200.00
International Student Fee	$31.50/semester
Computer Use Fee	$7.50 / semester hour
Library Access Fee	$4.50 / semester hour
Matriculation	$15.00 one-time fee
General Property Deposit	$10.00 one-time fee
Graduation:	
Payable at the beginning of the semester preceding graduation	$75.00 one-time fee
Identification Card:	
Issued by the Office of Admissions and Academic Records	
Required of all enrolled students	$15.00 one-time fee
Replacement Card	$20.00
Group Hospital Fee	$49.88/semester
Group Hospital Fee	$13.30/summer
Student Services	$37.50/semester
Parking	$60-$75/semester
Duplicate Diploma	$35.00
Lost Keys:	
Each replacement	$5.00
Returned Check:	
Assessed for each check returned from the bank	$25.00
Transcript:	
Incomplete copy (before degree) for grade report use, each copy	$5.00
Complete copy (after degree) first copy free, each subsequent copy	$5.00
Late Registration	$25.00
Laboratory Fee	$30.00/semester

Instrument Management Fee	$97.50/semester
Skull Rental Fee (first year, first semester only)	$25.00 one-time fee
Dental Malpractice Insurance Fee	
Dental	$50.00/year
Dental Hygiene	$30.00/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 30 days from the day classes begin. The student is automatically suspended from school if the tuition and fees have not been paid within 30 days after classes begin.

Books, Equipment and Supplies

Each student is required to purchase new textbooks and instruments as indicated by the official school lists. They are secured at the school on the day of registration and become the personal property of the student. 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 estimated cost of books, instruments and supplies for the complete curriculum is listed below. Scrubs are required but are not a part of the estimated cost. Students treating patients are required to undergo Hepatitis vaccinations. The series of vaccinations are offered to students at a reduced cost. The initial Hepatitis cost is approximately $120; the 12-month retest cost is $13.50. The total estimated cost less tuition is:

First Year (D1)	$9,686.47
Second Year (D2)	$10,220.97
Third Year (D3)	$3,176.00
Fourth Year (D4)	$2,734.61
Total	$25,818.07

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

Baylor College of Dentistry participates in several types of loan and scholarship programs. A needs-analysis system approved by the federal government is used to evaluate the need for financial aid. The college uses the Free Application for Federal Student Aid for this purpose. A parental contribution factor based on family resources is considered for the Health Professions Loan Program, scholarships and grants. 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.
- 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 students who are applying for need-based grants and scholarships.
- Merit scholarships, which are 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 who marries, separates, receives outside scholarships).

Graduating students who have received loans and scholarships must have an exit interview during May. Graduates must inform the lender of address changes during the repayment period for 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

Baylor College of Dentistry awards academic scholarships to entering first-year students in the program leading to the doctor of dental surgery degree. These scholarships are open to resident and nonresident students, and are based on the previous undergraduate academic record as indicted by grade point averages that document the history of accomplishment in all coursework 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 Admissions. Nonresident 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.

Health Services

Routine medical services are provided for students in order to help maintain good health standards. Serious medical problems that cannot be managed in the health clinic will be referred elsewhere. These referral services are not covered by the health clinic fee. A student health insurance plan is available on an optional basis. We encourage students to secure health insurance coverage. Dental services are available in the college's clinics.

Housing

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

Security

Information concerning campus security and crime statistics is available from the Office of Student and Alumni Services or directly from the Security Office of Baylor College of Dentistry. The college publishes these statistics on its web site 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. BCD is pleased to supply this information upon request.

Diversity Education

Welcoming Diversity Workshops, based on the model from the National Coalition Building Institute, are offered during freshman orientation and regularly throughout the school year to students, staff, faculty and administrators. The workshop is an interactive, nonconfrontational format for creating greater harmony and closer working relationships through the understanding and acceptance of self and others. The goal is to generate an atmosphere of community where both learning and patient treatment are enhanced. Upon request, Welcoming Diversity Workshops also are facilitated for community organizations.

During the year, expert speakers present diversity education sessions at noon. The annual Festival of Cultures is a weeklong celebration that includes speakers, entertainment, an ethnic potluck lunch and an all-college talent show.

Student Organizations

The following groups are registered as student organizations in the Office of Student Services.

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 BCD on the Council of Students.

American Society of Dentistry for Children

The American Society of Dentistry for Children 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

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. Two delegates to the association are elected to represent 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 help oral health care students establish relations with other local health professionals.

Athletics and Fitness

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

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 joint 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 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 missions trips to provide medical and dental care to selected villages in Latin America. CMDS membership at 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 the 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 Student Association

This association serves as an umbrella organization for student organizations deriving from and serving the interests of students of The Texas A&M University System Health Science Center. It represents the health science center’s student body and is a voice for each campus. One dental, one dental hygiene and one graduate student represent BCD in this organization.

Hispanic Dental Association

All dental and dental hygiene students are eligible for membership in the Hispanic Dental Association. The organizations’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 early in their dental careers to work with faculty members on research projects, which is facilitated through the student research chapter of the American Association for Dental Research. Research is an integral component of quality dental education.

At Baylor College of Dentistry, postdoctoral students are required to complete a research project as part of their academic experience. Predoctoral dental and dental hygiene students are encouraged and given every opportunity to become involved in research. Research fellowships are granted to predoctoral dental and dental hygiene students whose written proposals are approved by BCD’s Research Committee. Students have the opportunity to present their research findings at the annual Table Clinic 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 is an organization open to all students, faculty, employees and individuals who desire to grow spiritually and professionally, and 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 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 the 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; coordinate, evaluate and present suggestions about problems that may arise in the laboratories and clinics; and propose any change that might result in mutual improvement for 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 BCD Chapter of the Texas Association of Women Dentists 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 University System Health Science Center administration to supplement system policies and regulations. The dean, associate dean for academic services, associate dean for student and alumni services, 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: The A&M System and HSC policies and/or regulations have preeminent authority over the components' 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. 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.

Dress Code

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 the dress code are available from the Office of Student Services at BCD.

Conduct

It is the policy of 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, not withstanding 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

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. 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 the Associate Dean for Student and Alumni Services.

Individuals who believe they have experienced harassment or illegal discrimination are encouraged to contact the appropriate office. Students should contact BCD’s Office of the Associate Dean for Student and Alumni Services.

Due Process

The right for students to be heard in academic and disciplinary matters has been ensured by the guidelines in 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 Services at the college.

Drug and Alcohol Abuse

Baylor College of Dentistry has established a drug and alcohol 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 Baylor College of Dentistry 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 Baylor College of Dentistry. 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 Drug Abuse Education document may be obtained from the Office of Student and Alumni Services.

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 Admissions and Academic Records at 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 admissions and 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. 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 office of Baylor College of Dentistry, including:

- Office of Academic Services
- Office of Admissions and Academic Records
- Business Office
- Office of Clinical Services
- College Health Clinic
- 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 Admissions and 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

Grading System

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 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 removed in the academic semester following termination of the course, or the termination of the part of the course for which the grade was given. Any of the permanent grades may be earned.

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 rest with the faculty.

Student Grades

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

Dental: Office of Admissions and Academic Records
Dental Hygiene: Office of Admissions and Academic Records
Graduate: Department in which student is enrolled

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 and evaluates 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 reserve the right to 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 services, associate dean for student and alumni services and director of admissions and academic records will serve as advisory members. Voting membership is restricted to faculty who have served full-time at BCD for at least two years. No department may supply more than two members.

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 for that course. A minimum grade of C (75) is required to pass 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 grade point average 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 Baylor College of Dentistry:

1. The following conditions will result in dismissal of first-year dental students from Baylor College of Dentistry:
   - 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 Baylor College of Dentistry:
   - A student on academic probation for two consecutive semesters, excluding the summer semester, 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 Baylor College of Dentistry 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 Baylor College of Dentistry:

- 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 Services.

Requirements for Graduation

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

- Attained the age of 21
- Demonstrated evidence of satisfactory moral and professional conduct
- Satisfactorily completed all of the prescribed courses of study
- Attained the required grade point average
- Passed Parts I and II of the National Board Dental Examination
- Be certified by the faculty as approved for graduation
- 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 preclinical 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 Baylor College of Dentistry. The requirement for inclusion on the Dean's Honor List is to rank in the upper 20 percent of the class in overall academic performance for the year and to exhibit exemplary professional behavior. Dental and dental hygiene students included on the Dean's Cumulative Honor List must have achieved a cumulative grade point average 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 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 grade point average 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 20 competencies, organized by domain, define the objectives of the predoctoral program.

I. Professionalism
   1. Ethics: The new dentist must be able to discern and manage the ethical issues of dental practice.
   2. Information Management and Critical Thinking: The new dentist must be able to acquire and synthesize information in a critical, scientific and effective manner.

II. Assessment of the Patient and the Oral Environment
   3. Examination of the Patient: The new dentist must be able to perform an examination that collects biological, psychological and social information needed to evaluate the medical and oral condition for patients of all ages. This includes the ability to recognize and manage behavioral factors that affect oral health and use the information to implement strategies that facilitate the delivery of oral health care.
   4. Diagnosis: The new dentist must be able to determine a differential, provisional or definitive diagnosis by interpreting and correlating findings from the history, clinical and radiographic examination and other diagnostic tests.
   5. Treatment Planning: The new dentist must be able to develop, present and discuss individual treatment plans for patients of all ages consistent with the patient's condition, interest, goals and capabilities.

III. Establishment and Maintenance of a Healthy Oral Environment
   6. Prevention of Disease and Maintenance of Health: The new dentist must be able to provide care for patients of all ages that emphasizes prevention of oral diseases and supports the maintenance of existing systemic and oral health.
   7. Control of Pain and Anxiety: The new dentist must be able to employ techniques to manage orofacial discomfort and psychological distress.

8. Caries Management: The new dentist must be able to treat and manage caries in the primary, mixed and permanent dentitions.
9. Endodontic Therapy: The new dentist must be able to treat diseases of pulpal and periradicular origin in the primary, mixed and permanent dentitions.
10. Periodontal Therapy: The new dentist must be able to treat and manage periodontal disease in the primary, mixed and permanent dentitions.
11. Surgical Therapy: The new dentist must be able to evaluate, treat and manage conditions requiring reparative surgical procedures on the hard and soft tissues in patients of all ages.
12. Emergency Situations: The new dentist must be able to prevent and manage dental and medical emergency situations encountered in the practice of general dentistry.
13. Occlusal/TMD Therapy: The new dentist must be able to manage functional disorders of occlusal or non-occlusal origins.
14. Orthodontic Therapy: The new dentist must be able to manage developmental or acquired abnormalities in esthetics or occlusion.
15. Stomatology: The new dentist must be able to manage limited or common non-life-threatening oral mucosal diseases or disorders.

IV. Restoration of Form, Function and Esthetics

16. Restorative/Prosthodontic Therapy: The new dentist must be able to provide restorations and prostheses that are correct in anatomical form, comfortable and functionally effective, and that satisfy the esthetic requirements of the patient or legal guardian.

V. Health Promotion

17. Community Leadership: The new dentist must be able to assume a leadership role in improving the oral health of individuals, families and groups in the community.

VI. Practice Administration

18. Establishing a Practice: The new dentist must be able to develop and manage a general practice.
19. Office Systems: The new dentist must be able to use sound business principles in the administration of a practice.
20. Personnel Management: The new dentist must be able to perform as an effective employer and leader.

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 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.

Enhanced Program

The Enhanced Program is designed to ease the transition into professional school and provide students with additional learning experiences and skills. This program divides the traditional first-year curriculum, which is heavy in biologic sciences, into two years.

The Enhanced Program expands the total time in the predoctoral program to five years. Participants are considered to be full-time students even though the academic credit hour load is reduced. After completion of the Enhanced Program, students continue in the standard second-year curriculum.

All applicants who have been accepted into the first year of dental school are eligible for the Enhanced Program. However, there are limited places in this program. For more information contact the Office of Academic Services at Baylor College of Dentistry.

Summer Predental Enrichment Program

The Summer Predental Enrichment Program provides 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 designed to augment the students' knowledge base for

taking the Dental Admission Test. These courses are: Introduction to the Human Body, Introduction to Dental Sciences, Preclinical Dentistry, Learning Strategies, DAT Preparation and Cultural Competence. 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 mentors, including dental and dental hygiene 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.

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. Patient care is provided for patients with varied medical histories and infection control status, and includes children, adults, the elderly and those who are mentally or physically disabled.

A specialty clinic for the treatment of people with disabilities is provided by BCD to train students in many of the unique care requirements for patients with special needs. A stomatology clinic (which received an award from the American Dental Association) is the only one of its kind in the Southwest and receives referrals not only from practitioners in Texas, but also in surrounding states and Europe. In addition, students visit the Texas Scottish Rite Hospital for Children, Children's Medical Center in Dallas and the Denton State School to provide dental care for children. Student experience also is enhanced by off-campus programs in public schools, community agencies and state institutions in the area.

Extramural Community Activities

In addition to the dental care provided in the college clinics, Baylor College of Dentistry provides a broad range of oral health services to the people of Texas. Conducted with approximately 40 local, state and federal agencies and organizations, these activities enhance and supplement traditional dental education by providing services that are not otherwise available. Students, faculty and staff provide the services, including oral health care, oral screenings and examinations, health education, dental consultations, laboratory testing and program consultations, and reviews. In addition, BCD collaborates on research programs with schools, hospitals, and local, state and federal agencies.

Summer Clinic

The teaching clinics operate for a six-week period during the summer. Students participating in the summer session will be in attendance Monday through Friday from 8 a.m. to 4:30 p.m. All clinic rules are maintained and assignments are mandatory.

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 BCD students to participate in outreach activities.

“Tooth Talk”

All D3 students are required to participate in “Tooth Talk,” which involves spending one day making dental health education presentations to children in various Dallas area classrooms. Oral health education is given to public and private elementary school students, and career talks are made to middle school and high school students

“By the Roots”

By the Roots is an oral health educational program for younger elementary school and preschool children. The program is designed to provide information about the development and function of the dentition, instructions in good oral hygiene, and suggestions for improved nutrition in an entertaining and interactive format. Dental and dental hygiene students and interested faculty and staff participate in By the Roots on a voluntary basis.

Health Fair and Student Body Screenings

All D4 students and dental hygiene students are required to perform dental examinations and oral cancer screenings at two Community Connections events, usually community or corporate health fairs. Other community events in which students participate include presentations to service clubs and employee groups, denture cleanings and employee education at nursing homes and retirement centers, and Children's Sealant Day. Each year, BCD joins forces with Communities in Schools to provide dental screenings for entire student bodies at several at-risk elementary schools, most of which are in rural communities.

Dallas County Sealant Initiative

The Dallas County Sealant Initiative is a collaborative project of Baylor College of Dentistry and the Dallas County Dental Society. Under the supervision of BCD faculty, D4 students screen Dallas elementary school children to determine the need for dental sealants and deliver this care free of charge. BCD faculty and students are joined in this effort by dentist volunteers, coordinated by the Dallas County Dental Society.

Community Preceptorship Program

The Community Preceptorship Program is a selective program available to fourth-year dental students. It involves a one-week visit to a rural or suburban dental office or to a public health clinic. Approximately 25 students elect to participate each year. The experience helps students learn more about civic and professional obligations of a health care provider, philosophy and goals for a dental practice, community factors that affect dental care delivery, business and personnel management.

Participating professionals practice in Texas (unless noted otherwise) and include:

Dr. Jeff Atherton–Round Rock
Dr. Kirk Bond–Temple
Dr. Daniel W. Brockmeier–El Reno, Okla.
Dr. Charles H. Cox–Temple
Dr. Bret A. Downing–Seagoville
Dr. Karen L. Gott–Lindale
Dr. Sherri J. Horton–Rowlett
Dr. H. Peter Ku–Ft. Worth
Dr. Kurt Mackie–Harlingen
Dr. Kimberly D. Neiman–Wills Point
Dr. Ray Scott–San Marcos
Dr. Dick Standefer–Cleburne
Dr. Walter R. Weaver–San Marcos
Dr. Kay Berry–Aledo
Dr. Kendall Brennan–Georgetown
Dr. Jose' L. Cazares–McAllen
Dr. George H. Cramer–Wills Point
Dr. Lisa A. Franklin–Corpus Christi
Dr. Thomas C. Harrison–Katy
Dr. Gregory A. Kerbel–Garland
Dr. Dan H. Loving–Austin
Dr. Thomas M. McDougal–Richardson
Dr. John M. Red Fox–Dallas
Dr. Misty J. Staffel–Keller
Dr. William H. Terral–Ada, Okla.
Dr. Robert G. White–Bogata

Doctor of Dental Surgery Curriculum

First Year (D1)

		Clock Hours by Semester				Total	Total
		Fall		Spring		Clinic	Sem.
Courses		Lect.	Lab.	Lect.	Lab.	Hours	Hours
6500	Biochemistry	64	-	-	-	-	4
6520	Principles of Epidemiology and Dental Public Health	16	-	-	-	-	1
6540	Dental Anatomy	32	-	-	-	-	2
6543	Dental Anatomy-C	-	96	-	-	-	2
6570	Information Technology in Dentistry	4	8	-	-	-	0.5
6580	Dental Materials	-	-	8	24	-	1
6600	General Histology	28	42	-	-	-	3
6640	Gross Anatomy	42	126	-	-	-	6
6660	Growth and Development	22	-	-	-	-	1.5
6680	History of Dentistry	14	-	-	-	-	1
6690	Human Behavior in Dentistry	-	-	17	-	-	1
6724	Intro to Clinical Practice l-C	-	-	-	-	16	0.5
6740	Microbiology	-	-	51	17	-	3.5
6770	Neuroscience	-	-	32	-	-	2
6800	Occlusion	-	-	11	-	-	0.5
6804	Occlusion-C	-	-	-	22	-	1
6820	Oral Histology	-	-	22	20	-	2
6840	Operative Dentistry	-	-	17	-	-	1
6844	Operative Dentistry-C	-	-	-	102	-	2
6860	Introduction to Periodontics	-	-	8	9	-	1
6870	Physiology	-	-	64	96	-	6

"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	-		-	-	1
7084	Introduction to Clinical Practice Il-C	-	-	-	-	66	1.5
7100	Operative Dentistry	16	-	-	-	-	1

		Clock Hours by Semester				Total	Total
		Fall		Spring		Clinic	Sem.
Courses		Lect.	Lab.	Lect.	Lab.	Hours	Hours
7104	Operative Dentistry-C	-	96	-	-	-	2
7120	Basic Principles & Techniques of Dentoalveolar Surgery	-	-	16	-	-	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	-	-	11	-	-	0.5
7214	Orthodontics-C	-	-	-	33	-	0.5
7230	Local Anesthesia & Nitrous Oxide/ Conscious Sedation	-	-	16	-	-	1
7250	Pediatric Dentistry	-	-	17	34	-	2
7270	Periodontics	16	-	17	-	-	2
7274	Periodontics-C	-	-	-	-	33	1
7290	Dental Pharmacology	32	-	-	-	-	2
7330	Applied Preventative Dentistry	-	-	-	16	-	1
7350	Removable Prosthodontics	16	-	17	-	-	2
7353	Removable Prosthodontics-C	-	96	-	102	-	4

“C” following a course title indicates a clinical or preclinical course.

Third Year (D3)

		Clock Hours by Semester					Total	Total
		Summer	Fall		Spring		Clinic	Sem.
Courses		Lect.	Lect.	Lab.	Lect.	Lab.	Hours	Hours
8000	Summer Clinic		-	-	-	-	-	0
8004	Clinical Preventive Dentistry-C		-	-	-	-	26	0.5
8020	Principles of Biostatistics		-	-	17	-	-	1
8034	Comprehensive Care-C		-	-	-	-	210	4
8060	Endodontics		16	-	-	-	-	1
8064	Endodontics-C		-	-	-	-	50	1
8080	Fixed Prosthodontics	5	16	-	-	-	-	1.5
8084	Fixed Prosthodontics-C		-	-	-	-	150	3
8140	Human Behavior In Dentistry		16	-	-	-	-	1
8150	Contemporary Dental Materials		-	-	9	-	-	0.5
8160	Anesthesia in Dentistry		8	-	-	-	-	0.5
8180	Implant Dentistry		-	-	17	-	-	1
8200	Occlusion		-	-	17	-	-	1
8204	Occlusion-C		-	-	-	34	-	1
8220	Operative Dentistry	6	16	-	-	-	-	1.5

Courses		Clock Hours by Semester					Total Clinic Hours	Total Sem. Hours
		Summer	Fall		Spring			
		Lect.	Lect.	Lab.	Lect.	Lab.		
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
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	8	-	-	-	1.5
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.

Fourth Year (D4)

Courses		Clock Hours by Semester					Total Clinic Hours	Total Sem. Hours
		Summer	Fall		Spring			
		Lect.	Lect.	Lab.	Lect.	Lab.		
9000	Summer Clinic		-	-	-	-	0	-
9004	Clinical Services Assign-C		-	-	-	-	220	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*		-	-	-	-	970	20
9050	Selected Advanced Topics in Oral and Maxillofacial Surgery		8	-	-	-	-	0.5
9070	Orthodontics		14	-	-	-	-	1

		Clock Hours by Semester					Total	Total
		Summer	Fall		Spring		Clinic	Sem.
Courses		Lect.	Lect.	Lab.	Lect.	Lab.	Hours	Hours
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
9300	Geriatric Dentistry		8	-	-	-	-	0.5

*All clinical programs except 9004 are included in 9044 General Dentistry
"C" following a course title indicates a clinical or preclinical course.

		Clock Hours by Semester					Total	Total
		Summer	Fall		Spring		Clinic	Sem.
Courses		Lect.	Lect.	Lab.	Lect.	Lab.	Hours	Hours
9020	Endodontics*		11	-	-	-	-	0.5
9200	Periodontics•		9	-	-	-	-	0.5

*Last time to be presented for D4 class in the 2001-2002 academic year.
• Must be taught for D4 class in the 2001-2002 academic year and last time to be presented in the 2002-2003 academic year.

Course Descriptions

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

6260 AN INTRODUCTION TO DENTAL TERMINOLOGY / Word-building techniques and identification of dental vocabulary words through structural analysis of their components (Enhanced Program).

6360 ENRICHMENT SEMINAR / This seminar meets for one hour weekly and provides the student with a greater breadth of dental knowledge beyond the technical and clinical aspects emphasized in the major curriculum. Information and practical experience are provided to better prepare the student for private clinical practice as well as alternative careers in dentistry. The students also are highly encouraged to develop and implement community educational programs regarding oral health as a part of this seminar (Enhanced Program).

6460 ADVANCED PREPARATION FOR PHYSIOLOGY / General knowledge of normal body function (Enhanced Program).

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 PRINCIPLES OF EPIDEMIOLOGY AND DENTAL PUBLIC HEALTH / An introduction to basic concepts of epidemiology, the epidemiology of oral conditions and principles of dental public health.

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.

6560 LEARNING STRATEGIES SEMINAR / Adapting methods that promote active learning; scientific writing; library use; cooperative learning; motivation; problem solving and critical thinking; communication (Enhanced Program).

6570 INFORMATION TECHNOLOGY IN DENTISTRY / Three hours of orientation and online testing in a computer laboratory to insure competency in the use of electronic information resources and computers. Areas covered in this hands-on module relate to the contemporary practice of general dentistry; for example, using the Internet and Medline to acquire current and accurate information on oral diseases and new therapies.

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; basic and applied laboratory exercises correlated with lecture topics.

6760 ADVANCED PREPARATION IN GROSS ANATOMY / Introduction to terminology, basic concepts and body systems through a case-based educational format (Enhanced Program).

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.

6790 LABORATORY SKILLS ENHANCEMENT / Prepares students for enrollment in courses 7040 and 7044 by exposing them to basic preparation for and fabrication of fixed prostheses (Enhanced Program).

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.

6860 INTRODUCTION TO PERIODONTICS / Introduction to periodontics, etiology and pathogenesis of periodontal disease; introduction to therapy (scaling and root planing).

6870 PHYSlOLOGY / 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.

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 PROSTHODONTlCS-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 INTRODUCTlON 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.

D3 Courses

8000 SUMMER CLINIC-C / All phases of clinic practice; required attendance for third-year students.

8004 CLINICAL PREVENTIVE DENTISTRY-C / Clinical applications of disease detection.

8020 PRINCIPLES OF BIOSTATISTICS / Introduction to biostatistical concepts 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.

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 HUMAN BEHAVIOR IN DENTISTRY / Behavioral principles applied to patient and staff management and satisfaction, including behavioral approaches to pain and anxiety control.

8150 CONTEMPORARY DENTAL MATERIALS / Advanced topics in dental materials emphasizing the relationship between materials' properties and clinical applications. Comparisons between recent product developments and conventional materials.

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 8260; 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 DIAGNOSTIC SCIENCES / 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; required 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 TOPICS IN ORAL AND MAXILLOFACIAL SURGERY/ Emphasis is on more advanced and complex oral and maxillofacial 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.

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; purchasing existing practices; locating and financing a dental practice; taxes and insurance; staffing and delegation of duties; marketing; Occupational Safety and Health Administration; stress management; third-party considerations.

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 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.

9200 PERIODONTICS / Comprehensive case analysis and treatment planning emphasizing periodontal literature and interdisciplinary concerns.

9300 GERIATRIC DENTISTRY/ Designed to increase the awareness of dental care for the senior dental patient and older adults; principles of geriatrics; an interdisciplinary approach to the senior dental patient; interaction with senior dental patients in the nursing home and home setting.

Selective Courses

A variety of selective courses are offered with a minimum two-semester-hours required. Some selected courses have limited enrollment. Departments are listed in parentheses at the end of each course description.

ADVANCED CONCEPTS IN ENDODONTICS / Topics essential to successful diagnosis and treatment; innovative techniques. (Restorative Sciences)

ADVANCED PERIODONTAL SURGERY / Anatomy; wound healing; techniques, indications and contraindications; opportunity for clinic treatment of case. (Periodontics)

ATHLETIC MOUTHGUARDS / Students attend seminars and fabricate athletic mouthguards for a community athletic team. (General Dentistry)

BASIC LIFE SUPPORT INSTRUCTOR (CPR) / Provides certification status as American Heart Association BLS Instructor. For dental students who wish to become involved with teaching CPR. (Oral and Maxillofacial Surgery and Pharmacology)

CERAMICS / Theory and fabrication of ceramo-metal and all-ceramic prosthodontic restorations. (Restorative Sciences)

DENTAL IMPLANTOLOGY / A clinical, laboratory, surgical and restorative exercise. Practical aspects of dental implantology. (Restorative Sciences)

DENTAL PHOTOGRAPHY / Basic knowledge and skills; hands-on intra-oral and extra-oral experience. (General Dentistry)

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; (3) the delivery of dental care to children under various forms of sedation and general anesthesia; and (4) the treatment of malocclusions in the developing dentition. (Pediatric Dentistry)

ORAL AND MAXILLOFACIAL SURGERY / For senior students. 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 24 different topics. The emphasis is hands-on participation and open forum discussions. (Oral and Maxillofacial Surgery and Pharmacology)

ORTHODONTIC EXTERNSHIP / Recognition of developing malocclusion; ramifications of early malocclusion on the later occlusal scheme: observation of an orthodontic practice; coordination between general practice and orthodontics. (Orthodontics)

PRACTICAL APPROACH TO ORAL PATHOLOGY / The new dentist frequently is overwhelmed by the myriad of conditions that affect the oral cavity. This course will present a simplified approach based on the clinical signs and symptoms produced by these diseases. (Diagnostic Sciences)

PUBLIC HEALTH SCIENCES PRECEPTORSHIP PROGRAM / Provision of oral health care services for at least four days in private practice, Indian Health Service, Veterans Administration hospital or other public health settings. (Public Health Sciences)

STOMATOLOGICAL DISORDERS OF INTEREST TO THE GENERAL DENTIST / Diagnosis, treatment and management of common oral mucosal diseases, including recurrent aphthae, erosive lichen planus, cicatricial pemphigoid, burning mouth syndrome, xerostomia, candidosis, etc. (Periodontics)

TOBACCO CESSATION / This course integrates tobacco background knowledge with pharmacology, behavioral modification and the national guidelines for the clinical practice of tobacco cessation. (Public Health Sciences)

TUTORING SKILLS SEMINAR / This course will train students to become effective tutors by developing skills in instructional technique. Students will participate in several microteaching experiences. (Student Development)

WHAT'S NEW IN ESTHETIC DENTISTRY? / Review and comparison of dental materials important in general dentistry. (Biomaterials Sciences)

DENTAL HYGIENE

History

The Caruth School of Dental Hygiene is an integral part of 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 the fall of 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 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 also is offered. See Advanced Education in the Baylor College of Dentistry section of this catalog.

Admissions

Prerequisite Courses

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.utexas.edu/student/tccn/.

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 nonscience major 1405 and 1407 or higher level)	8
English (two courses in basic freshman composition and two courses in literature)	12
American Government (three hours in U.S. and three hours in Texas State and Local)	6
American History (three hours may be 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 credit will be determined by the staff of BCD's Office of Admissions and 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 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 coursework.
5. Equivalency of coursework is determined by content found in catalog course description 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, coursework 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 grade point average 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 Academic Skills Program

The Texas Academic Skills Program 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, the applicant to the Caruth School of Dental Hygiene must submit TASP scores if they were so required when entering their undergraduate institutions. Established cutoff scores on the SAT, ACT or TAAS tests qualify students for exemption. Proof of these scores must be submitted in place of TASP scores. Alternative test scores accepted by the Texas Higher Education Coordinating Board may be provided as proof of compliance with academic skills regulations.

Applicants from out-of-state colleges or private colleges who have never been required to take TASP must take the test prior to acceptance for admission.

Request that test scores be sent to the Office of Admissions and Academic Records at Baylor College of Dentistry directly from the testing agency.

Application Procedures

- Request application materials from and return all materials to the Office of Admissions and Academic Records at Baylor College of Dentistry.
- 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
- Out-of-state applicants must comply with Texas Academic Skills Program.
- 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 (for example, 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 Baylor College of Dentistry 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 Texas Higher Education Coordinating Board rules and regulations on determination of residency status is available in the Office of Admissions and Academic Records at Baylor College of Dentistry.

Bases For Acceptance

All applicants for admission will be considered without regard to race, color, creed, religion, national origin, sex or age. Preference is given to Texas residents. Qualified handicapped persons who are capable of meeting the academic and technical standards essential to participation in the program will receive equal consideration.

- The quality of the applicant's scholarship is a prime consideration. A grade point average 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.

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.

Admissions 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 Baylor College of Dentistry. The estimated cost of the program for the entering class of 2001 follows:

	Junior Year (DH1)	Senior Year (DH2)
*Tuition		
In-state	$2,751.00	$2,814.00
Out-of-state	$10,312.50	$9,949.50
Books and Lab Fees	$1,318.00	$622.00
Instruments	$862.00	$60.00
Uniforms	$275.00	-
Other Fees	$1,045.00	$1,140.00
I.D. Card	$15.00	-
Matriculation	$15.00	-
Graduation Pin	-	$40.00
Graduation	-	$75.00

* Tuition is based on $42 per semester hour for residents and $253 per semester hour for nonresidents. Plus, designated tuition is $42 per semester hour to a maximum of 15 hours per semester.

Fees And Deposits

Please see the rules and procedures in the previous Dentistry section.

Tuition Refund Policy

Tuition refunds are made in accordance with the policy established for The Texas A&M University System Health Science Center and complies with federal and state guidelines.

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 Baylor College of Dentistry.

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 Baylor College of Dentistry. The college does not inspect or approve listings; however, BCD’s Office of Student and Alumni Services 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 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 is available to any student enrolled at 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 University System Health Science Center and Baylor College of Dentistry for the benefit of all concerned. The offices of Academic Planning and Development and Student and Alumni Services, 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 Baylor College of Dentistry section of the catalog.

Scholarship

Grading System

Please refer to the explanation of the grading system in the Dentistry section.

Review of Academic Process

In addition to the information found under Scholarship in the 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 grade point average 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 grade point average 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 Baylor College of Dentistry:

- A student on academic probation for two consecutive semesters will be dismissed, excluding the summer session.
- 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 Baylor College of Dentistry:
  - 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:

- Attained the age of 19 years
- Demonstrated evidence of satisfactory moral and professional conduct
- Satisfactorily completed all of the prescribed courses of study including an estimated 129 semester hours in prerequisite and dental hygiene courses
- Attained the required cumulative grade point average (2.00)
- Be certified by the faculty as approved for graduation
- Be certified free of debts and obligations to 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 $140. 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 $650.

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 grade point average 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 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 medicolegal 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 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

Attendance in an abbreviated 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.

Junior Year (DH1)

Course Number and Title		Credit Award	Clock Hours Per Week 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	-	-
3430	Microbiology	3	3	1	-
3530	Applied Dental Materials	3	2	2.5	-
3830	Clinical Dental Hygiene I	3	-	-	12
	Total	35.5			

* Scheduled by course director + Continues following term

Senior Year (DH2)

Course Number and Title		Credit Award	Clock Hours Per Week 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

Course Descriptions

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 emphasis on root morphology; identification of extracted 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 and physiology, 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.

3530 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 pathologic 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 will include 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 also will be 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.

ADVANCED EDUCATION

(by departments)

The mission of the advanced education programs at 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 advanced 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 biomedical sciences, dental hygiene, health professions education or oral biology; a doctor of philosophy in biomedical sciences; or a doctor of medicine degree. The Advanced Education Council maintains traditional concepts in advanced education by providing broad, multidisciplinary monitoring of the programs. All graduate faculty have fulfilled the qualifications adopted by AEC 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 Baylor College of Dentistry, a component of The Texas A&M University System Health Science Center. The Ph.D. degree is awarded in the Graduate School of Biomedical Sciences. 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.

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 so that 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, 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 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 Baylor College of Dentistry.

M.S. in Biomaterials Science

The objective of the M.S. Program in Biomaterials Science is to provide advanced training in research and science to two types of students: (1) postgraduate dentists who may be enrolled concurrently in a specialty program, and (2) non-dental students with a baccalaureate degree in biological or engineering sciences. Program objectives are to provide training in modern materials science research methods and to equip students to critically analyze research and clinical literature. For dental graduates, this training will prepare them for clinical faculty positions. For non-dental students, this training will enhance opportunities for careers as educators in secondary schools and junior colleges as well as technicians and research associates in biological and engineering laboratories. The program also is appropriate for students who wish to improve their background in preparation for admission to dental and medical schools and advanced graduate (Ph.D.) programs.

M.S. in Biomedical Sciences

The M.S. Program in 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.

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 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 (36.5 semester hours) is required.

M.S. in Health Professions Education

The M.S. Program in Health Professions Education is designed to prepare students possessing a professional degree for a career in teaching and research in the health sciences. 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 27 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 advanced students with an interest in academic research careers in the health sciences. It is administered by the Department of Biomedical Sciences through the Graduate School of Biomedical Sciences. Students may take graduate-level courses in other graduate specialty areas of 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.

Admissions Requirements

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 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.

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. 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 and M.S. in Oral Biology

- Doctor of dental surgery or doctor of dental medicine from a fully accredited institution;
- A minimum total grade point average 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;
- 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 advanced education.

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 grade point average 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 Admissions Committee and the associate dean for research and advanced education.

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 grade point average 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 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 advanced education.

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 a license to practice dental hygiene from any state;
- A minimum grade point average 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 advanced education; 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 grade point average of 3.0 (0.0-4.0 point system) and a record of study and experience that is predictive of success in advanced education;
- 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 advanced education.

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 coursework in the biological sciences also will be considered for admission;
- A minimum total grade point average 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 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 advanced education.

Application Procedures

Obtain application material from the Office of Research and Advanced Education or from the dental specialty area of your choice and return it to the Office of Admissions and Academic Records at Baylor College of Dentistry when completed. Application deadlines follow:

Advanced Education in General Dentistry

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

Biomaterials Science

Applications are accepted throughout the year; however, a summer-semester starting date is recommended. Students interested in pursuing a combined degree (certificate program and M.S. in biomaterials science concurrently) should apply to both programs at the deadline indicated for the clinical program.

Biomedical Sciences

M.S.: Applications are accepted throughout the year with a recommended fall-semester start date.

Ph.D.: There is no application deadline; however, 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.

Dental Hygiene

Jan. 15 of the year of desired entry into the program.

Endodontics

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

Health Professions Education

Applications are accepted throughout the year with a recommended summer-semester start date; applications are due March 31.

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.

Orthodontics

Sept. 15 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

Oct. 1 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 Admissions and 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 Admissions and Academic Records at Baylor College of Dentistry.
- A letter from the dean of the dental school certifying the applicant's grade point average and class standing (applies only to applicants for the certificate programs).
- National Board Examination scores.
- Test of English as a Foreign Language score.

Transfer of Credit

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 Baylor College of Dentistry. Such courses must be approved by the program director and the associate dean for research and advanced education. 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 at which transfer courses are taken must be sent directly to the Office of Admissions and Academic Records at Baylor College of Dentistry. Acceptance of transfer credit will not decrease the on-campus minimum residence requirement associated with each graduate program.

Several graduate programs at Baylor College of Dentistry 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 Baylor College of Dentistry. 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).

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.

Fees and Expenses

Application Fee (nonrefundable)	$35.00
Application Renewal Fee (nonrefundable)	$25.00
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)	$31.50
Tuition (per semester hour):	
In-state	$84.00
Out-of-state	$253.00
Designated Tuition (per semester hour)	$42.00
Computer Use Fee (per semester hour)	$7.50
Library Access Fee (per semester hour)	$4.50
Health Fee (per semester)	$49.88
Parking Fee (per semester)	$67.50
Matriculation Fee	$15.00
Audit Fee (per course hour)	$80.00
Late Registration Fee	$25.00
Course Changes After Initial Registration	$5.00
Graduation Fee	$75.00
Dental Malpractice Insurance Fee (per year)	$75.00

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 advanced education 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 Advanced Education 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 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 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 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 Baylor College of Dentistry involves faculty evaluation of both cognitive and non-cognitive performance in specific courses and assignment of grades. Noncognitive 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 advanced education, 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 Advanced Education Council.

The Advanced 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 grade point average 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 coursework 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 coursework 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).

Advanced education students who are enrolled in a certificate or degree program having a course curriculum itemized in the 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 Advanced Education 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 Advanced Education for approval before the student registers for the first time. For students in advanced education 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 advanced education office. 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 Advanced Education 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 graduate faculty. Adjunct graduate faculty 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 advanced education 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 advanced education.

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

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 (CS)

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	5122	Biostatistics Lab
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
PHS	5191	Human Behavior in Dentistry
BMS	5251	Immunology
OMS	5221	Internal Medicine
BMS	5350	Oral Microbiology
OD	5250	Oral Radiology
OMS	5233	Physical Diagnosis
AGD	5205	Practice Management
BMS	5260	Research and Scientific Communication I
BMS	5261	Research and Scientific Communication II
BMS	5262	Research and Scientific Communication III
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 BCD's teaching departments or guest lecturers with expertise in a specific area.

Core Course Descriptions

BMS 5269 ADVANCED GROWTH AND DEVELOPMENT / Normal prenatal growth and development. Patterns and mechanisms of growth and maturation.
Faculty 2 sem. hrs.

BMS 5V73 ADVANCED HUMAN CRANIOFACIAL DEVELOPMENT AND GROWTH / Processes involved in the development, growth and adaptation of the craniofacial region; both prenatal and postnatal development and growth are considered, with emphasis on postnatal events; impact of orofacial function on growth; unique properties of the cartilages, skeletal structure and musculature of the craniofacial region.
Carlson 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; four semester hours credit plus one additional hour for optional laboratory.
Binnie/Cundiff variable

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 5122 BIOSTATISTICS LAB / Laboratory focusing on methods and analysis of data from didactic presentations in Research and Scientific Communication III (BMS 5262).
Jones 1.5 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

OMS 5214 CLINICAL PHARMACOLOGY / Selection and evaluation of dentally related drugs and review of current literature; seminar format; limited to clinical specialty students.
S. Taylor 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 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.
Carlson variable

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.

PHS 5191 HUMAN BEHAVIOR IN DENTISTRY / Behavioral and psychological principles applied to dental practice; interpersonal communication techniques related to the doctor-patient relationship, discussion of patient satisfaction and compliance with preventive or treatment regimens; etiology, recognition and behavioral management of dental pain and anxiety; consideration of both emotionally normal and psycho-pathologic patients; employee selection and management; research in patient satisfaction and marketing; current ethical issues in dentistry; seminar format.
Faculty 0.5 sem. hr.

BMS 5251 IMMUNOLOGY I / Update on the principles of immunology with an emphasis on oral aspects and related diseases.
Newman 1 sem. hr.

OMS 5221 INTERNAL MEDICINE / Oral manifestations of systemic disease; problems in internal medicine and diagnosis.
Bates 2 sem. hrs.

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.
Faculty 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.
Frederiksen 1 sem. hr.

OMS 5233 PHYSICAL DIAGNOSIS / Patient examination, history-taking and physical diagnosis in hospitalized patients.
Bates 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 5260, 5261 RESEARCH AND SCIENTIFIC COMMUNICATION I AND II / Introduction of basic scientific concepts; development of research questions and hypotheses; formulation of research proposals and overview of research methods used in dentistry.

Buschang/Svoboda 2 sem. hrs.

BMS 5262 RESEARCH AND SCIENTIFIC COMMUNICATION III / 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.

Jones 1.5 sem. hr.

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.

CLINICAL AND BASIC SCIENCE PROGRAMS

Advanced Education in General Dentistry

Chair:	Mohsen Taleghani, Professor
Program Director:	Charles W. Wakefield, Associate Professor
Assistant Director:	Herman Dumbrique, Assistant Professor

Residency (one year, certificate)
Starting date: July 1

Program Objectives

The program objectives are to:

- provide residents with both clinical and didactic training in all disciplines of general dentistry beyond that received in the undergraduate curriculum;
- increase both the confidence and competence of residents in all components of general dentistry;
- improve the resident's ability in diagnosis, treatment planning, oral examination and physical evaluation of the multidiscipline patient; and
- assist the resident in developing a working knowledge of practice management and administration.

*One Year Curriculum**

			Clock Hours
OMS	5218	Conscious Sedation	22
OMS	5221	Internal Medicine	22
OMS	5233	Physical Diagnosis	22
GD	5201	Implant Dentistry	22
GD	5222	Clinical Endodontics	22
GD	5213	Advanced Removable Prosthodontics	22
GD	5214	Advanced Fixed Prosthodontics	22
GD	5215	Advanced Clinical Periodontology	22
GD	5216	Advanced Clinical Orthodontics	22
GD	5217	Current Concepts in Operative Dentistry	22
GD	5218	Advanced Pediatric Dentistry	22
GD	5219	Treatment Planning Conferences	22
GD	5220	Current Literature Reviews	22
GD	5221	Clinical Pathology Conferences	22
GD	5222	Principles of Practice Management	22
GD	5224	Ethics in Dentistry	22
GD	5226	Stomatology	22
GD	5227	Advanced Geriatric Dentistry	22
GD	5228	Advanced Dentistry for Special Care Patients	22
GD	5303	Advanced Maxillofacial Surgery	66
		Total	**495**

*Courses may continue more than one semester.

Course Descriptions

5201 IMPLANT DENTISTRY / Diagnosis, management and treatment of both fixed and removable implant patients. Lecture, seminars and patient 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.

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 complicated 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 recent literature on a topic chosen by the graduate faculty; enhancement of student knowledge in the subject area and ability to evaluate scientific literature.
Staff 1.5 sem. hrs.

5221 CLINICAL PATHOLOGY CONFERENCES / Presentation of clinical cases representing various types of oral pathology; formulation of a logical differential diagnosis.
Staff 1.5 sem. hrs.

5222 PRINCIPLES OF PRACTICE MANAGEMENT / Principles of office management including accounting, insurance, financial planning, office design and personnel relations.
Staff 1.5 sem. hrs.

5224 ETHICS IN DENTISTRY / Ethical approach to practice promotion and professional interactions.
Staff 1.5 sem. hrs.

5226 STOMATOLOGY / Participation and experience in the Stomatology Clinic; multidisciplinary approach to patients with chronic, debilitating diseases with oral manifestations.
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; rotation through the Denton State School.
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.

Biomaterials Science

Chair:	Toru Okabe, Regents Professor
Program Director:	Jason Griggs
Associate Professor:	B. Miller
Assistant Professors:	Cai, Griggs

Master of Science in Biomaterials Science

30 semester hours minimum
24 months minimum
Thesis
Starting date: Summer semester desirable

Program Objectives

The purpose of the M.S. Program in Biomaterials Science is to provide advanced training in research and science to two types of students: (1) postgraduate dentists who may be enrolled concurrently in specialty programs, and (2) non-dental students with a baccalaureate degree in the biological or engineering sciences.

Program objectives are to provide training in modern materials science research methods and to equip students to critically analyze research and clinical literature. For dental graduates, this training will prepare them for clinical faculty positions. For non-dental students, this training will enhance opportunities for careers as educators in secondary schools and junior colleges as well as technicians and research associates in biological and engineering laboratories. The program also is appropriate for students who wish to improve their background in preparation for admission to dental and medical schools and advanced graduate (Ph.D.) programs.

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.

Sem. Hrs.	Course	Title
2	BMS 5260	Research and Scientific Communication I and II
1.5	BMS 5262	Research and Scientific Communication III
2	DM 5160	Mathematics for Materials Study
1	DM 5161	Introduction to Dental Applications
2	DM 5162	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
16.5	**Total**	

Course Descriptions

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.
Miller 1.5 sem. hrs.

5160 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.
Miller 1 sem. hrs.

5162 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.
Okabe 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
Faculty 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; prepare oral defense.

Faculty max. 6 sem. hrs.

Biomedical Sciences

Chair:	David S. Carlson, Robert E. Gaylord Professor
Program Director:	Paul C. Dechow
Professors:	L. Bellinger, C. Berry, E. Miller
Associate Professors:	B. Bowles, P. Dechow, R. Hinton, R. Hutchins, K. Svoboda Williams, B. Wong,
Assistant Professors:	Bishop, Diekwisch, Ezzo, McIntosh, Mbiene, Nouri-Shirazi, Opperman
Adjunct Professors:	Dietschy, Ellis, Finnell, Gatchel, German, Gulliya, Mann, Öz Samchukov, Vanatta, Welch
Adjunct Associate Professors:	Newman, Throckmorton
Instructor:	Spears

Associated Faculty

I. Al-Hashimi (Periodontics); P. Buschang, R. Taylor and R. Behrents (Orthodontics); L. Folke (Public Health Sciences); S. Taylor and G. Triplett (Oral and Maxillofacial Surgery and Pharmacology); J. Wright and W. Binnie (Diagnostic Sciences); J. Gutmann (Restorative Sciences).

Master of Science in Biomedical Sciences

30 semester hours minimum (advanced placement possible for students with a D.D.S.)
Master's Thesis
24 months minimum
Starting date: Fall semester desirable

Program Objectives

The M.S. Program in Biomedical Sciences is oriented toward graduates of dental programs and students enrolled in a specialty clinical program at Baylor College of Dentistry. This 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 Baylor College of Dentistry and non-dental students with a baccalaureate degree in the biological sciences also are eligible to apply to 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 modem research methods;
- equip students with the basic information and tools for critical analysis of the literature necessary to be lifelong learners in the oral health sciences; and
- prepare students for participation on clinical dental faculties.

An additional benefit of the M.S. Program in Biomedical Sciences is that predoctoral students and students in the dental specialty programs at Baylor College of Dentistry will become more competitive for admission to training programs in the dental clinical specialties and Ph.D. programs.

For most graduate clinical programs at Baylor College of Dentistry, there is significant overlap in course work with the M.S. degree in biomedical sciences. Thus, the M.S. 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 Baylor College of Dentistry also are 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 modem research methods. This training will

enhance opportunities for careers as educators in secondary schools and junior colleges, and as technicians and research associates in modem 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. 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

78-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. 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 Baylor College of Dentistry.

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 languages.

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. 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. 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 and stomatology.

Postdoctoral Training

The research and training environment in the Department of 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, which are part of the Biomedical Sciences Graduate Program.

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. Funding is available for United States citizens and permanent residents through an institutional National Research Service Award from the National Institute of Dental and Craniofacial Research.

Biomedical Sciences Course Descriptions

5126 RESPONSIBLE CONDUCT IN BIOMEDICAL RESEARCH / A discussion of issues relating to ethical conduct and research. Offered spring semester of even years.
Dechow 0.5 sem. hr.

5127 SCANNING ELECTRON MICROSCOPY AND ASSOCIATED TECHNIQUES / Principles and methods of scanning electron microscopy. Technical instruction will include 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 will include 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 student.
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 nonoral 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 will be 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 will provide 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 / Prerequisite: 5603 or equivalent. 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.
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 the biomedical properties of the tissue and for the development of degenerative changes will be 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 will be 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 / Prerequisite: 5306 or equivalent. Intermediary metabolism of protein, protein synthesis, nucleic acid metabolism and biochemical endocrinology.
Miller 2 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.

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.

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.
Svoboda 2 sem. hrs.

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.

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.

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 will acquire knowledge in a variety of different disciplines including agriculture, food science, nutrition, biology, chemistry, medicine and toxicology.

Miller 3 sem. hrs.

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.

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.

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/ Prerequisites: 5208 or equivalent; 5306, 5307 or equivalent. A general survey intended to provide background information concerning the methods and theory of modem 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.

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 / Prerequisite: 5270. Normal prenatal growth and development of the craniofacial region; processes and mechanisms of palatal development; maxillomandibular development; factors influencing sutural development.

Opperman variable

5V72 CRANIOFACIAL ANOMALIES / Prerequisites: 5271 and 5273. 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.
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 will be 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	BMS5V36	Topics in Molecular Biology	UTD
BMS5631	Eukaryotic Molecular and Cell Biology	UTD	CMB5096	Cellular and Molecular Biology	UTSW
BMS5632B	Biochemistry/Proteins and Nucleic Acids	UTD	AE1312	Statistics	UTA
MS5633	Molecular Biology	UTD	AE2312	Dynamics	UTA
BMS5634	Cell Biology	UTD	ME2312	Structural Statistics	UTA
BMS5V35	Methods in Molecular and Cell Biology	UTD	ME5340	Finite Element Application	UTA

*UTA University of Texas, Arlington
UTD University of Texas, Dallas
UTSW University of Texas Southwestern Graduate School of Biomedical Sciences

Dental Hygiene

Chair:	Janice P. DeWald, Professor
Graduate Program Director:	Marylou E. Gutmann, Professor
Associate Professor:	A. McCann, P. Campbell
Clinical Associate Professor:	Muzzin

Graduate Program (M.S. with Thesis; Non-thesis option for administrative track)
36.5 semester hours
Starting date: Summer

Program Plan

The M.S. Program in Dental Hygiene at 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 depending on approval of the Dental Hygiene Graduate Program Committee. The program must be completed within five years of the start date.

Credit Requirements

Requirements for the degree consist of a total of 36.5 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**		
First Semester (Summer)					
DH	5100	Advanced DH Clinical Skills Elective Option(s)	DH	5100	Advanced DH Clinical Skills Elective Option(s)
Second Semester (Fall)					
DH	5200	Educational Research	DH	5200	Educational Research
DH	5201	Teaching Strategies DH Ed 1	DH	5201	Teaching Strategies SH Ed 1
BMS	5260, 5261	Research and Scientific Communication I and II	BMS	5260, 5261	Research and Scientific Communication I and II
		Off-campus Elective Option(s)			Off-campus Elective Option(s)
Third Semester (Spring)					
DH	5V98	Research for Thesis	DH	5V88	Research for Practicum Project or

DH	5130	Clinical DH Teaching practicum		5V98	Thesis
DH	5202	Teaching Strategies DH Ed II	DH	5208	Hospital Administration Practicum I
DH	5301	Didactic Teaching Strategies			Off-campus Statistics Course
		Off-campus Statistics Course			Off-campus Elective Option(s)

Second Year

Fourth Semester (Summer)

DH	5V98	Research for Thesis	DH	5V88	Research for Practicum Project or
DH	5130	Clinical DH Teaching Practicum		5V98	Research for Thesis
DH	5210	Special Care Patient Seminar	DH	5118	Hospital Admin. Practicum II
DH	5211	Clinical Case Study	DH	5210	Special Care Patient Seminar
			DH	5211	Clinical Case Study

Fifth Semester (Fall)

DH	5112	Introduction to Faculty Responsibilities	DH	5V88	Research for Practicum Project or
		and Issues in Higher Education		5V98	Thesis
DH	5V98	Research for Thesis	DH	5219	Hospital Admin. Practicum III
DH	5314	Classroom Teaching Practicum			Off-campus Elective Option(s)
		Off-campus Electives (2 courses)			

Sixth Semester (Spring)

DH	5V99	Thesis	DH	5V89	Practicum Project or
		Elective Option(s)		5V99	Thesis
					Off-campus Elective Option(s)

Electives

Administrative track students must take at least four courses from the following list from Texas Woman's University's Department of Health Care Administration:

5003	Management of Health Services Organizations
5013	Hospital Organizations and Operations
5023	Health and the Health Care System
5033	Health Services Human Resources Management
5043	Legal Foundations of Health Care Administration
5053	Quantitative Methods in Health Care Administration
5063	Financial Management for Health Care Administration
5093	Ambulatory Care Administration

Education track students must take at least three elective courses from the following list:

Texas A&M–Commerce, Commerce campus and/or via distance learning in Mesquite; not all courses available at both campuses

PSY	625	Cognition and Instruction I
PSY	626	Cognition and Instruction II
ETec	561	Learning and Technology
ETec	578	Instructional Design and Development

PSY	519	Advanced Educational Psychology
PSY	620	Cognitive Psychology
PSY	661	Psychology of Organizational Change and Improvement
SHEd	542	Analysis of Teaching in Higher Education
SHEd	621	Teaching in Colleges
SHEd	651	Curriculum Development in Higher Education
SHEd	655	Issues in Higher Education
SHEd	656	Higher Education and the Law
SHEd	658	Administration in Higher Education

University of North Texas

EDER	5050	Educational Research and Evaluation
EDER	5210	Educational Statistics
EDER	5220	The Evaluation of Education Programs
EDER	5230	Cognitive and Performance Evaluation.
EDER	5240	Survey Research Methods in Education
EDER	5350	Introduction to Educational Measurement
EDER	5550	Data Processing for Education
EDHE	5240	Instruction in the Community College
EDHE	5270	The Administrative Structure of the Community College
EDHE	5710	Trends and Issues in Adult/Continuing Education
CECS	5010	Computer Education Tools
CECS	5020	Computers in Education
CECS	5110	Computer – Assisted Instruction.
ATTD	5450	Organization and Development of Instructional Materials.
ATTD	5470	Interpersonal Skills Development
ATTD	5530	Curriculum Development in Applied Technology, Training and Development
EDUC	5130	Philosophy and Principles of Multicultural Education
EDAD	5530	Leadership and Evaluation

Texas Woman's University

ELDR	5143	Theories of Learning and Educational Measurement
ELDR	5343	Philosophy of Education
ELDR	5713	Trends and Issues in Adult Education
ELDR	5823	Adult Learning and Development
ELDR	5833	Instructional Methods in Adult Education
HS	5023	Methods in Health Education Research
HS	5103	Principles and Methods of Teaching Health Professionals
HS	5113	Curriculum Development for Health Professionals
HS	5183	Program Administration for Health Professionals

In addition, students must take one graduate-level statistics course, either at Baylor College of Dentistry or at the following campuses:

STAT	5353	APPLIED STATISTICS AND DATA ANALYSIS FOR NON-MAJORS I (University of Texas, Dallas)
EDER	5210	EDUCATIONAL STATISTICS (University of North Texas)

Electives also are offered through Baylor College of Dentistry. Education track and administrative track graduate students may take a variety of electives from BCD course offerings. Students are encouraged to choose electives based on discussion and consultation with the graduate program director. Examples of appropriate courses are:

HPE	5225	Teaching Skills (1 sem. hr.)
OP	5V21	Advanced Oral Pathology (2 sem. hrs.)
HPE	5142	Literature Review Seminar (1 sem. hr.)
HPE	5343	Educational Assessment (2 sem. hrs.)

Degree Plan

Students must choose which 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 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.

Course Descriptions

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 extramural rotations to further advance clinical proficiency.
Campbell 1 sem. hr.

5112 INTRODUCTION TO FACULTY RESPONSIBILITIES AND ISSUES IN HIGHER EDUCATION / This course will expose 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.

5200 EDUCATIONAL RESEARCH / This course will help students develop the knowledge and skills necessary to be intelligent consumers and producers of educational research. A focus will be on conducting survey research.
Staff 2 sem. hrs.

5201, 5202 TEACHING STRATEGIES: DENTAL HYGIENE EDUCATION I and II / Application of teaching 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; mentoring undergraduate students on projects; clinical teaching; developing clinical teaching criteria; measuring teaching effectiveness; and the development, teaching and evaluation of psychomotor skills.
Campbell total 4 sem. hrs.

5208, 5118, 5219 HOSPITAL ADMINISTRATION PRACTICUM I, II and III / This series of practicums will prepare 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 6 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 hygiene program and include goals, curriculum content, and objectives that address patients who are mentally, emdically or physically challenged. Students in the administration track will develop a fictitious health care facility or a mobile dental clinic for special-care patients and include targeted population, objectives, policy statements, budget, personnel and equipment. In addition, both tracks will prepare a lecture on a special-needs patient and present it to the undergraduate dental hygiene students.

Muzzin 2 sem. hrs.

5211 CLINICAL CASE STUDY / This course will help the student develop and apply the knowledge and skills necessary to develop a formal presentation of a case study.

Campbell 1 sem. hr.

5214 CLASSROOM TEACHING PRACTICUM / This course provides the student with the opportunity to student teach in a classroom setting. The student will be responsible for choosing a topic, developing goals and objectives, deciding the teaching and evaluation mechanisms, selecting and developing the necessary audiovisual aids, and presenting the lecture to the undergraduate dental hygiene students.

Gutmann 1 sem. hr.

5301 DIDACTIC TEACHING STRATEGIES / This course introduces the graduate student to a procedure for developing a competency-based curriculum. Using the process of assessment, planning, implementation and evaluation, the student will learn the steps in developing an individual lecture, a module of instruction and a course.

Gutmann 2 sem. hrs.

5V88 RESEARCH FOR PRACTICUM PROJECT / (Non-thesis Option: Administrative Track) Students will assess the need for, plan, implement and evaluate a major project in their interest area.

Staff max. 3 sem. hrs.

5V89 PRACTICUM PROJECT / Students will prepare a written report of their project and formally present and defend this project to the faculty.

Staff max. 3 sem. hrs.

5V98 RESEARCH FOR THE MASTER'S THESIS / Conduct original research in chosen topic; data analysis.

Staff max. 3 sem. hrs.

5V99 THESIS / Formal presentation of research literature review, objectives, methods, data analysis, results, discussion and conclusions in acceptable written form.

Staff max. 3 sem. hrs.

Texas Woman's University – Parkland Campus

HCA 5003 MANAGEMENT OF HEALTH CARE SERVICES ORGANIZATION / Introduction to the theories, concepts, techniques, functions and methods of management as they relate to health services organizations generally with specific emphasis on hospitals. Prerequisite: HCA 5023 (may be taken concurrently). Three lecture hours a week.

Driscoll 3 sem. hrs.

HCA 5013 HOSPITAL ORGANIZATION AND OPERATIONS / Intensive study of the organizational structure, medical staff and departmental functions of hospitals with variations by size and ownership; architectural alternatives; professional and institutional standards; medical and administrative quality and productivity control systems. Prerequisite: Completion of 12 semester hours of HCA courses or permission of the instructor. Three lecture hours a week.

Staff 3 sem. hrs.

HCA 5023 HEALTH AND HEALTH CARE SYSTEM / Introduction to the organization, financing, and delivery of health services. Historical development, current structure, future direction, methods of payment and function of the health care system are explored with emphasis on the determinants of health and disease, utilization of health services, patient-practitioner relationships, socio-cultural and government effects, disease prevention and health promotion. Three lecture hours a week.

Staff 3 sem. hrs.

HCA 5033 HEALTH SERVICES HUMAN RESOURCES MANAGEMENT / Techniques for effective management of human resources in health services organizations. The theories of organizational behavior are explored in relation to the functions and principles of human resource management including planning, staffing, appraising, compensating and developing employees. Relevant employment and labor relations law relating to health care organizations is examined. Prerequisites: HCA 5003 and 5023 or permission of instructor. Three lecture hours a week.

Driscoll 3 sem. hrs.

HCA 5043 LEGAL FOUNDATIONS OF HEALTH CARE ADMINISTRATION / Introduction to law as it affects the health care delivery system with emphasis on both the theoretical and practical determinants of legal decision making. An examination of the American legal system, its principles and processes, as well as how the law regulates issues related to control of costs through regulation and antitrust laws, and respect for "personhood" in the context of the professional-patient and organization-professional relationship are also addressed. The dynamics between law and ethics are explored. Prerequisite: HCA 5023 or permission of instructor. Three lecture hours a week.

Driscoll 3 sem. hrs.

HCA 5053 QUANTITATIVE METHODS IN HEALTH CARE ADMINISTRATION / Fundamental principles of probability theory, statistical inference, linear regression and management science applied to the analysis of management problems in health care administration. Applications include forecasting methods, deterministic and stochastic approaches to modeling systems behavior and simulation methods. Prerequisites: HCA 5003, HCA 5023 and knowledge of statistics. Three lecture hours a week.

Maurer 3 sem. hrs.

HCA 5063 FINANCIAL MANAGEMENT FOR HEALTH CARE ADMINISTRATION / Examination of the theory and practice of health care financial management and decision-making methods. Emphasis is placed on the role of the finance function in measuring, evaluating and controlling an organization's performance.

Staff 3 sem. hrs.

HCA 5093 AMBULATORY CARE ADMINISTRATION / Administration of ambulatory care services and facilities including outpatient clinics, emergency centers, health maintenance organizations, group medical practices and home health care agencies. Prerequisites: Completion of 12 semester hours of HCA courses or permission of instructor. Three lecture hours a week.

Staff 3 sem. hrs.

University of North Texas

EDER 5050 EDUCATIONAL RESEARCH AND EVALUATION / An introduction to methods and limitations of educational research. The student will learn the procedures, strengths and limitations of the research process.

Staff 3 sem. hrs.

EDER 5210 EDUCATIONAL STATISTICS / Descriptive and inferential statistical concepts and techniques commonly used in educational research. Organization of data, graphical representation, measures of central tendency and variability, normal distribution curve, sampling theory and tests of significant differences between related and independent samples.

Staff 3 sem. hrs.

EDER 5220 THE EVALUATION OF EDUCATION PROGRAMS / Models for program evaluation with emphasis on design, instrumentation, information processing and data interpretation. The content and methodology of the course are appropriate for educators working in elementary and secondary schools, as well as in colleges and universities.

Staff 3 sem.hrs.

EDER 5230 COGNITIVE AND PERFORMANCE EVALUATION / Introduction to cognitive and performance measurement and evaluation. Course covers development of knowledge-based tests and the evaluation of training. Measurement strategies for cognitive and performance testing are combined with evaluation strategies.

Staff 3 sem.hrs.

EDER 5240 SURVEY RESEARCH METHODS IN EDUCATION / History of surveys, information needs, sampling design, instrumentation data collection, data processing and report generation will be discussed.
Staff 3 sem. hrs.

EDER 5350 INTRODUCTION TO EDUCATIONAL MEASUREMENT / Introduction to measuring and evaluating school learning. Course covers planning for instruction and tests; designing, developing and using classroom tests; and communicating student progress. Specifics include test specifications, item-writing strategies, item analysis, test construction and grade reporting. The course content is appropriate for educators working in elementary and secondary schools as well as in colleges and universities.
Staff 3 sem. hrs.

EDER 5550 DATA PROCESSING FOR EDUCATION / Statistical packages and their impact on planning and implementing educational research projects. Emphasis on collection and codification of data, and SPSS statistics packages.
Staff 3 sem. hrs.

EDHE 5240 INSTRUCTION IN THE COMMUNITY COLLEGE / Designed to assist faculty members in achieving mastery and competence in management of classroom instructional strategies and techniques in the community college.
Staff 3 sem. hrs.

EDHE 5270 THE ADMINISTRATIVE STRUCTURE OF THE COMMUNITY COLLEGE / This course is designed to achieve mastery and competence regarding the basic concepts of the administrative structures, and their development and implementation in the junior/community colleges of America.
Staff 3 sem. hrs.

EDHE 5710 TRENDS AND ISSUES IN ADULT/CONTINUING EDUCATION / An introduction to adult/continuing education that includes a review and analysis of its historical development, social context, current practice and problems, and research.
Staff 3 sem. hrs.

CECS 5010 COMPUTER EDUCATION TOOLS / Application of computer software tools in education. Study of computer application packages and their utilization in the classroom.
Staff 3 sem. hrs.

CECS 5020 COMPUTERS IN EDUCATION / Analysis of computer use in education and applications programming in education. Topics include software and hardware evaluation, planning computer education curricula and facilities. Prerequisite: CECS 5010 (may be taken concurrently).
Staff 3 sem. hrs.

CECS 5110 COMPUTER-ASSISTED INSTRUCTION / Study and analysis of the use of the computer to deliver instruction. Topics include design, development, and review techniques for CAI, current trends in CAI technology and lesson development with an authoring language. Prerequisite: CECS 5020.
Staff 3 sem. hrs.

ATTD 5450 ORGANIZATION AND DEVELOPMENT OF INSTRUCTIONAL MATERIALS / The development, organization and use of materials in applied technology and industrial training programs with an emphasis on developing a unit of instruction; performance objectives, suggested activities, content outline, supplemental activities, and unit tests.
Staff 3 sem. hrs.

ATTD 5470 INTERPERSONAL SKILLS DEVELOPMENT / Development of human relations and communication skills; human relations as a factor in developing programs in business, education and industry.
Staff 3 sem. hrs.

ATTD 5530 CURRICULUM DEVELOPMENT IN APPLIED TECHNOLOGY, TRAINING AND DEVELOPMENT / Designed for applied technology and training professionals, this course focuses on curriculum theories, approaches to curriculum development, and curriculum evaluation strategies. Includes development of goals, competencies, objectives, knowledge-based testing and performance-based testing.
Staff 3 sem. hrs.

EDUC 5130 PHILOSOPHY AND PRINCIPLES OF MULTICULTURAL EDUCATION / The recognition and examination of the philosophy and principles germane to multicultural education. Emphasis is on sensitivity to racial and cultural differences and their influences on an effective educational program. Students also examine the great diversity of lifestyles that our multicultural heritage embraces.
Staff 3 sem. hrs.

EDAD 5530 LEADERSHIP AND EVALUATION / Focuses on administrative leadership functions, including analysis of leadership styles and behaviors, decision-making processes, supervision techniques, teacher evaluation theories and conferencing skills.
Staff 3 sem. hrs.

Texas Woman's University

ELDR 5023 METHODS IN HEALTH EDUCATION RESEARCH / Focus on basic research skills, including library skills, the reading and interpreting of research, writing style, research planning and design, methodologies, and research reporting as they relate to health education. Three lecture hours a week.
Staff 3 sem. hrs.

ELDR 5143 THEORIES OF LEARNING AND EDUCATIONAL MEASUREMENT / Contemporary perspectives of teaching-learning processes and instructional theories; related research on cultural differences and learning; measurement and evaluation; historical issues in learning. Prerequisite: Graduate standing. Three lecture hours a week.
Staff 3 sem. hrs.

ELDR 5343 PHILOSOPHY OF EDUCATION / Leading philosophical points of view in education; concepts of the individual, society, the educative process and the role of education. Three lecture hours a week.
Staff 3 sem. hrs.

ELDR 5713 TRENDS AND ISSUES IN ADULT EDUCATION / Trends and issues affecting adult education in areas such as philosophy, adults as learners, agencies and institutions, program development and the role of the adult educator.
Sherwood 3 sem. hrs.

ELDR 5823 ADULT LEARNING AND DEVELOPMENT / Examination of theory and practice of learning and development within adult education.
Sherwood 3 sem. hrs.

ELDR 5833 INSTRUCTIONAL METHODS IN ADULT EDUCATION / Analysis of instructional methods, techniques and styles utilized in adult education settings. Three lecture hours a week.
Sherwood 3 sem. hrs.

HS 5103 PRINCIPLES AND METHODS OF TEACHING HEALTH PROFESSIONALS / Development of classroom and clinical teaching competencies with emphasis on identification of resources, planning and implementation of instructional units, and instructional strategies for health professionals.
Staff 3 sem. hrs.

HS 5113 CURRICULUM DEVELOPMENT FOR HEALTH PROFESSIONALS / Theoretical concepts of curricular design; identification and implementation of unique factors that determine health curricula.
Staff 3 sem. hrs.

HS 5183 PROGRAM ADMINISTRATION FOR HEALTH PROFESSIONALS / Overview of organization and administration of health education programs; administrative theories; management by objectives.
Staff 3 sem. hrs.

Texas A&M Commerce

ETec 561 LEARNING AND TECHNOLOGY / This course will focus on the theory and principles underlying the uses of technology in the learning process. Included will be the utilization of communication technologies applicable to teaching and learning. The student will develop competencies for selecting and teaching on emergency certification and 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 material are utilized to facilitate achievement of goals.
Staff 3 sem. hrs.

PSY 519 ADVANCED EDUCATIONAL PSYCHOLOGY / This course 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 on the study of knowledge representation, memory, problem-solving, expertise, reasoning and language.
Staff 3 sem. hrs.

PSY 625 COGNITION AND INSTRUCTION I / This course will examine the psychological principles and scientific knowledge base underlying the major models and theories of instructional design. Content will include 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 will require students to apply knowledge and theory derived from cognitive psychology to the design and development of instructional systems and products. Students will be expected to integrate cognitive models and knowledge of human cognition within the processes of developing and designing instructional systems and products.
Staff 3 sem. hrs.

PSY 661 PSYCHOLOGY OF ORGANIZATIONAL CHANGE AND IMPROVEMENT / This course will examine the psychological principles and scientific knowledge base underlying the major models and theories of organizational change and improvement. Particular attention will be 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 will be 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 will be examined along with a discussion of additional roles an 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 will be 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 will be a discussion of different administrative organizations and practices within colleges and departments.
Staff 3 sem. hrs.

Endodontics

Program Director:	James L. Gutmann, Professor
Assistant Professor:	Witherspoon
Clinical Associate Professor:	Johnson
Clinical Assistant Professors:	Buxt, Douthitt, Jowid, Leonard, Lovdahl, Rakusin, Roda

Graduate Program (M.S. in Oral Biology with Thesis + Certificate)
Curriculum published in this catalog
75 semester hours minimum
36 months
Starting date: July

Graduate Program (M.S. in Health Professions Education with Thesis + Certificate)
Information available upon request
75 semester hours minimum
36 months
Starting date: July

Graduate Program (Ph.D. + Certificate)
Information available upon request
60 months
Starting date: July

International Training Program
Information available upon request

Program Objectives

The program objectives are to:

- provide a highly integrated selection of courses and educational experiences that emphasize the development of a strong basic science background coupled with advanced clinical skills;
- develop a highly skilled specialist who is prepared to meet the challenges of contemporary oral health care as a clinician;
- educate the neophyte dental specialist in basic principles of research methodology and adult education in preparation for a career in higher education; and
- provide research, educational and professional experiences necessary for the trained dental specialist in endodontics to be active and productive in a career pursuing scholarly activities within a private practice and academic environment.

Curriculum - Certificate/M.S. in Oral Biology

First Year

First Semester (Summer)			Clock Hours	Credit Hours
OMS	5214	Pharmacology	28	1.5
HPE	5225	Teaching Skills	14	1
OMS	5233	Physical Diagnosis	16	1
BMS	5V04	Head and Neck Anatomy	7	1.5
END	5111	Current Literature Review	14	1
END	5121	Endodontic Treatment Planning	14	1
END	5141	Special Problems in Endodontics	7-35	1
		Total	**100-128**	**8**
Second Semester (Fall)				
BMS	5260	Research and Scientific Communication I	17	1
BMS	5261	Research and Scientific Communication II	17	1
BMS	5312	Physiology	34	2
OMS	5221	Internal Medicine	34	2
OMS	5218	Conscious Sedation	22	1
END	5111	Current Literature Review	34	1
END	5111	Endo Treatment Planning	34	1
END	5141	Special Problems in Endodontics	17-85	1
END	5201	Principles of Clinical Endodontics I	34	2
		Total	**243-311**	**12**
Third Semester (Spring)				
OD	5250	Oral Radiology	17	1
OP	5V21	Advance Oral Pathology	34	2
BMS	5350	Oral Microbiology	34	2
BMS	5V42	Cellular and Molecular Biology	34	2
BMS	5251	Immunology	34	1
BMS	5262	Research and Scientific Communication III	51	1
END	5111	Current Literature Review	34	1
END	5121	Endodontic Treatment Planning	34	1
END	5141	Special Problems in Endodontics	17-85	1
END	5202	Principles of Clinical Endodontics II	34	2
BMS	5227	Scanning Electron Microscopy	51	1
		Total	**374-442**	**15**
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
		Total	**119-189**	**5**

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	5203	Pulpal/Periradicular Biology I	34-51	2
END	5222	Clinical Endodontics	204-306	2
AGD	5205	Practice Management	34	1.5
		Total	**357-544**	**8.5**
Sixth Semester (Spring)				
END	5111	Current Literature Review	34	1
END	5121	Endodontic Treatment Planning	34	1
END	5142	Advanced Special Problems in Endodontics	17-85	1
END	5204	Pulpal/Periradicular Biology II	34-51	2
END	5222	Clinical Endodontics	204-306	2
		Total	**323-510**	**7**
Seventh Semester (Summer)				
END	5111	Current Literature Review	14	1
END	5121	Endodontic 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)				
END	5111	Current Literature Review	34	1
END	5121	Endodontic 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	5205	Pulpal/Periradicular Biology III	51	2
END	5223	Advanced Clinical Endodontics	204-306	2
		Total	**408-731**	**9-17**
Ninth Semester (Spring)				
END	5111	Current Literature Review	34	1
END	5121	Endodontic 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	5206	Pulpal/Periradicular Biology IV	34-51	2
END	5223	Advanced Clinical Endodontics	204-306	2
		Total	**391-850**	**9-17**

Course Descriptions

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 nine credit hours.

Gutmann/Witherspoon 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 nine credit hours.

Gutmann/Witherspoon 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 six semester hours.

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 five semester hours.

Staff 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.

Gutmann/Witherspoon 2 sem. hrs.

5202 PRINCIPLES OF CLINICAL ENDODONTICS II

Continuation of END 5201 with advanced clinical concepts.

Gutmann/Witherspoon 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.

Gutmann 2 sem. hrs.

5204 PULPAL/PERIRADICULAR BIOLOGY II

Biologic basis for treatment rationale based on classic and current literature. Continuation of END 5203.

Gutmann 2 sem. hrs.

5205 PULPAL/PERIRADICULAR BIOLOGY III

Continuation of END 5204 with advanced concepts.

Gutmann 2 sem. hrs.

5206 PULPAL/PERIRADICULAR BIOLOGY IV

Continuation of END 5205 with advanced concepts.

Gutmann 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.

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.

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 one to five semester hours.

Staff max. 3 sem. hrs.

5V99 THESIS

Credit for completion of thesis in acceptable form.

Staff max. 2 sem. hrs.

Health Professions Education

Program Director:	Ernestine S. Brooks, Assistant Professor
Professors:	D. Jones, G. Kress
Associate Professors:	B. DeSpain Eden, D. Harman, A. McCann, J. Shulman

Graduate Program (M.S. with Thesis)
30.5 semester hours minimum
24 months minimum
Starting date: Summer session desirable

The M.S. Program in Health Professions Education is designed to prepare students possessing a professional degree for a career in teaching and research in the health sciences. A minimum of two calendar years (30.5 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.

Curriculum

First Year

First Session (Summer)			Clock Hours	Credit Hours
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	5261	Research and Scientific Communication I and II	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	5262	Research and Scientific Communication III	27	1.5
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
PHS	5291	Human Behavior in Dentistry	9	0.5
		Total	**252**	**11**

Second Year

Fourth Semester (Summer)			Clock Hours	Credit Hours
HPE	5V98	Research for Thesis	56	1
		Total	**56**	**1**
Fifth Semester (Winter			Clock Hours	Credit Hours
HPE	5V98	Research for Thesis	58	1
		Total	**68**	**1**
Sixth Semester (Spring)			Clock Hours	Credit Hours
HPE	5V99	Thesis	72	1
		Total	**72**	**1**

Course Descriptions

DH 5112 INTRODUCTION TO FACULTY RESPONSIBILITIES AND ISSUES IN HIGHER EDUCATION / This course will expose 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 will be presented with materials and 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 will create assessment plans for the course and program level.
McCann 2 sem. hrs.

HPE 5V13 TEACHING INTERNSHIP / Students will teach in the preclinical laboratories, clinics and lecture in selected courses. A progression from teaching observation to lecture and course development and presentation will occur over the duration of the program. Students will work closely with course directors in the development of teaching and clinical activities.
Brooks 1 sem. hr.

HPE 5V25 RESEARCH PRACTICUM / Each student will work with a mentor to conduct research in biomedical, clinical science or education. Students will be 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 will be designed in a journal club format. Each semester, a major topic will be explored through reading and discussion. Students will take responsibility for leading class discussions. Semester topics will address current issues in higher education.
Staff 0.5 - 2 sem. hrs.

HPE 5V27 TEACHING PRACTICUM / Each student will work with a teaching mentor to improve teaching effectiveness. This mentoring process will include 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 will meet weekly in a seminar setting to discuss teaching and learning issues. Students also will select courses from the National Curriculum for Dental Educators (self-study courses requiring participants to complete reading assignments and exercises in pedagogical areas). The National Curriculum for Dental Educators is comprised of 20 courses designed to be administered at the local level. Topics were selected through a national needs assessment. Course developers were solicited along with development teams representing more than 40 dental schools. Courses were reviewed according to standards established by a national advisory committee. Topics include: didactic instruction (four courses), clinical research (two courses), clinical teaching (two courses), clinical assessment (three courses), interpersonal communication, encouraging thinking and judgment, strategies for publishing, teaching, perceptual motor skills, the art of personnel management, computer literacy, ethical inquiry, and administrative and management skills (two courses).
Harman 1-2 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 will 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.

Course Description (Off-campus)

ETec 561 LEARNING AND TECHNOLOGY / This course will focus on the theory and principles underlying the uses of technology in the learning process. Included will be the utilization of communication technologies applicable to teaching learning. The student will develop 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 will examine the psychological principles and scientific knowledge base underlying the major models and theories of instructional design. Content will include 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 will require students to apply knowledge and theory derived from cognitive psychology to the design and development of instructional systems and products. Students will be 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 will examine the psychological principles and scientific knowledge base underlying the major models and theories of organizational change and improvement. Particular attention will be 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 will be 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 will be 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 which have affected the development of the curriculum in higher education. Procedures for designing, implementing and evaluating curricula at the senior college level will be 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 will be a discussion of different administrative organizations and practice within the colleges and departments.
Staff 3 sem. hrs.

Oral and Maxillofacial Pathology

Chair:	William H. Binnie, Professor
Program Director:	John M. Wright, Professor
Associate Professor:	E. Cundiff II

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 lifelong 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	1-2
PER	5V10	Clinical Stomatology I	28	1
OP	5V05	Oral and Maxillofacial Pathology Service	140	0-1
		Total	**203**	**2-4**
First Semester (Fall)				
OP	5V00	Oral and Maxillofacial Pathology Seminar	85	1-2
BMS	5261	Research and Scientific Communication I and II	34	2
PER	5V10	Clinical Stomatology I	68	1
BMS	5190	Seminar: Current Issues in Biomedical Science*	(17)	(1)
		Oral Diagnosis Clinic	68	0
OP	5V05	Oral and Maxillofacial Pathology Service	340	0-1
		Total	**595 (612*)**	**4-7 (5-8*)**
Second Semester (Spring)				
OP	5V00	Oral and Maxillofacial Pathology Seminar	85	1-2
BMS	5V10	Clinical Stomatology I	68	1
BMS	5262	Research and Scientific Communication III	22	1.5
BMS	5122	Biostatistics Lab	11	0.5

BMS	5V42	Cellular and Molecular Biology of Oral and Craniofacial Tissues	34	2
BMS	5190	Seminar: Current Issues in Biomedical Science*	17	(1)
		Oral Diagnosis Clinic	44	0
OP	5V05	Oral and Maxillofacial Pathology Service	250	0-2
OP	5V21	Advanced Oral Pathology	34	2
		Advanced Oral Pathology Laboratory	17	1
OP	5305	General Pathology	33	0
		Oral Diagnosis Clinic	44	0
		Total	**642 (659*)**	**9-12 (10-13*)**

Second Year

			Clock Hours	Semester Hours
In any semester, one or more biomedical science elective(s)				2+
Summer Term				
OP	5V01	Anatomic Pathology and Autopsy	280	2-5
		Baylor University Medical Center		
BMS	5V40	Cellular and Molecular Biology	14	1
		Total	**294**	**3-6**
Third Semester (Fall)				
OP	5V01	Anatomic Pathology and Autopsy	760	3-9
		Clinical Pathology		
		Baylor University Medical Center		
OP	5303	General Pathology	33	0
		Total	**793**	**3-9**
Fourth Semester (Spring)				
OP	5V00	Oral and Maxillofacial Pathology Seminar	85	1-3
BMS	5251	Immunology I	17	1
PER	5V11	Clinical Stomatology II	68	1
		Oral Diagnosis Clinic	44	0
OP	5V05	Oral and Maxillofacial Pathology Service	170	0-2
BMS	5126	Responsible Conduct in Biomedical Sciences*	(17)	(1)
BMS	5V98	Research for Thesis*	(68)	(1)
		Total	**384 (469*)**	**3-7 (5-9*)**

Third Year

Summer Term			Clock Hours	Semester Hours
OP	5V00	Oral and Maxillofacial Pathology Seminar	35	1-2
PER	5V12	Advanced Clinical Stomatology	28	1
		Oral Diagnosis Clinic	28	0
BMS	5V98	Research for Thesis*	(28)	(1)
OP	5V05	Oral and Maxillofacial Pathology Service	70	0-1
		Total	**161 (189*)**	**2-4 (3-5*)**

Fifth Semester (Fall)				
OP	5V00	Oral and Maxillofacial Pathology Seminar	85	1-2
PER	5V12	Advanced Clinical Stomatology	68	1
		Oral Diagnosis Clinic	68	0
		Oral Maxillofacial Imaging	68	0
BMS	5V98	Research for Thesis*	(100)	(2)
OP	5V05	Oral and Maxillofacial Pathology Service	170	0-4
		Total	**459 (559*)**	**2-7 (4-9*)**
Sixth Semester (Spring)				
OP	5V00	Oral and Maxillofacial Pathology Seminar	85	1-2
PER	5V12	Advanced Clinical Stomatology	68	1
		Oral Diagnosis Clinic	68	0
BMS	5V98	Research for Thesis*	(100)	(2)
OP	5V05	Oral and Maxillofacial Pathology Service	170	0-4
		Total	**391 (491*)**	**2-7 (4-9*)**

* M.S. degree candidates

Course Descriptions

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.

5251 IMMUNOLOGY I / Update on the principles of immunology with an emphasis on oral aspects and related diseases.
Staff 1 sem. hr.

5260 RESEARCH AND SCIENTIFIC COMMUNICATION I / Introduction of basic scientific concepts; development of research questions and hypotheses; formulation of research proposals; overview of research methods used in dentistry.
Buschang 2 sem. hrs.

5261 RESEARCH AND SCIENTIFIC COMMUNICATION II / Overview of the research process, introduction to research methodology and designs; sampling strategies; hypothesis testing; critical evaluation of the scientific literature; interchange of scientific information.
Buschang 2 sem. hrs.

5262 RESEARCH AND SCIENTIFIC COMMUNICATION III / 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 will interact daily with faculty utilizing multiheaded teaching microscope to discuss all pathology cases accessioned daily. These will be supplemented with more diagnostically challenging cases. All aspects of the diseases and conditions will be discussed as well as current and historical literature.
Wright 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 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 one additional hour for optional laboratory.
Binnie/Cundiff 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 and Pharmacological Sciences

Chair:	R. Gilbert Triplett, Regents Professor
Program Director:	Sterling R. Schow, Professor
Professor:	S. Parel
Associate Professors:	R. Alexander, S. Taylor
Assistant Professors:	Franco, Frohberg, Grogan

Postgraduate Program (Certificate and M.D. or Ph.D.).

Programs may be combined and completed within the specified time period).
72 months minimum
Starting date: July 1

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 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 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.

M.D./Certificate Curriculum

First Year	Advance placement (year 2 in accredited medical school)
Second Year	Year 3 in accredited medical school
Third Year	Year 4 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)

Course Descriptions

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

Chair:	Rolf G. Behrents, Professor
Professors:	Richard F. Ceen, Peter H. Buschang
Clinical Professors:	C. Alexander, R. Alexander, E. Genecov, T. Matthews
Associate Professors:	J. English, R. Taylor
Clinical Associate Professors:	Attaway, Aubrey, Crosby, Moore, Nichol, Oakes
Clinical Assistant Professors:	Adams, Boley, Brady, Collins, Geller, Goates, Holt, Polson, Tadlock, Valant

Graduate Program (M.S. with Thesis):
73.5 semester hours minimum
27 months minimum

Program Objectives

The program objectives are to:
- provide the student with a well balanced educational experience, integrating a strong foundation in the basic sciences with a diverse clinical experience; and
- graduate a specialist with the highly refined analytical, clinical and management skills necessary to provide optimum oral health care.

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	5200	Introduction to Orthodontics	27	1.5
ORT	5202	Radiology and Cephalometrics	14	1
ORT	5532	Orthodontic Techniques	157	2.5
		Total	**252**	**7**
Second Semester (Fall)				
BMS	5V71/ 75	Growth and Development*	16	1.0
BMS	5V73	Advanced Human Craniofacial Growth*	16	1
CS	5221	Internal Medicine*	22	1.5
CS	5260	Research and Scientific Communication I*	17	1
CS	5261	Research and Scientific Communication II*	17	1
ORT	5042	TMD Clinic	0	0
ORT	5103	Biomechanics I	17	1
ORT	5107	Material Science in Orthodontics	8	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	374	4.5
		Total	**724**	**16**
Third Semester (Spring)				
BMS	5V72	Craniofacial Anomalies*	17	1
CS	5262	Research and Scientific Communication III*	22	1.5
CS	5V01	Advanced Oral Pathology*	36	2
ORT	5031	Orthodontic-Periodontic Seminar	18	0.5
ORT	5042	TMD Clinic	0	0
ORT	5104	Biomechanics II	18	1
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	23	1.5
ORT	5333	Clinical Orthodontics I	389	5
		Total	**763**	**17**

Second Year

Summer Session			Clock Hours	Credit Hours
BMS	5225	Teaching Skills	14	1

ORT	5042	TMD Clinic	0	0
ORT	5050	Craniofacial Anomalies Clinic	0	0
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	142	2
		Total	**281**	**5.5**

Fifth Semester (Fall)

AGD	5205	Practice Management*	12	0
ORT	5042	TMD Clinic	0	0
ORT	5050	Craniofacial Anomalies Clinic	0	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	11	0.5
ORT	5248	Independent Research	158	2.5
ORT	5534	Clinical Orthodontics II	374	4.5
		Total	**718**	**10**

Sixth Semester (Spring)

AGD	5205	Practice Management*	14	1.5
ORT	5042	TMD Clinic	0	0
ORT	5050	Craniofacial Anomalies Clinic	0	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	389	5
		Total	**753**	**12.5**

Third Year

Summer Session			Clock Hours	Credit Hours
ORT	5042	TMD Clinic	0	0
ORT	5050	Craniofacial Anomalies Clinic	0	0
ORT	5110	Orthognathic Surgery Conference III	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 III	145	2
		Total	**281**	**5.5**

Course Descriptions

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.
English, Hallmon 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, Moore 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.
Anderson 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.
Gandini 1 sem. hr.

5104 BIOMECHANICS II / Force and movement; basic concepts fundamental to an understanding of tooth movement.
Chu 1 sem. hr.

5107 MATERIAL SCIENCE IN ORTHODONTICS / Evaluation and utilization of dental materials used in clinical orthodontics.
Griggs 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.
Behrents 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.
English 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.
Behrents 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.
Brady 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.
Behrents 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.
Behrents 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. A edgewise course is conducted on typodonts simulating the treatment of various malocclusions.
English 2.5 sem. hrs.

5533, 5534 CLINICAL ORTHODONTICS I, II and III / Diagnosis and treatment of patients with a broad variety off 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.
English varies by semester

AGD 5205 PRACTICE MANAGEMENT SEMINAR* / 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 an office team.
Wakefield 1.5 sem. hr.

BMS 5225 TEACHING SKILLS FOR HEALTH PROFESSIONS EDUCATORS* / Provides an overview of teaching principles and methods. It will be geared toward the special needs of the health profession educator. Students will be presented with materials and actively involved in exercises concerned with all aspects of the teaching / learning process. Seminar and workshop format.
Brooks 1 sem. hr.

BMS 5V04 HEAD AND NECK ANATOMY* / Static and functional aspect of anatomy with emphasis on the tissues, organs and systems pertinent to dentistry.
Harper 1.5 sem. hrs.

BMS 5V71, 5V75 GROWTH AND DEVELOPMENT* / Deals with the fundamentals of modern developmental biology, morphogenesis, and embryology of the craniofacial region. Also provides an overview of the biology of postnatal human growth and maturation from birth to senescence.
Svoboda 1 sem. hr.

BMS 5V72 CRANIOFACIAL ANOMALIES* / Deals with the abnormal development of the craniofacial region, with emphasis on the definition and recognition of syndromes and on the genetic environmental factors responsible for craniofacial dysmorphogenesis.
Carlson 1 sem. hr.

BMS 5V73 ADVANCED HUMAN CRANIOFACIAL DEVELOPMENT* / Processes involved in the development, growth and adaptation of the craniofacial region; both prenatal and postnatal development and growth are considered with emphasis on postnatal events; impact of orofacial function on growth; unique properties of the cartilages, skeletal structure and musculature of the craniofacial region.
Carlson 1 sem. hr.

CS 5221 INTERNAL MEDICINE* / Oral manifestations of systemic disease; problems in internal medicine and diagnosis.
Bates 1.5 sem. hrs.

CS 5260, 5261, 5262 RESEARCH AND SCIENTIFIC COMMUNICATION I*, II* and III* / A series of courses dealing with research methodology. The process of research, ranging from the initiation of research projects to the presentation of findings; traditional and innovative approaches to oral health research; and the mechanics of scientific writing are considered. The latter section of the series consists of a lecture and laboratory course dealing with elementary statistical methods for workers in biological sciences; selection of methods appropriate for experimental design and data interpretation.
Buschang varies per semester

CS 5V01 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

Chair: N. Sue Seale, Regents Professor
Associate Professors: C. McWhorter, M.Webb, C. Wilson
Assistant Professors: Gallup, Inga, King, Lindsay

Graduate Program (M.S. with Thesis)
48.5 hours minimum
27-30 months minimum

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	4
PD	5V21	Hospital Dentistry I	25	1.5
		Total	**110**	**6.5**
Fall Semester				
BMS	5260	Research and Scientific Communication I	17	1
BMS	5261	Research and Scientific Communication II	17	1
BMS	5V71, 75	Craniofacial Growth Track I, II and III	51	3
AGD	5205	Practice Management	credit in spring semester	
PD	5V12	Pediatric Dentistry II	25	1.5
PD	5V22	Hospital Dentistry II	34	2
		Total	**144**	**8.5**
Spring Semester				
BMS	5273	Research and Scientific Communication III	25	1.5
AGD	5205	Practice Management	25	1.5
PD	5V13	Pediatric Dentistry III	25	1.5
PD	5V23	Hospital Dentistry III	85	5
		Total	**160**	**9.5**

Second Year

Summer Session			Clock Hours	Credit Hours
PD	5V14	Pediatric Dentistry IV	42	2.5
PD	5V24	Hospital Dentistry IV	59	3.5
		Total	**101**	**6**
Fall Semester			Clock Hours	Credit Hours
PD	5V15	Pediatric Dentistry V		0
PD	5V25	Hospital Dentistry V	153	9
		Total	**153**	**9**
Spring Semester			Clock Hours	Credit Hours
OD	5250	Oral Radiology	17	1
PD	5V16	Pediatric Dentistry VI	102	6
PD	5V26	Hospital Dentistry VI	34	2
		Total	**153**	**9**

Course Descriptions

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 will focus 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 will present 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 will investigate 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 will be 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 will be 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 will be 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

Chair:	William W. Hallmon, Professor
Program Director:	William W. Hallmon, Professor
Stomatology Director:	Terry D. Rees, Professor
Clinical Professors:	P. Allen, M. Ramsay
Associate Professors:	I. Al-Hashimi, J. Cho, F. Rivera-Hidalgo, T. Stanford

Clinical Associate Professors:	Bookatz, Glass, Griffiths, Harrel, Krayer, Israelson, Plemons, Rossmann, Ward
Assistant Professors:	Boltchi, Hammi, Tanur
Clinical Assistant Professors:	Barnes, Crump, Lee, Staretz
Visiting Clinical Professors:	Lamey, Menter
Visiting Associate Clinical Professors:	Burkhart, Buser, Mealey, Wilson
Visiting Assistant Clinical Professors:	Lorenzana, Simmons
Clinical Instructor:	Abraham

Graduate Program (M.S. with Thesis)
86.5 semester hours minimum
36 months minimum
Starting date: July 1

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;
- 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
OMS	5233	Physical Diagnosis	16	1
OMS	5214	Clinical Pharmacology	22	1.5
BMS	5V04	Head and Neck Anatomy	22	1.5
		Total	**254**	**6.5**
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
BMS	5260, 5261	Research and Scientific Communication I and II	34	2
OMS	5218	Conscious Sedation	22	1
		Total	**526**	**12**

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	5262	Research and Scientific Communication III	36	1.5
BMS	5251	Immunology	18	1
BMS	5350	Oral Microbiology	36	2
OP	5V21	Advanced Oral Pathology/Lab	54	3
		Total	**696**	**13.5**

Total credit hours for year 1 - 32
Total clock hours for year 1 - 1476

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	5221	Practice Teaching	56	2
PER	5432	Clinical Anesthesia for the Periodontist	160	3
		Total	**312**	**6**

Fall Semester			Clock Hours	Credit Hours
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	0.5
PER	5221	Practice Teaching	119	2
PER	5227	Periodontics Literature Review II	34	2
PER	5V98	Research for Masters Thesis	34	2
PER	5115	Periodontal Plastic Surgery	16	0.5
BMS	5312	Applied Medical Physiology	34	2
OMS	5221	Internal Medicine	34	2
		Total	**695**	**13.5**

Spring Semester			Clock Hours	Credit Hours
PER	5V11	Clinical Stomatology II	148.5	0
PER	5006	Advanced Clinical Periodontics	44	0
PER	5031	Journal Club	22	0
PER	5221	Practice Teaching	11	0
PER	5045	Related Disciplines Seminar	8	0
PER	5140	Case Presentation/Treatment Planning	22	2
PER	5227	Periodontal Literature Review II	77	2
PER	5227	Advanced Dental Implants		
PER	5035	Ortho/Perio Seminar	24	0
PER	5066	Mock Board Examination I	16	0.5
PER	5V42	Cell and Molecular Biology	36	2
		Total	**760**	**11**

Total credit hours for year 2 - 30.5
Total clock hours for year 2 - 1767

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
PER	5435	Periodontal Histopathology	16	2
		Total	**270**	**7**

Fall Semester			Clock Hours	Credit Hours
PER	5065	VA Hospital Rotation (one day/week	64	0
		for eight-week block)	68	
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
AGD	5205	Practice Management	12	0
		Total	**653**	**8**
Spring Semester			Clock Hours	Credit Hours
PER	5V12	Advanced Clinical Stomatology	36	0
PER	5006	Advanced Clinical Periodontics II	288	0
PER	5031	Journal Club	36	0
AGD	5205	Practice Management	14	1.5
PER	5221	Practice Teaching	72	2
PER	5045	Related Disciplines Seminar	36	0
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	**612**	**9**

Total credit hours for year 3 - 24
Total clock hours for year 3 - 1,535

Total credit hours for residency (three years) - 86.5
Total clock hours for residency (three years) - 3,302

Course Descriptions

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 5005. 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 5006. 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 dermatologic 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 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 will be 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 and 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 a related to
Periodontics 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 also are 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 pharmacotherapeutics and complex regenerative therapeutic approaches.
Rees, Faculty 2 sem. hrs.

5213 DENTAL IMPLANTS / Historical review of dental implants, including biologic 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.

5221 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.

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 four 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 four semester hours.
Hallmon, Staff 2 sem. hrs.

5228 PERIODONTAL LITERATURE REVIEW III / A seminar series during the third year of residency. Students will learn to select and then research various contemporary topics and lead group discussions. Use of computer search technology and interlibrary facilities will be taught and utilized. Self-reliance and individual effort will be emphasized instead of school-provided reading lists as in PER 5224 and PER 5227. Students register for two semesters for a total of four 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

Program Director:	Ronald D. Woody, Professor
Professors:	A. Bolouri, A. Miller, S. Parel
Associate Professors:	G. Guillen
Assistant Professors:	Hudson, Hummel
Clinical Assistant Professors:	Barbash, Buskin, Daley, Naik, Pace
Clinical Associate Professors:	Dahl, Goodman

Graduate Program (M.S. with Thesis):
82 semester hours minimum
35 months minimum
Starting date: July

Postgraduate Program (Certificate)
Runs concurrently with master's program
80 semester hours minimum
35 months minimum
Starting date: July

Program Objectives

The program objectives are to:
- develop clinical proficiency in the disciplines of prosthodontics, complete denture, removable partial denture, fixed partial denture, maxillofacial prosthetics and implant prosthodontics;
- develop laboratory competence in fixed and removable prosthodontics;
- provide relevant didactic course content in the basic sciences, prosthodontics and related disciplines that will establish a firm foundation for clinical diagnosis and treatment; and
- promote and provide research opportunities.

Curriculum

First 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	.5
PRO	5210	Prosthodontic Concepts and Techniques	218	2.5
PRO	5112	Basic Occlusal Concepts and Waxing Techniques	48	1
OMS	5233	Physical Diagnosis	18	1
OMS	5214	Clinical Pharmacology	22	1.5
BMS	5V04	Head and Neck Anatomy	22	1.5
		Total Summer Clock/Credit Hours	**320**	**7**

Fall Semester				
PRO	5019	Journal Club	36	0
PRO	5020	Treatment Planning and Clinical Review	18	0
PRO	5118	Prosthodontic Topic Literature Review	36	1
PRO	5226	Occlusal Concepts and Techniques	36	1.5
PRO	5122	Advanced Prosthodontic Concepts and Techniques	36	1
PRO	5126	Related Disciplines Seminar	36	1
PRO	5301	Clinical Prosthodontics	350	3
PRO	5259	Implant Concepts and Treatment	36	1.5
OMS	5221	Internal Medicine	34	2
BMS	5261	Research and Scientific Communications I and II	34	2
OMS	5218	Conscious Sedation	22	1
BMS	5V73	Human Craniofacial Development and Growth	22	1
PRO	5022	Interdisciplinary Conferences	24	0
		Total Semester Clock/Credit Hours	**720**	**15**
Spring Semester				
PRO	5019	Journal Club	36	0
PRO	5020	Treatment Planning and Clinical Review	18	0
PRO	5118	Prosthodontic Topic Literature Review	36	1
PRO	5226	Occlusal Concepts and Techniques	36	1.5
PRO	5132	Advanced Prosthodontic Concepts and Techniques	36	1
PRO	5126	Related Disciplines Seminar	36	1
PRO	5301	Clinical Prosthodontics	360	3
OP	5V21	Advanced Oral Pathology	36	2
BMS	5350	Oral Microbiology	36	2
OD	5250	Oral Radiology	18	1
BMS	5262	Research and Scientific Communications III	36	1.5
PRO	5001	Mock Board Examination I	12	0
PRO	5022	Interdisciplinary Conferences	24	0
		Total Semester Clock/Credit Hours	**720**	**14**
First Year Totals			**1,760**	**36**

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	.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 Board	18	0
PRO	5118	Prosthodontic Topic Literature Review	36	1
PRO	5127	Advanced TMD and Occlusal Concepts and Treatments	36	1.5
PRO	5136	Maxillofacial Prosthodontic Concepts	18	1
PRO	5402	Advanced Clinical Prosthodontics I	462	4
PRO	5250	Geriatric Prosthodontics	18	1
PRO	5V98	Thesis Research	72	1
PRO	5022	Interdisciplinary Conferences	24	0
		Total Semester Clock/Credit Hours	**720**	**9.5**
Spring Semester				
PRO	5019	Journal Club	36	0
PRO	5020	Treatment Planning Board	18	0
PRO	5118	Prosthodontic Literature Review	36	1
PRO	5136	Maxillofacial Prosthodontic Concepts and Treatments	18	1
PRO	5402	Advanced Clinical Prosthodontics I	420	4
PRO	5160	Advanced Implant Concepts and Treatment	36	1.5
PRO	5126	Related Disciplines Seminar	36	1
PHS	5191	Human Behavior	12	0.5
PRO	5V98	Thesis Research	72	1
PRO	5002	Mock Board Examination II	12	0
PRO	5022	Interdisciplinary Conferences	24	0
		Total Semester Clock/Credit Hours	**720**	**10**
Second Year Totals			**1,760**	**23.5**

Third 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	.5
PRO	5503	Advanced Clinical Prosthodontics II	200	2.5
HPE	5225	Teaching Skills	16	1
PRO	5V98	Thesis Research	64	1
		Total Summer Clock/Credit Hours	**312**	**5**

Fall Semester				
PRO	5019	Journal Club	36	0
PRO	5020	Treatment Planning Board	18	0
PRO	5118	Prosthodontic Topic Literature Review	36	1
PRO	5503	Advanced Clinical Prosthodontics II	480	5
PRO	5130	Clinical Teaching	54	1
AGD	5205	Practice Management		
PRO	5V99	Thesis Preparation	72	1
PRO	5022	Interdisciplinary Conferences	24	0
		Total Semester Clock/Credit Hours	**720**	**8**
Spring Semester				
PRO	5019	Journal Club	36	0
PRO	5020	Treatment Planning Board	18	0
PRO	5118	Prosthodontic Topic Literature Review	36	1
PRO	5503	Advanced Clinical Prosthodontics II	472	5
PRO	5126	Related Disciplines Seminar	36	1
AGD	5205	Practice Management	14	1.5
PRO	5003	Mock Board Examination III	12	0
PRO	5V99	Thesis Preparation	72	1
PRo	5022	Interdisciplinary Conferences	24	0
		Total Semester Clock/Credit Hours	**720**	**9.5**
Third Year Totals			**1,760**	**22.5**

Summary

First year: 36 semester hours
Second year: 23.5 semester hours
Third year: 22.5 semester hours
Total: 82 semester hours

Course Descriptions

5001 MOCK BOARD EXAMINATION I / Prepares the students for certification by the American Board of Prosthodontics. Includes a comprehensive written examination, presentation and defense of a Part IV patient presentation with oral examination.
Woody, Faculty 0 sem. hr.

5002 MOCK BOARD EXAMINATION II / A continuum of Mock Board Examination I (5001) preparing students for certificate by the American Board of Prosthodontics with a comprehensive written examination, presentation and defense of a Part II or Part III patient presentation with oral examination.
Woody, Faculty 0 sem. hr.

5003 MOCK BOARD EXAMINATION III / A continuum of Mock Board Examination I (5001) preparing students for certificate by the American Board of Prosthodontics with a comprehensive written examination, presentation and defense of a Part II or Part III patient presentation not yet presented with oral examination. Selection also is made of which parts II, III or IV should possibly be considered for actual presentation to the American Board of Prosthodontics. Students are required to take Part I (written) of the ABP examination in February of their third year.
Woody, Faculty 0 sem. hr.

5019 JOURNAL CLUB / Reviews current prosthodontic literature and encompasses analytical review and evidence based approach to literature. Students register for a total of three summers and six semesters.
Woody, Faculty 0 sem. hr.

5020 TREATMENT PLANNING AND 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.
Woody, Faculty 0 sem. hr.

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.
Woody, Faculty 0 sem. hr.

5118 PROSTHODONTIC TOPIC LITERATURE REVIEW / Detailed review of classical and current prosthodontic literature organized into specific topics, encompassing all subdisciplines in prosthodontics. Students are assigned a specific topic, upgrade past literature packets and 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.
Woody, Faculty 1 sem. hr.

5122 ADVANCED PROSTHODONTIC CONCEPTS AND 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.
Woody, Faculty 1 sem. hr.

5126 RELATED DISCIPLINES SEMINAR / Interactive seminar presentations in the specialty areas of periodontics, oral and maxillofacial surgery, orthodontics, endodontics, biomaterials, physiology and other disciplines not covered in the core curriculum specifically related to prosthodontics. Students register for a total of four semesters.
Woody, Faculty 1 sem. hr.

5130 CLINICAL TEACHING / Lectures and clinical instruction involving contact with second-, third- and fourth-year dental students. Four hours per week per semester of clinical instruction including diagnosis, treatment and recall of patients requiring various categories of prosthodontic treatment. Students register for one semester.
Woody, Faculty 1 sem. hr.

5136 MAXILLOFACIAL/IMPLANT PROSTHETICS / 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. Students register for a total of two semesters.
Naik, Parel, Woody 1 sem. hr.

5150 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.
Gibson 1 sem. hr.

5210 INTRODUCTION TO PROSTHODONTIC CONCEPTS AND TECHNIQUES / Assessment, development and enhancement of diagnostic and clinical skills in prosthodontics; lecture/laboratory format, concepts in fixed, removable and implant prosthodontics, occlusion, porcelain laboratory techniques and applications.
Woody, Faculty 2.5 sem. hrs.

5226 OCCLUSAL CONCEPTS AND TECHNIQUES / Theories and clinical application of various occlusal concepts with utilization of various categories of recording mechanisms for concylar movements. Students register for a total of two semesters.
Pace, Woody, Faculty 1.5 sem. hrs.

5227 ADVANCED TMD AND OCCLUSAL CONCEPTS AND TREATMENTS / Seminars and clinical application of contemporary literature and techniques in temporomandibular disorders and occlusion.
Pace, Woody, Faculty 1.5 sem. hrs.

5259 IMPLANT CONCEPTS AND 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.
Woody, Faculty 1.5 sem. hrs.

5260 ADVANCED IMPLANT PROSTHODONTICS / 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.
Woody, Faculty 1.5 sem. hrs.

5301 CLINICAL PROSTHODONTICS / Diagnosis, treatment and management of patients requiring various categories of prosthodontic care. Patient selection and load determined by student aptitude and clinical competence. Students register for a total of two semesters.
Woody, 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 one day a week for three 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.
Woody/Faculty 4 sem. hrs.

5503 ADVANCED CLINICAL PROSTHODONTICS II / A continuum of Advanced Clinical Prosthodontics I 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. Students register for a total of one summer and two semesters.
Woody, 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.
Woody, Faculty max 4 sem. hrs.

5V99 THESIS PREPARATION / 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 hypothesis with the necessary experimental and control procedures.
Woody, Faculty max 4 sem. hrs.

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, Baylor College of Dentistry vigorously supports continuing dental education and offers a full range of programs. Lectures, seminars, electronic distance-learning and clinical experiences about topics of current interest to dentists and dental auxiliaries are taught by 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. Some courses may include subject matter of an experimental or controversial nature offered for informational purposes in a spirit of academic freedom.

The entire sixth floor of Baylor College of Dentistry is designed for courses in continuing education. These dedicated facilities include a dental laboratory with 30 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, lunch and dinner plus morning and afternoon breaks – all served from the food service areas that are a part of the efficiency-oriented facility.

The schedule offers more than 500 credit hours of continuing education per year. Approximately 40 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. This is accomplished by educating the team at the course or by sending the doctor a videotape or other materials to educate the dental team in the office.

To accommodate those registrants in locations inconvenient to the Dallas/Fort Worth metroplex area, BCD offers some courses each year off campus. The Office of Continuing Education also is 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. The first project is a workbook and video addressing “Biohazard Control in the Dental Office.” This package contains forms and information for a personal office training manual. There also is a self-test for the entire office that yields continuing education credits and/or certification of mandatory OSHA training for the current year. Information regarding purchase of the manual (package) may be obtained by calling the Office of Continuing Education.

In addition, the department maintains a rich informational and educational site on the World Wide Web as an integral part of the Baylor College of Dentistry web site. The Office of Continuing Education web page includes a calendar of courses offered and full professional courses such as a distant-learning course on distraction osteogenesis. The web site can be reached at http://www.tambcd.edu/CEdental.

For information or the annual CE catalog, write to: Charles J. Arcoria, D.D.S., M.B.A., Interim Director of Continuing Education; Baylor College of Dentistry; The Texas A&M University System Health Science Center; P.O. Box 660677; Dallas, Texas 75266-0677; or call 214-828-8238 or 1-800-856-8238.

College of Medicine

Photo – Gary Hansen, Scott & White

2001-2003 Catalog

College of Medicine

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Table of Contents

Administrative Structure

Nancy W. Dickey, M.D.	Interim Dean of Medicine
Roderick E. McCallum, Ph.D.	Executive Associate Dean
Walter P. Dyck, M.D.	Senior Associate Dean for Clinical Affairs
R. Kelly Hester, Ph.D.	Associate Dean for Academic Affairs
Douglas P. Venuti	Associate Dean for Finance and Business Services
Kathleen M. Fallon, M.D.	Associate Dean for Student Affairs and Admissions
Allison R. Ficht, Ph.D.	Interim Assistant Dean for Research and Graduate Studies
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

Department Heads

Timothy M. Bittenbinder, M.D. (Interim)	Anesthesiology
Jerry R. Baskerville, M.D. (Interim)	Emergency Medicine
Don B. Cauthen, M.D.	Family and Community Medicine
James R. West, Ph.D.	Human Anatomy and Medical Neurobiology
Dennis Bastron, M.D.	Humanities in Medicine
John Starr, M.D.	Internal Medicine
Hagan Bayley, Ph.D.	Medical Biochemistry and Medical Genetics
John M. Quarles, Ph.D. (Interim)	Medical Microbiology and Immunology
George C.Y. Chiou, Ph.D.	Medical Pharmacology and Toxicology
Harris J. Granger, Ph.D.	Medical Physiology
Dudley P. Baker, M.D.	Obstetrics and Gynecology
Julius A. Gordon, M.D.	Pathology and Laboratory Medicine
Don P. Wilson, M.D.	Pediatrics
William J. Meek, M.D. (Interim)	Psychiatry and Behavioral Science
L. Gill Naul, M.D.	Radiology
Dennis J. Lynch, M.D.	Surgery
Arthur E. Johnson, Ph.D.	Wehner-Welch Chair
Kenneth M. Baker, M.D.	Frank W. Mayborn Chair

Dean's Biography

Nancy W. Dickey, M.D.
Interim Dean, College of Medicine

Dr. Nancy W. Dickey, interim dean of The Texas A&M University System Health Science Center College of Medicine and past president of the American Medical Association, is a board-certified family physician from College Station. She was the founding program director of the Family Practice Residency of the Brazos Valley affiliated with the A&M System HSC College of Medicine in Bryan/College Station. She also is a professor in the Department of Family and Community Medicine at COM.

Dickey was elected president-elect of AMA in June 1997 and assumed the role of president in June 1998. Prior to her election, she served in many roles with the association including chair of the Board of Trustees, vice chair and secretary of the board. During her tenure as chair and president, Dickey helped create the National Patient Safety Foundation and served as its first chair of the board. Prior to her election to the board, she served on the AMA Ad Hoc Committee on Women in Organized Medicine (1979-80), the AMA Council on Ethical and Judicial Affairs (1980-89) and as its chair from 1984-87. A fellow of the American Academy of Family Physicians, she has served several roles in the Texas Medical Association as well.

A graduate of Stephen F. Austin State University, Dickey received her medical training at the University of Texas Medical School at Houston, where she was a recipient of the Distinguished Alumni Award. She has served as a reviewer for the *Journal of the American Medical Association* and on the editorial advisory boards of *Patient Care*, *Medical World News*, *Medical Ethics Advisor* and *Archives of Family Medicine*.

Academic Calendar

The College of Medicine reserves the right to change the academic calendar at any time.

Year 1 (M-1) Students: Class of 2005

College Station Campus

Fall Semester 2001

Week	Date (First Day)	
	July 30	Orientation
1	August 6	1st Semester Begins
2	August 13	
3	August 20	
4	August 27	
5	September 3	Labor Day
	September 4	Class Resumes
6	September 10	
7	September 17	
8	September 24	
9	October 1	
10	October 8	
11	October 15	
12	October 22	
13	October 29	
14	November 5	
15	November 12	
	November 19-23	Thanksgiving Break
16	November 26	Class Resumes
17	December 3	
18	December 10	Finals
	December 17 & 24	Vacation Weeks

Spring Semester 2002

Week	Date (First Day)	
1	January 2, 2002	2nd Semester Begins
2	January 7	
3	January 14	
	January 21	Dr. Martin Luther King Jr. Holiday
4	January 22	Class Resumes
5	January 28	
6	February 4	
7	February 11	
8	February 18	
9	February 25	
10	March 4	
	March 11-15	Spring Break
11	March 18	Class Resumes
12	March 25	
13	April 1	

14	April 8	
15	April 15	
16	April 22	
17	April 29	
18	May 6	Finals
	End of Academic Year	

	Thanksgiving Break	November 19-23, Monday-Friday
	Vacation Week(s)	December 17-January 1, 2002
	Dr. Martin Luther King Jr. Holiday	January 21
	Spring Break	March 11-15, Monday-Friday

Year 2 (M-2) Students: Class of 2004

College Station Campus

Fall Semester 2001

Week	Date (First Day)	
1	August 6, 2001	1st Semester (Short) Begins
2	August 13	
3	August 20	
4	August 27	
5	September 3	Labor Day
	September 4	Class Resumes
6	September 10	
7	September 17	
8	September 24	
9	October 1	
10	October 8	
11	October 15	
12	October 22	
	October 29	Exam

Winter-Spring Semester 2001-2002

Week	Date (First Day)	
1	October 30	2nd Semester (Long) Begins
2	November 5	
3	November 12	
	November 19-23	Thanksgiving Break
4	November 26	Class Resumes
5	December 3	
6	December 10	
	December 17 & 24	Vacation Weeks
7	January 2, 2002	Class Resumes
8	January 7	
9	January 14	
	January 21	Dr. Martin Luther King Jr. Holiday
10	January 22	Class Resumes

11	January 28	
12	February 4	
13	February 11	
14	February 18	
15	February 25	
16	March 4	
	March 11-15	Spring Break
17	March 18	Class Resumes
18	March 25	
19	April 1	
20	April 8	
21	April 15	
22	April 22	
23	April 29	Review Week
24	May 6	Finals

Thanksgiving Break	November 19-23, Monday-Friday
Vacation Week(s)	December 17-January 1
Dr. Martin Luther King Jr. Holiday	January 21, Monday
Spring Break	March 11-15, Monday-Friday
USMLE Exam I Step 1	May-June

Year 3 (M-3) Students: Class of 2003

Temple Campus

Week	Date (First Day)
	Orientation/ACLS
0	June 11, 2001
1	June 18
2	June 25
3	July 2
4	July 9
5	July 16
6	July 23
	End of 6-week Clerkships
7	July 30
8	August 6
9	August 13
10	August 20
11	August 27
12	September 3
	End of 6- & 12-week Clerkships
13	September 10
14	September 17
15	September 24
16	October 1
17	October 8

Week	Date (First Day)	
18	October 15	
	End of 6-week Clerkships	
19	October 22	
20	October 29	
21	November 5	
22	November 12	
23	November 19	
24	November 26	
	End of 6- & 12-week Clerkships	
25	December 3	
26	December 10	
27	December 17	
28	December 24	Vacation Week
29	December 31	
30	January 7, 2002	
31	January 14	
	End of 6-week Clerkships	
32	January 21	
33	January 28	
34	February 4	
35	February 11	
36	February 18	
37	February 25	
	End of 6- & 12-week Clerkships	
38	March 4	Vacation Week
39	March 11	
40	March 18	
41	March 25	
42	April 1	
43	April 8	
44	April 15	
	End of 6-week Clerkships	
45	April 22	
46	April 29	
47	May 6	
48	May 13	
49	May 20	
50	May 27	
	End of 6- & 12-week Clerkships and Academic Year	

Year 4 (M-4) Students: Class of 2002

Module	Week	Date (Monday)
Becoming a Clinician		
	1	June 4, 2001
I	2	June 11
	3	June 18
	4	June 25
	5	July 2
II	6	July 9
	7	July 16
	8	July 23
	9	July 23
III	10	August 6
	11	August 13
	12	August 20
	13	August 27
IV	14	September 3
	15	September 10
	16	September 17
	17	September 24
V	18	October 1
	19	October 8
	20	October 15
	21	October 22
VI	22	October 29
	23	November 5
	24	November 12
	25	November 19
VII	26	November 26
	27	December 3
	28	December 10
	29	December 17
	30	December 24 **
	31	January 1, 2002 **
VIII	32	January 7
	33	January 14
	34	January 21
	35	January 28
IX	36	February 4
	37	February 11
	38	February 18
	39	February 25
Becoming a Clinician		
	40	March 4
	41	March 11
X	42	March 18 *
	43	March 25
	44	April 1
	45	April 8
XI	46	April 15
	47	April 22
	48	April 29
	49	May 6
	50	May 13 **

Graduation: May 18, 2002

10-week Vacation

* Match Day (March 21, 2002)

** Optional Vacation

History

The Texas State 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 COM 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 College of Medicine, 32 in all, matriculated in 1977. In 1981, 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 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 Texas A&M University System Health Science Center.

The College of Medicine 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 University System 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 college utilizes the varied resources of the Texas A&M University System, The Scott & White Memorial Hospital and Clinic, the Central Texas Veterans Health Care System, 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 College of Medicine 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.

Institutional Objectives

The faculty of the College of Medicine is composed of more than 800 basic scientists and physicians. The majority of the basic scientists on the faculty teach first- and second-year students on the College Station campus, whereas physician faculty members are located in College Station, Temple, Killeen and Corpus Christi.

Medical students are offered a wide range of clinical experiences through formal clerkships at the Scott & White Memorial Hospital and Clinic, a large multi-specialty practice that includes a health maintenance organization; the Central Texas Veterans Health Care System hospitals; Driscoll Children's Hospital in Corpus Christi; Darnall Army Community Hospital at Fort Hood; or with private practitioners 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 College of Medicine believe that the four years leading to the M.D. degree are only the beginning of a lifelong 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, 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. 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 with 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 Texas A&M University System Health Science Center College of Medicine 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 major university, an exemplary multi-specialty group medical practice, individual practitioners of medicine, the medical programs of the departments of Veterans Affairs and Defense, and local private or public health care agencies.

Location

The 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, Darnall Army Community Hospital at Fort Food and Driscoll Children's Hospital in Corpus Christi.

College Station

Texas A&M University is located in College Station. Bryan adjoins College Station, and the two cities have attained a combined total population of about 134,000. 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 14,000 people in Brazos County. Other major employers include the City of College Station, the City of Bryan, Agency Management Services, and Sanderson Farms. For employment information, write the: Texas Employment Commission; 801 E. 29th St.; Bryan, Texas 77801; or the Personnel Office, Texas A&M University.

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, two golf courses and numerous tennis courts. There are a number of private and university recreational facilities. In addition, the George Bush Presidential Library and Museum makes its home here as well.

Temple

Temple, the largest city 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 Stillhouse Hollow Reservoir. Medicine is the largest industry in Temple. Four local hospitals, Scott & White Memorial Hospital and Clinic, Scott & White Santa Fe Center, Olin E. Teague Veterans' Center, and King's Daughters Hospital provide more than 1,500 beds and employ more than 7,000 people. Other major employers in Temple include Mobil Chemical Company, McLane Company Inc., Ralph Wilson Plastics Inc., American Desk, Artco-Bell, the Santa Fe Railroad and Western Auto.

Temple has a pleasant small-town atmosphere in a region with Sunbelt-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.

Facilities

The College Station Campus

The Joe H. Reynolds Building, located on the west side of the Texas A&M campus, houses the teaching and research facilities for the basic science departments. The College of Medicine administrative offices, institutes and departmental offices for Human Anatomy and Medical Neurobiology, Family and Community Medicine-College Station campus, Humanities in Medicine, Medical Biochemistry and Medical Genetics, Medical Microbiology and Immunology, Medical Pharmacology and Toxicology, Medical Physiology, and Pathology and Laboratory Medicine are at this location.

The Clinical Campus

The clinical campus of the College of Medicine consists of the Scott & White Memorial Hospital and Clinic, the Central Texas Veterans Health Care System and Darnall Army Community Hospital – all in the Temple/Fort Hood area – as well as Driscoll Children's Hospital in Corpus Christi.

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 240-acre hilltop site just south of downtown Temple in 1963. It became associated with the Texas A&M University College of Medicine in 1974, prior to the opening of the medical school.

The Scott & White health complex is composed of Scott & White Memorial Hospital; Scott, Sherwood and Brindley Foundation; Scott & White Clinic; Scott & White Health Plan; and the Division of Research and Education. Scott & White Memorial Hospital is a nonprofit hospital operating 463 beds. Among its special facilities are the Lucy King Brown Special Treatment Center, the Mabee Diagnostic Center, the W. Guy Draper and Monette Jordan Draper Critical Care Center, and the Jesse H. and Mary Gibbs Jones Prenatal Center. In addition, the Scott & White Santa Fe Center offers skilled nursing beds, geriatric, and alcohol and drug rehabilitation services. The Scott & White Clinic staff – all faculty members in the College of Medicine – is composed of about 510 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 18 regional clinics in Killeen, McGregor, Moody, Hewitt, Waco, Georgetown, Goldthwaite, Gatesville, Taylor, Belton, Round Rock, Bellmead, Cedar Park, Horseshoe Bay, Meridian and College Station. The Scott & White Clinic in College Station, opened in 1986, is staffed by more than 70 physicians in 23 medical specialties. The Texas A&M University System Health Science Center College of Medicine offices for the departments of Anesthesiology, Emergency Medicine, Internal Medicine, Obstetrics and Gynecology, Pediatrics, Psychiatry and Behavioral Science, Radiology, and Surgery are housed at the 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 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. In fiscal year 2000, CTVHCS had nearly 500,000 outpatient visits and saw more than 7,000 admissions to acute care.

CTVHCS 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 in Palestine, Brownwood 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 College of Medicine since the college's inception. Third- and fourth-year medical students participate in clinical training in the areas of general surgery, orthopedics, internal medicine, urology, ophthalmology, anesthesiology, plastic surgery, pulmonary, 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.

CTVHCS' research program is entering a phase of rapid growth. At the Teague Center, a $500,000, five-year Merit Review Program was funded Oct. 1, 1997, to study liver disease and continues to grow with two new investigators. In addition, current projects include research on nerve regeneration and cardiac microcirculation with recent funding of $100,000 for cardiac vascular research.

The Neuropsychiatry Research Program, which is studying schizophrenia, PTSD, and Alzheimer's, 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 just started and a new clinical research unit at Waco has just opened. Start-up funding of $88,000 has been received from the VA Regional Office for a molecular biology-based cancer detection study.

Additionally, groundbreaking will be held in the summer of 2001 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 Texas A&M University System Health Science Center, and Scott & White Memorial Hospital.

Darnall Army Community Hospital 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-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 is $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.

Hospital services, physicians and administrative staff use a data base called the Composite Health Care System to make and track appointments, enter and fill prescriptions, enter patient data and use that data for business process re-engineering. The hospital uses digital radiology, telemedicine and telepathology for diagnostic purposes.

Driscoll Children's Hospital, serving Corpus Christi and South Texas since 1953, is a 188-bed, tertiary care, regional referral center offering comprehensive medical and surgical services to meet the unique needs of children. In 1997, the hospital admitted over 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, Infant 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 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. As one of only 200 pediatric residency programs in the nation, Driscoll Children's Hospital currently has 41 pediatric residents, medical students and 10 different allied health programs. The hospital is one of the top 10 employers in Nueces County, with 1,200 employees and an operating expense budget of more than $77 million.

Other Facilities

The College of Medicine also is affiliated with the following clinical institutions in Texas: the A.P. Beutel Health Center at Texas A&M, College Station Medical Center, St. Joseph's Regional Health Center, Planned Parenthood of Brazos County in College Station, Grimes St. Joseph Health Center in Navasota, Trinity Medical Center in Brenham and Madison St. Joseph Health Center in Madisonville.

Medical Sciences Library

This 44,000 square foot professional research library is dedicated to meeting the educational and research needs for the College of Medicine. Adjacent to the college, the Medical Sciences Library serves the College of Veterinary Medicine, The Texas A&M University System Health Science Center, including COM and the School of Rural Public Health, and other A&M faculty and students with its specialized collection of biomedical books, journals and electronic resources. The library's collection includes more than 100,000 volumes of journals and books in print and other media, including electronic formats. The library currently receives 1,803 subscriptions to American and international biomedical journals, as well as more than 1,100 available electronically. MEDLINE and other biomedical and health sciences databases are accessible online through the university's computer network.

MSL, along with the hospital libraries at Scott & White and the Central Texas Veterans Health Care System, shares resources and provides information services to the College of Medicine's Temple campus.

Professional staff provides reference services as well as instruction in database searching and managing biomedical information. Librarians participate in teaching programs in both the College of Medicine and the College of Veterinary Medicine, attend rounds in veterinary clinics and offer services to local health institutions and practitioners through outreach programs.

MSL is open 99 hours each week and has an open-stack arrangement. Its public catalog is available through the campus network and on its web site at chiron.tamu.edu. Books are loaned for four weeks (two weeks for undergraduates); journals circulate for two hours. For more information about the library's services and policies, visit its web site at http://msl.tamu.edu.

Learning Resources Unit, College Station

The Learning Resources Unit is the primary study facility for medical students on the College Station campus. Occupying 6,100 square feet of the first floor of the Medical Sciences Library Building, LRU provides both a technically advanced, information-rich environment for independent learning and a calm harbor in the midst of the intensity of medical school. Students have access to computers with Internet connections, numerous self-instructional computer programs, binocular microscopes, basic science text and reference books, class materials and instructional audiovisual programs. Nineteen study rooms are available for individual study and group activities. Open more than 100 hours per week, LRU provides an active learning environment for students in the College of Medicine.

Learning Resources Center, Temple

The Learning Resources Center is the primary study facility for third- and fourth-year medical students on the Temple campus. Located in the Medical Research Building, LRC provides services that are similar to those of the Learning Resources Unit on the College Station campus. The center has a computer lab, self-instructional computer and audiovisual programs, and basic medical reference books for the clinical sciences. LRC is open 76 hours per week. For additional information, visit its web site at http://medicine.tamu.edu/lrc.

Sterling C. Evans Library

Texas A&M University's principal research collections, with more than 2.6 million volumes, 4.7 million microforms and 29,600 serials, are housed in the Sterling C. Evans Library at the center of the Texas A&M University campus.

Clinical Campus Libraries

The libraries of the Central Texas Veterans Health Care System Temple Va Library and the Scott & White Memorial Hospital and Clinic extend library privileges to A&M System HSC medical students. The Temple VA library consists of a collection of 4,950 books, 500 audiovisuals and 342 current journals. The Scott & White library contains a collection of 9,153 books and more than 945 current journal subscriptions.

Health Science Center Office of Communications

The Health Science Center Office of Communications provides communications support for the Texas A&M University System HSC including the teaching, research, administrative and public service efforts of the College of Medicine. The Office of Communications performs public information functions such as press releases, event coordination and publicity, media relations and maintenance of current information on HSC events and activities on the HSC web site at http://tamushsc.tamu.edu.

HSC Communications Production offers services including digital imaging and photo-laboratory services, technical and medical illustration, publication design and production, poster design and production, computer graphics and animation, web site development, video production and other support for academic and research publications and presentations.

Photographic services available include general studio photography, medical photo-illustration, copy photography, video production and clinical and specimen photography including photomacrography and photomicroscopy. Complete black and white and color laboratory services are available as well.

Graphic design and production services include full support for research publication graphics, brochures, 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.

Admissions

Admission to The Texas A&M University System Health Science Center College of Medicine is competitive. COM considers for enrollment individuals who have completed their undergraduate course work at a fully accredited college or university in the United States or its territories. By state mandate, enrollment of individuals who are residents of states other than Texas may not exceed 10 percent.

The A&M System HSC and COM are explicit about their commitment to excellence in improving the health and public health needs of Texans, particularly rural and underserved populations, through integrated education, research and the use of community-focused health education and public service programs. This mission is the philosophy by which the college guides itself and the admissions process. It also 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 and mission of the HSC and COM.

Applicants, therefore, must demonstrate better than average ability to master a challenging educational experience. In addition to academic ability, successful applicants must exhibit the personal qualities necessary to interact with others in an effective and personable manner. Premedical advisers play an important role in helping the Admissions Committee assess these attributes and qualities. Prospective applicants are urged to get to know their advisers early in their undergraduate education.

Undergraduate Course Requirements

Most entering students have completed a baccalaureate degree before enrolling. However, some applicants are enrolled with 90 semester hours of college work; exceptional applicants may be considered with 60 semester hours. Each year 64 entering students are enrolled. The small class size permits every student to receive individual attention in both the basic sciences and clinical experiences.

The following courses are required with at least a grade of "C" from a fully accredited college or university in the United States or its territories:

General Biology (with laboratory)	8 hours or 1 year
Additional Biological Sciences	6 hours or 1 year
General Chemistry (with laboratory)	8 hours or 1 year
Organic Chemistry (with laboratory)	8 hours or 1 year
General Physics (with laboratory)	8 hours or 1 year
English	6 hours or 1 year
Calculus or math-based statistics	3 hours or 1/2 year

Note: One semester of Biochemistry is recommended (not required) in fulfilling three hours of additional biological science. The Calculus course can be any calculus taught by a math or physics department. Business Calculus or any pre-calculus courses ARE NOT ACCEPTED.

The Statistics course must be math-based and preferably taught in the math department. Business Statistics or statistics taught in the departments of social studies or education ARE NOT ACCEPTED.

Application Information

The Texas Medical and Dental Schools Application Service processes all applications. Application materials may be obtained after May 1 from TMDSAS; 702 Colorado, Suite 6.400; Austin, Texas 78701; or from the Internet at http://dpweb1.dp.utexas.edu/mdac/homepage.htm after May 1; or from the Health Professions Advising Office at the student's college or university.

The TMDSAS application fee is $55; the fee increases with each school selected. The fee schedule is included with the electronic application. *Application deadline is Nov. 1.* Refer to the TMDSAS web site for details.

Secondary Admission Application

Available online at http://medicine.tamu.edu/studentaffairs/AdmissionInfo/AppInfo.htm#2ndApp is the COM Secondary Admission Application. Please complete the application online and submit it electronically directly to the COM's Office of Student Affairs and Admissions. The secondary application is $45 (nonrefundable). Applicants will not be considered for further evaluation until the COM secondary and TMDSAS primary applications have been properly completed, appropriate MCAT scores released and letters of evaluation submitted. *Secondary application deadline is Nov. 1.*

Screening of Applications

The process of screening applications for interview is selective. Therefore, 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 of these applications under review will result in either an interview or an offer of admission. Applicants are screened for interview on academic performance and intellectual capacity, dedication to service and capacity for effective interactions, special life circumstances and other compelling factors.

Applicants are screened for interview 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 while applicant attended elementary, secondary, and undergraduate institutions
- first generation to attend or graduate from an undergraduate program or from a graduate or professional school 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 admissions to one of the state's public undergraduate institutions

Letters of Evaluation

Submit letters of evaluation or Health Professions Advisory Committee Evaluation packets 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 are 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 College of Medicine may also request additional letters or references at any time.

If applicants are no longer in undergraduate school and cannot obtain an evaluation from their former health professions adviser or Advisory Committee, applicants should proceed as follows:

a) If attending graduate school, one of the evaluations must be from the applicant's graduate adviser, a major professor, or the chair of the applicant's major department.

b) If the applicant has been out of college for one year or more and is currently employed or in military service, one of the evaluations must be from the applicant's immediate supervisor. If self-employed, a letter of reference must be obtained from a business associate. The evaluation must detail the applicant's performance.

If applicants cannot obtain a letter from a health professions adviser because they have been out of school, and have exhausted every measure to secure at least one professor letter, applicants must then submit at least three letters from employment supervisors, medically related preceptors, and/or research mentors to complete the evaluation packet.

Personal Interviews

Applicants are invited for personal interviews based upon their competitiveness within the screening process described above. Interview sessions typically are scheduled from August to December, beginning in College Station on Thursday morning and concluding in Temple on Thursday afternoon. Each applicant is interviewed by a combination of faculty Admissions Committee members, student Admissions Committee members, and faculty-guest interviewers. Personal interviews at the College of Medicine 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 College of Medicine. Although intellectual ability and record of achievement are important elements contributing to the mastery of a challenging medical education experience, the Admissions Committee understands that other qualities are necessary to foster the development of a competent, compassionate and responsible physician. Ability to communicate and interact, learning skills and attitudes toward education, social consciousness, maturity, integrity of character, tolerance and motivation for a career in medicine are among the characteristics sought.

Tender of Acceptance Offer

COM will participate in the Matching Program employed by TMDSAS on Jan. 15. Refer to the explanation of the Matching Program in the primary application or visit the TMDSAS web site.

Profile of the Matriculated Class

The College of Medicine received 2,293 applications for the 2000 entering class. Four hundred eighty-six applicants were interviewed. The class is composed of 98 percent Texas residents, 53 percent women, and 3 percent under-represented minorities. Among the students enrolled, 93 percent received baccalaureate degrees, 1 percent had graduate degrees, and 6 percent were admitted without degrees. The choice of major varied among the students, but 76 percent chose majors in the sciences. Among the nonscience degrees, some of the choices of specialization were anthropology, business administration, English, finance, physical education and psychology. Eighteen 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 grade point ratio of 3.68 and average MCAT scores for the subsets of 9.7 (29).

Medical College Admission Test

Although the Medical College Admission Test is offered twice each year in April and August, we strongly encourage applicants to take the test in April just prior to the beginning of the application period and certainly no later than August of the year preceding expected enrollment. When you take the MCAT, you should release the scores directly to TMDSAS. Refer to the primary application for instruction.

Although an applicant's performance on the MCAT is used in the admissions and the competitive scholarship process, it is not used as the sole criterion for consideration or as the primary criterion to end consideration. In the evaluation and selection processes, 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.

Information and registration materials for the MCAT may be obtained from your health professions adviser or by writing to the MCAT Program Office; P.O. Box 4056; Iowa City, Iowa 52243-4056; or calling 319-337-1357.

Program for Medical Scientist Training Leading to the M.D./Ph.D. Degree

Program Description

The Texas A&M University System Health Science Center College of Medicine 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 Medical Scientist Training 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 and/or its territories
- an outstanding academic record
- above average MCAT performance (MCAT scores will be used in place of GRE scores)
- research experience

Students who desire to apply for the M.D./Ph.D. program should complete the primary and secondary application as described above. You should indicate on the College of Medicine's Secondary Admission Application that you are an M.D./Ph.D. applicant. You may then contact the director of the M.D./Ph.D. program at 979-845-0823 or by e-mail at gedavis@tamu.edu for additional information about the graduate programs.

Questions regarding the status of your application and its progress through the process of evaluation can be addressed to the assistant dean for admissions at the College of Medicine 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 College of Medicine. 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.

Curriculum Format and Sequence

The M.D./Ph.D. program typically requires seven to eight years to complete the combined degree requirements. Students entering the program are encouraged to begin the training program in early June before the first-year medical school curriculum begins. This summer period is used to introduce students to research laboratories and potential research advisers. The summer between the first and second year of the basic-science medical school curriculum can also be used for this purpose. In addition, M.D./Ph.D. students participate in a weekly journal club that is a required component of the M.D./Ph.D. curriculum. Students also are strongly encouraged to attend weekly research seminars offered on the Texas A&M campus. The research rotations, journal club and seminars assist students in identifying a major discipline area for their research training.

The medical scientist research training program is flexible in many ways and is designed to meet the individual educational needs of the student. For example, students in the M.D./Ph.D. program have two options from which to choose to complete their training.

Option 1

The first two years are spent in the normal medical curriculum, which covers the basic medical sciences. Students then undertake three to four years of graduate study and research. After completion of the Ph.D. requirements, students return to the medical curriculum to complete the third and fourth years of medical school training.

Option 2

The first three years of training are spent in the normal medical school curriculum. In this track, students complete two years of basic medical science training and one year of required clinical rotations. After the third year, students undertake three to four years of graduate study and research. After completion of the Ph.D. requirements, students return to the medical curriculum to complete the fourth year of medical school training.

For more information, visit the web site at http://tamushsc.tamu.edu:80/mdphd/mdphd.htm.

Admission in Advanced Standing

For students enrolled in the M.D. degree program at other medical colleges to be eligible for admission in advanced standing, the College of Medicine's 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:

- a personal letter requesting transfer and providing reasons for seeking admission in advanced standing by Oct. 15 of the year preceding enrollment;
- a letter of evaluation and support from the associate dean for student affairs (or a person in a comparable position) at the medical school in which candidate is enrolled by Nov. 1 of the year preceding enrollment;
- 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;
- official MCAT scores by Nov. 1. (For MCAT scores to be a part of the application materials, scores must be reported directly to the College of Medicine'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 College of Medicine, and gained a recommendation for admission in advanced standing from the Admissions Committee. The dean of the College of Medicine 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.

If you have questions concerning admissions, please address them to:

Assistant Dean for Admissions
College of Medicine
The Texas A&M University System Health Science Center
Office of Student Affairs and Admissions
159 Joe H. Reynolds Medical Building
College Station, Texas 77843-1114
979-845-7743
E-mail: MED-STU-AFF@TAMU.EDU

Admission For Graduate Students

Applicants normally are admitted to the program only to pursue the doctor of philosophy degree. The Doctor of Philosophy Degree Program requires a minimum of 96 semester hours. Master of science degree candidates must complete a minimum of 32 semester hours credit.

The College of Medicine also offers a combined M.D./Ph.D. program. At the time of admission, selected students may enroll in both the Graduate Program in Medical Sciences leading to a Ph.D. degree at the Graduate School of Biomedical Sciences and in COM's program for the degree. Alternatively, they may enroll in another graduate program at Texas A&M simultaneously with studies toward the M.D. degree.

Prerequisites

To be considered for admission to the Ph.D. degree program, applicants are expected to have:

1) completed an undergraduate degree at an accredited educational institution with an overall grade point average of 3.0 or better; and
2) achieved a combined minimum score of 1,100 on the quantitative and verbal sections of the Graduate Record Examination. International students also must achieve a minimum score of 550 (or 213 computer-based) on the Test of English as a Foreign Language or 450 on the GRE Verbal.

The Application Process

Admission is normally granted only for the beginning of each academic year. Applications may be submitted at any time. Application forms for admission and financial support as well as additional information about doctoral programs can be obtained from the Office of Graduate Studies at the Graduate School of Biomedical Sciences. All application materials should be sent to this office.

Applications are accompanied by the student's undergraduate record, test scores from the Graduate Record Examination and letters of recommendation. International applicants also must submit scores from the Test of English as a Foreign Language. In the application, each student declares his or her area of research interest from the basic disciplines of human anatomy and medical neurobiology, medical biochemistry and medical genetics, medical microbiology and immunology, pathology and laboratory medicine, medical pharmacology and toxicology, or medical physiology. Applications from qualified individuals are forwarded to the corresponding departments for consideration.

Partnership for Primary Care Program

The Partnership for Primary Care Program, which is administered by the Office of Student Affairs and Admissions at The Texas A&M University System Health Science Center College of Medicine, is an innovative early-admission program (for undergraduate college students) intended to address the pressing need for better distribution of health care providers across the state. Students participating in the program are guaranteed admission to the College of Medicine without having to take the Medical College Admissions Test. In return, the students – who are chosen from Texas communities that are presently underserved in health care – are required to meet high academic standards before and during their undergraduate years prior to entering medical school.

Students accepted into the Partnership for Primary Care Program take the required course work at one of The Texas A&M University System universities. In addition, they participate in several medical enrichment activities while in college, including learning skills development workshops, regular medical seminars, and meeting with other students in the program to share experiences and discuss current medical issues.

Once Partnership students enter medical school at The Texas A&M University System Health Science Center College of Medicine, their first two years – like those of other students – are at COM's College Station campus. During the first year, they have the opportunity to work in a health care environment in a rural or medically underserved area of Texas with a disproportionately low number of primary care physicians by participating in summer enrichment programs. Third and fourth years are conducted at the college's Temple campus; during the third year, arrangements are made for students to complete selected clerkships in a specific primary care or rural medicine track in their community depending on available facilities.

To be eligible for consideration for the program, a student must have the equivalent of a GPA of 3.50, be predicted to graduate in the top 10% of their class, and must present SAT scores of at least 1200 or an ACT of 26. Students must be U.S. citizens or permanent residents. They also must maintain a 3.50 grade point average while in their undergraduate programs, and finish the required courses for medical school. Students meeting these requirements are guaranteed admission to medical school upon completion of an undergraduate degree program.

The Partnership for Primary Care Program is a cooperative program between the College of Medicine and seven member institutions of The Texas A&M University System:

- Prairie View A&M University
- Texas A&M International University - Laredo
- Texas A&M University - College Station
- Texas A&M University - Commerce
- Texas A&M University - Corpus Christi
- Texas A&M University - Kingsville
- West Texas A&M University - Canyon

The program is designed to recruit and jointly admit a select group of students to the components of The Texas A&M University System with a guaranteed admissions to the A&M System HSC College of Medicine.

Medical Science Scholars–Baccalaureate/M.D. Degree Program

Students who are nationally recognized high school scholars have the opportunity at The Texas A&M University System Health Science Center College of Medicine and Texas A&M University to make the most of their scholastic achievements. National Merit, National Achievement and National Hispanic Recognition scholars who are interested in medicine as a career may now qualify to enroll in medical school even before completing their undergraduate course work. Through an innovative program offered by COM and the Texas A&M University Honors Programs and Academic Scholarships Office, outstanding high school honors students who successfully complete an accelerated curriculum can now earn both their baccalaureate and M.D. degrees in as few as six years.

Students admitted to the Medical Science Scholars Program have the option of enrolling in the College of Medicine as early as the completion of their sophomore year at Texas A&M University, or they may wait to enroll until their junior year or after completing their baccalaureate degree. During the first few years of undergraduate study, participating students complete the University Core Curriculum requirements and required premedical courses. They also will participate in clinical observations and will have contact with a physician mentor. These experiences, designed to broaden exposure to medical education, are an integrated part of the premedical curriculum. The last four years of the program are devoted to satisfying the requirements for the M.D. degree – two years of basic medical sciences and two years of clinical clerkships.

There Are No Shortcuts

This program is not a shortcut; it is designed to let you make the most of your abilities and determination at one of the best universities in the country. The program is traditionally eight years long with the last four years devoted to satisfying the requirements for the M.D. degree–two years of basic medical sciences and two years of clinical clerkships.

A unique feature of the program is that participating students may earn their baccalaureate and M.D. degrees in as few as six years. Keep in mind that students who are on this accelerated path must complete all requirements of the standard four-year medical curriculum satisfactorily to complete the program with a bachelor of science degree in medical sciences and the doctor of medicine degree.

The premedical curriculum includes both university core and degree requirements for the designated baccalaureate degree, as well as the prerequisite science courses for admission to the College of Medicine. During undergraduate study, which for most students will be four years, participating students will take part in clinical observations, gain research exposure, and have contact with a physician mentor. These activities, designed to broaden exposure to medical education and enhance their perspective of the medical profession, are an integral part of the premedical curriculum.

Examples of activities are:

- workshops on careers in medicine;
- seminars on medical ethics;
- special fall, spring and summer clinical experiences; and
- undergraduate medical sciences research.

In addition, students admitted to the program will be required to meet on a regular basis with the College of Medicine's assistant dean for admissions to develop a coordinated plan for enrollment into the college and graduation from Texas A&M University.

Qualifications

Phase I

Admission standards to this program are high. First, to be considered at all, an applicant must be a National Merit, National Achievement or National Hispanic Recognition Scholar. Admission is restricted to residents of Texas.

Applicants must be admitted from high school to Texas A&M University as a freshman, following all published application and admission procedures. All applicants must be recipients of one of the following four-year competitive academic scholarships:

- President's Endowed,
- Lechner,
- McFadden or
- President's Achievement Award.

All of these scholarships are granted and administered through the Texas A&M University Office of Honors Programs and Academic Scholarships.

Once an applicant is admitted to the university and is awarded one of the above scholarships, *applicants are invited to apply to the program*. The College of Medicine will screen applicants for interview, taking into consideration the factors outlined below:

- SAT or ACT scores

- grade point average
- high school class rank
- evidence of leadership
- involvement in community service activities
- exposure to medicine
- letters of evaluation from teachers

Applicants are invited for personal interviews based upon their competitiveness in the screening process. The interview session is conducted on a Friday in late March or early April, beginning in College Station and concluding in Temple. Each applicant is interviewed by two members of the Admissions Committee. Students who reach this phase of the admissions process will be contacted via mail, telephone or e-mail by the College of Medicine's Office of Student Affairs and Admissions with details on time and location of interviews. Approximately 35 candidates will be selected to interview from a pool of qualified applicants. The program has admitted on average 15 students per year since the inception of the program in 1996.

Note: An interview by the College of Medicine's Admissions Committee is required for selection, and the process of admitting applicants to the program is selective.

Phase 2

After successfully completing a minimum of *60 resident hours** of undergraduate course work, students in the program may request enrollment into the College of Medicine. Prior to entry into the medical school portion of the program, *all students must be interviewed* by two members of the Admissions Committee and receive final approval by the entire committee. The committee has the right to deny or defer enrollment at that time based on the student not fulfilling any of the items in the *Conditions for Matriculation.* Although some students may enter the medical school before completing a baccalaureate degree, the Admissions Committee strongly encourages students in the program to make their college years a time of educational and personal growth. For some students, this may mean that it is to their advantage to remain in college for three or four years.

Most opt to complete a baccalaureate degree in their chosen field of study before enrolling into medical school. A student who is admitted to the Medical Science Scholars Program will need to meet certain requirements to progress to College of Medicine enrollment. These requirements include a minimum of 60 resident hours* including the following prerequisite courses:

- General Biology with labs (8 credit hours or 2 semesters)
- Advanced or Additional Biological Sciences (6 credit hours or 2 semesters)
- General Chemistry with labs (8 credit hours or 2 semesters)
- Organic Chemistry with labs (8 credit hours or 2 semesters)
- Physics with labs (8 credit hours or 2 semesters)
- Calculus or math-based statistics (3 credit hours or 1 semester)
- English (6 credit hours or 2 semesters)

The Medical College Admissions Test is *not required* of students in the program to enroll in the College of Medicine. Enrollment requires a minimum grade point average of 3.50 overall and in the *chosen major*, and no grade below a "C" in any of the medical prerequisite courses. In addition, the College of Medicine also evaluates letters of recommendation from undergraduate faculty and physician mentors, participation in extracurricular activities, demonstrated leadership, community service, ethical behavior appropriate for a future physician, a realistic assessment of medicine as a career, and independent study or research. Also, all required courses must be completed at Texas A&M University.

**Resident hours* refers to graded course work taken at Texas A&M University. Credit hours earned by Advanced Placement or Credit by Exam cannot be applied to the 60-hour minimum.

Expenses

Undergraduate educational expenses for nine months at Texas A&M will vary according to personal needs and course of study. The Financial Aid Office's basic budget for new undergraduate students including tuition and fees, books, supplies, transportation, room and board, incidental and living expenses comes to approximately $11,789. Total expenses for returning students during an academic year should be slightly less than those for new students. All tuition and fee amounts provided herein represent the most accurate figures available at the time of publication and are subject to change without notice.

Resident students pay $40 per semester credit hour with a minimum of $120 per semester or $60 per summer term.

In 2001-02, the medical school tuition cost for Texas residents is $6,550 per year. Estimated annual costs – which include fees, room and board, books and supplies, transportation and other personal expenses – for state residents in years one and two amount to approximately $19,634.

Admissions Timeline

Filing of Scholarship Application with the TAMU Office of Honors Programs/Scholarships
- Earliest date - Sept. 1 (one year before date of expected college enrollment)
- Latest postmarked date (or closing) - Beginning of the second week of January (year of expected college enrollment)

Scholarship Notification
- Early February

Filing of the Medical Science Scholars Program Application
- Earliest date to file application - Feb. 15 (year of expected college enrollment)
- Deadline date to file application - March 5 (year of expected college enrollment)

Note: Application must be postmarked March 5 and received by March 15 (closing date).

Letters of Recommendation
- Earliest date - Feb. 15
- Deadline date - March 5

Note: Recommendations must be postmarked March 5 and received by March 15 (closing date).

Personal Interviews
- Late March or early April (year of expected college enrollment)
- Applicants are invited for personal interviews based upon their competitiveness in the screening process. The interview session is a one day event on a Friday, beginning early in the day in College Station and concluding late in the afternoon in Temple.

Note: An interview by the College of Medicine's Admissions Committee is required for selection, and the process of admitting applicants to the program is selective.

Tender of Acceptance
- April 15

Note: Enrollment is limited to a total of 15 students.

Orientation
- Early September

Note: Orientation will detail program conditions and expectations and feature enrichment activities and opportunities.

Contact Information

For additional information and specific application information:

Office of Student Affairs and Admissions
College of Medicine
The Texas A&M University System Health Science Center
159 Joe Reynolds Medical Building
College Station, Texas 77843-1114
979-845-7743
E-mail: med-stu-aff@tamu.edu
http://tamushsc.tamu.edu/Admis/MSS.html

or

Office of Honors Programs and Academic Scholarships
Texas A&M University
College Station, Texas 77843-4233
979-845-1957
http://honors.tamu.edu/Honors/scholarships

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 College of Medicine program for academic year 2001-02. Expenses for subsequent years may be different. Nonresident 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 University System Health Science Center are acceptable. All checks and money orders are accepted subject to final payment. The estimated expenses for College of Medicine students are as follows:

Estimated Academic Costs

College Station Campus (Years 1 and 2)

	Fall Term	Spring Term	Annual Total
*Tuition (statutory amount regardless of course load)			
Resident	$3,275.00	$3,275.00	$6,550.00
Fees	825.00	825.00	1,650.00
Books and Supplies	1,100.00	1,100.00	2,200.00
Total Academic Costs	$5,200.00	$5,200.00	$10,400.00
Estimated Room and Board	$4,617.00	$4,617.00	$9,234.00
Total Estimated Annual Cost for State Residents in Years 1 and 2			**$19,634.00**

Temple Campus (Years 3 and 4)

	Fall Term	Spring Term	Annual Total
*Tuition (statutory amount regardless of course load)			
Resident	$3,275.00	$3,275.00	$6,550.00
Fees	610.00	610.00	1,220.00
Books and Supplies	625.00	625.00	1,250.00
Total Academic Costs	$4,510.00	$4,510.00	$9,020.00
Estimated Room and Board	$5,444.00	$5,444.00	$10,888.00
Estimated Annual Cost for State Residents in Years 3 and 4			**$19,908.00**

College of Medicine student apartments at Temple range in cost from $130 per month to $245 per month with water paid.

Withdrawal from The Texas A&M University System Health Science Center College of Medicine

Once payment for tuition and fees has been accepted by the College of Medicine, 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 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 College of Medicine 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 College of Medicine 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.

Cash Needs

It is recommended that students have a checking account to meet cash and other financial needs while attending the College of Medicine. Students may use their ATM cards at the automatic teller machines located near the east entrance to the Memorial Student Center or in the nearby Biochemistry-Biophysics Building.

Financial Assistance

A student's ability to pay for medical school is not a factor in the admissions process at the College of Medicine. Approximately 90 percent of our students receive some form of financial assistance. 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 first step in the financial aid process is to complete a Free Application for Federal Student Aid, or the Renewal FAFSA, as soon as possible after Jan. 1 in the year of anticipated enrollment. Students accepted to the College of Medicine and who apply for financial aid are considered for all forms of aid for which they are eligible. More detailed information is provided when applicants interview and when they are accepted to the college.

Health Services

The A.P. Beutel Health Center is a modern clinic that provides outpatient services to students. The medical staff is composed of general practitioners and consulting specialists in orthopedic surgery, general surgery, gynecology and diagnostic radiology. Physical therapy, pharmacy, laboratory and health education services also are available.

The clinic is open 8 a.m. - 5 p.m., Monday through Friday. Dial-A-Nurse services are available 24 hours a day by calling 979-845-2822. The health center also operates an Emergency Medical Service 24 hours a day.

First- and second-year College of Medicine students pay a health center fee that entitles them to the use of all services. There is a nominal charge for prescription medication and X-rays.

Health Insurance

All students enrolled in the College of Medicine are required to have personal health insurance that meets certain minimum requirements. See the College of Medicine Student Handbook or contact the Office of Student Affairs and Admissions for details.

Psychological Counseling

The College of Medicine also offers confidential personal counseling to its medical students for a limited period at no cost to the student. Students who select counselors other than those provided by the College of Medicine 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 College of Medicine from professors and from qualified students who work as tutors.

Disadvantaged Student Support

The 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 as well as seminars on application, completion and interviewing. 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 College of Medicine encourages inquiries and applications from any potential medical student.

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. The supply of on-campus housing is limited. On-campus housing is not available to graduate students except during summer school.

The College of Medicine manages 66 apartments for its third- and fourth-year medical students on the grounds of the Olin E. Teague Veterans' Center in 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.

Student Activities

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 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.

The Texas Medical Association and American Medical Association offer membership to all medical students under local county medical society sponsorship. All students are encouraged to join and to become involved in these important organizations.

The Organization of Student Representatives was created to incorporate medical students into the activities and governance of the Association of American Medical Colleges. 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.

The American Medical Student Association 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.

The Organization for Minority Issues in Medicine exists for all medical students of the College of Medicine. The organization maintains two fundamental goals: 1) to educate and sensitize fellow students and faculty on health care issues and the needs of the underprivileged in the community, and 2) to promote unity and provide social and academic assistance for all students.

The 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.

Women in Medicine / American Medical Women's Association 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.

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 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 Pediatrics Club, the Psychiatry Interest Group, the Sports Medicine Club and the Surgery Interest Group.

Policies and Regulations

Student Handbook

The Texas A&M University System Health Science Center College of Medicine Student Handbook is located on the Internet at http://medicine.tamu.edu/studentaffairs/HandbookIndex.htm. This handbook is the official statement of rules and regulations that govern student conduct and student activities at the College of Medicine. Copies also are available in the Office of Student Affairs and Admissions.

Graduate Student Rules and Regulations

Rules and regulations for graduate students in the Graduate School of Biomedical Sciences are currently under development. Interim rules and regulations are published in the GSBS section of this catalog. Until detailed rules or regulations are approved by the HSC, the rules and regulations of Texas A&M University (published in the Texas A&M University Regulations and the Texas A&M University Graduate Catalog) will generally be used for GSBS students. The College of Medicine's Graduate Instruction Committee has the primary responsibility to oversee graduate student progress for graduate students within the college.

Scholarship

Grading

A student's grade in every course in the curriculum of the 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 College of Medicine and their significance are as follows:

A	Excellent	4 grade points per credit hour
B	Good	3 grade points per credit hour
C	Satisfactory	2 grade points per credit hour
F	Failure	No grade points
I	Incomplete	No grade points
S	Satisfactory	
U	Unsatisfactory	
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 grade point ratio a medical student must attain for graduation is 2.00. Further information about grading and promotion can be found in the Student Handbook.

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 College of Medicine offers the doctor of medicine degree. The 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.

College of Medicine students who qualify for the M.D. degree and who attain a grade point ratio 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 College of Medicine 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 College of Medicine, 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 College of Medicine in 1985. A special feature of the program is an emphasis on broad-based instruction in medical sciences. Faculty members in the College of Medicine and Graduate School of Biomedical Sciences 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 A&M System 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. The graduate adviser for that discipline area designs, with the student, a course of study that generally requires four to five years to complete.

The College of Medicine 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 three terms and a summer session that is usually used for research.

For more information, contact the Office of the Associate Dean for Graduate Studies and Research.

Awards and Honor Societies

Membership in Alpha Omega Alpha Medical Honor Society is based on scholastic excellence, integrity, capacity for leadership, compassion and fairness. Twenty-five percent of the graduating class with the highest GPA is considered for the AOA award. Fifteen percent of the graduating class is selected for membership at the beginning of the fourth year; five percent are selected at the beginning of the third year.

Curriculum

The doctor of medicine degree requires a minimum of four years of study. Students spend their first two years in College Station 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 (primarily in Temple), students receive clinical training in several different patient care settings: Scott & White Memorial Hospital and Clinics, Olin E. Teague Veterans' Center, and Darnall Army Community Hospital at Fort Hood. Students also can rotate to Driscoll Children's Hospital in Corpus Christi for a portion of their pediatric clinical experience. 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 University System Health Science Center College of Medicine/Scott & White programs participate in the National Residency Matching Program to fill its residency positions. The College of Medicine-affiliated Emergency Medicine Residency Program at Darnall Army Community Hospital 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' medical centers in Temple and Waco, Darnall Army Community Hospital at Fort Hood, Ben Taub and Shriners hospitals in Houston and others. Currently The Texas A&M University System Health Science Center College of Medicine/ 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.

For more information, contact the Graduate Medical Education Department at Scott & White at 254-774-2232.

Leadership in Medicine

The College of Medicine has created an enrichment program for all medical students 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 A&M System 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 College of Medicine 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.

Curriculum Listing

First Year

- Biochemistry and Genetics
- Gross Anatomy
- Histology
- Neuroscience
- Physiology
- Becoming A Clinician I:
  - Humanities in Medicine
  - Introduction to Clinical Skills in Psychiatry
  - Introduction to Physical Diagnosis
  - Leadership in Medicine
  - Working with Patients
- Electives (by department)

Second Year

- Microbiology and Immunology
- Pathology and Laboratory Medicine
- Pharmacology
- Becoming A Clinician II:
  - Clinical Preceptorships in Primary Care Medicine
  - Critical Approach to Medical Literature
  - Humanities in Medicine
  - Introduction to Clinical Psychiatry
  - Introduction to Medicine
  - Introduction to Obstetrics and Gynecology
  - Introduction to Pediatrics
- 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)
- Neurology (4 weeks)

DEPARTMENTS

All courses offered in the 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.

Anesthesiology (ANES)

Professors:	Bastron, Hoffer.
Associate Professors:	Bean-Lijewski, Kim, Kitchings, May, Morton.
Assistant Professors:	Bittenbinder (interim head), Borum, Brinkley, Ciceri, Dias, Elliott, Gibson, Gloyna, Kenney, Matthews, McAllister, McDavid, Patton, Pollock, Preston, Roberson, Stinson, Stuart, Villamaria, Yeleti.

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.

Course Descriptions

983.301 CLINICAL ANESTHESIOLOGY / 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.

983.308 PAIN CLINIC / Four Weeks. An introduction to acute post-operative pain and chronic pain syndromes. Prerequisite: Satisfactory completion of the clinical anesthesiology elective.

Emergency Medicine (EMER)

Professor:	Coppola.
Associate Professors:	Bollinger, Chlapek, Hobbs.
Assistant Professors:	Baskerville (interim head), Bass, Butler, Falcon, Greenberg, Harrison, Johnson, Jones, McCuskey, Roberts, Smith, Stallard, Turner.

Emergency medicine has emerged as a specialty with its own training programs, specialty boards, literature, etc. 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 seen, examined, have workups started, receive treatment and have dispositions made. 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 have (and does have) its own "style" of medicine.

The goal is to teach some of the basic concepts of emergency medicine. This involves formal discussion, reading of the literature, and most importantly allowing students to handle their own cases with the appropriate amount of supervision. Important concepts, etc., include: patient triage, performing a history and physical examination that is appropriate to the individual case, and structuring an appropriate workup and following it through. Students are encouraged to learn and practice skills such as suturing, IV techniques and any other procedure available. Students will learn how to become more comfortable in management of diverse as well as multiple patients.

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 resolution of the patient's problem. Our goal is timely, compassionate, scientifically excellent emergency care.

Students on rotation in the Emergency Department have an opportunity to develop their history, physical and differential diagnosis skills. They are expected to develop and implement a treatment plan with senior staff supervision. They are encouraged to fine-tune procedural skills such as suturing, IV access, intubation and others.

At the conclusion of the rotation, the student 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. They will be familiar with the presentation and stabilization of most critical illness and injury.

Course Descriptions

983 & 984 ELECTIVE CLERKSHIP IN MEDICINE / Four Weeks. Credit 5. Prerequisite: Satisfactory completion of year three of the medical curriculum.

Family and Community Medicine (MFCM)

Professors:	Cauthen (head), Daniel, DeVaul, Dickey (interim dean), Hall, McNew, Pope, Smith.
Associate Professors:	Edwards, Forjuoh, Hudspeth, McIlhaney, Segrest, Weinblatt.
Assistant Professors:	Averitt, Bame, Barber, Bartels, Benavides, Biles, Braden, Bramson, Butler, Cabaniss, Carpentier, Childs, Clanton, Coate, Cohen, Cohen, Cooney, Cortes, Couchman, David, Eisenberg, English, Fasolino, Fiesinger, Freeman, Fritz, Gardner, Gehring, Gerdes, Ghans, Goebel, Graham, Grant, Hagen, Haji, Hamilton, Hamm, Hardin, Henry, Hermann, Herron, Higgins, Holland-Barkis, Howard, Imes, Jensen, Jernigan, Joseph, Kindle, Kirkpatrick, Lambert, Lane, Lawrence, Ligon, Madsen, Manning, Marshall, Maxwell, Maynard, McClellan, Mills, Morrison, Morrow, Moquist, Nair, Ngo, Ogburn-Russell, Oliver, O'Neal, Patel, Patel, Peeples, Phenow, Porter, Pullen, Price, Prihoda, Purvis, Rascoe, Reis, Richardson, Robinson, Rosiles, Roquet, Ruggiero, Segrest, Sharp, Sheffield, Shriver, Smith, Smith, Sterling, Stern, Stewart, Stigler, Stone, Sullivan, Tipton, Thakrar, Turvey, Via, Villarreal, Wagner, Waguespack, Warren, Welch, Wiprud, Wiprud.

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.

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.

Course Descriptions

912 WORKING WITH PATIENTS II / (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 IN PRIMARY CARE MEDICINE / (0-3). Credit 1. Students rotate through primary care experiences in family medicine, internal medicine, pediatrics, gynecology, otorhinolaryngology, obstetrics, ophthalmology, dermatology and orthopedics. Prerequisite: IMED 923.

981 SEMINAR / (1-0). Credit 1. Current issues in medicine. Prerequisite: Approval of department head.

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.

992 CLERKSHIP / Credit 5. Full-time clerkship experiences in the offices of primary care physicians. Prerequisites: Completion of first and second years of the medical curriculum.

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.

Human Anatomy and Medical Neurobiology (MANA)

Professors:	Gelderd, Russell, Sampson, West (head).
Associate Professors:	Champney, Earnest, McCord, Miranda.
Assistant Professors:	Chen, Dohrman, Maier, Quarles, Sohrabji, Ufema.

The Department of Human Anatomy and Medical Neurobiology offers training in neuroscience based on original research and graduate course work. In addition, medical courses provide fundamental knowledge in four major areas: neuroanatomy, histology, embryology and gross anatomy. Interdisciplinary programs within the College of Medicine, The Texas A&M University System Health Science Center and Texas A&M University are encouraged.

The department’s research concentration centers on several broad areas: brain development, neuroteratology and cellular and molecular mechanisms of alcohol, nicotine and other drugs of abuse; the development of the cerebral cortex; neuronal plasticity; circadian rhythms; neuroendocrinology of the pineal gland; Alzheimer’s disease; estrogen regulation of neural development and functions; and bone and joint disease.

Shared departmental resources include a three-dimensional imaging computer, a quantitative image data acquisition and display system, molecular biological facilities, gamma and scintillation counters, histological, photographic and computer facilities.

The Ph.D. Program in Anatomy and Neurobiology usually requires four years to complete. The master of science degree is offered, only in special situations, to qualified medical students or physicians in residency who want specialized anatomical training. Graduate students are expected to gain teaching experience by assisting in medical courses.

Graduates from our program are prepared for careers in research and teaching in academic, industrial or governmental positions.

Course Descriptions

602 HISTOCHEMISTRY / (1-2). Credit 2. Basic histochemistry demonstrating tissue components and morphology; precise identification, localization of tissue components. Prerequisites: MANA 911 and approval of instructor.

603 SPECIAL REGIONAL HUMAN DISSECTIONS / Credit 1-3. 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.

604 HUMAN EMBRYOLOGY / (1-0). Credit 1. Basic embryology; clinically oriented; includes human gametogenesis, fertilization, normal and abnormal development of the organs and systems of the body; the causes of congenital anomalies. Prerequisite: MANA 901 and approval of instructor.

607 METHODS OF BEHAVIORAL BRAIN RESEARCH / (0-3). Credit 1. Advanced laboratory course in brain and behavior research; direct supervision in brain surgery techniques, electrical stimulation, recording, behavioral training, brain imaging using autoradiography; computerized data collection and analysis. Uses laboratory animals. Prerequisites: MANA 922 and approval of instructor.

608 METHODS IN NEUROHISTOLOGY / (1-2). Credit 2. Instruction in anesthetization, perfusion of animals; removal of neural tissues; histological processing, staining of tissues. Prerequisites: MANA 911 and approval of instructor.

609 NEUROCHEMISTRY / (2-0). Credit 2. Emphasis on mammalian neurotransmitter systems. Prerequisites: MANA 922 or equivalent and approval of instructor.

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); observe in the laboratory and present at least one lecture. Prerequisites: Taken and passed Gross Anatomy (MANA 901) with a “B” and approval of course coordinator.

622 TEACHING MEDICAL HISTOLOGY / (2-4). Credit 1. Provides teaching and supervisory experience for graduate students; instruct students in teaching and supervising medical students in Microanatomy (MANA 911); observe in the laboratory and present at least one lecture. Prerequisites: Taken and passed Microanatomy (MANA 911) and approval of course coordinator.

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: Taken and passed Medical Neuroscience (MANA 922) with a “B” and approval of course coordinator.

642 OSTEOPOROSIS AND BONE BIOLOGY / (2-0). Credit 2. Introduction to the discipline of bone biology as it pertains to the development and pathophysiology of osteoporosis. Will include peak bone mass, estrogen deficiency, epidemiology, nutrition and prevention; discussion to include all aspects of bone biology. Prerequisite: Graduate classification in Human Anatomy and Medical Neurobiology 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.

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.

911 MEDICAL HISTOLOGY / Credit 5. Morphologic detail of human cells, tissues and organs as demonstrated by light and electron microscopic techniques; function of structural components. Prerequisite: Admission to medical curriculum or approval of course coordinator and department head.

922 NEUROSCIENCE / Credit 7. Neural substrates for regulation of somatic and visceral bodily function; and 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.

985 PROBLEMS / Credit 1 or more. Special problem areas within framework of human gross, microscopic, neuro- or developmental anatomy. Prerequisite: Approval of instructor.

989 SPECIAL TOPICS IN… / Credit 1-4. Selected topics in human anatomy or neurobiology.

991 RESEARCH / Credit 1 or more. Original investigation of selected areas in anatomy. Prerequisite: Approval of instructor.

Humanities in Medicine (MHUM)

Professors:	Anderson, Bastron (head), Black, Dickey (interim dean), Green, McDermott, McMurray, Rosen, Self, Sharf.
Associate Professors:	Gastel, Gert, Meek, Morgan, Russell, Sanders.
Assistant Professors:	Bramson, Easterling, Herring, Holguin, Pickle, Preston, Sicilio, Tyler, Wiprud.
Adjunct Assistant Professor:	Leslie.
Lecturer:	Bosquez.

The Department of Humanities in Medicine is a charter department in the College of Medicine. The tasks of this department include: 1) educating students in the basic ethical and social questions confronting the contemporary physician; 2) acquainting the student with the classic works in the history of medicine, social medicine and literature as related to medicine; 3) integrating ethical and social concerns with the accompanying basic sciences curricula; 4) providing sustenance for students with regard to the developing relationship between scientific, technological and humanistic learning in the making of a physician; 5) stressing the complex interpersonal, social, legal and political factors in the physician-patient relationship; and 6) increasing tolerance of differing values in order to reduce prejudice in health care delivery.

The department offers a required course in humanities in medicine during the first and second years. Electives are offered during the first, second and fourth years. Symposia, workshops, electives and visiting speakers are available to students. A course in medical jurisprudence is required of all fourth-year students. Occasionally, the department sponsors regional or national conferences. The Department of Humanities in Medicine periodically invites outstanding medical humanists with national reputations to the College of Medicine to speak with medical students. Students are encouraged to visit with faculty members. Members of the department view their mission as one of helping.

Course Descriptions

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.

912 HISTORY OF MEDICINE / (2-0). Credit 2. Development of medicine in various civilizations, emphasizing relationship between medicine and society. 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.

985 PROBLEMS / 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)

Professors:	Baker, Brasher, Carpenter, Dyck, Follender, Foulks, Green, Howard, Hurley, Kelley, Manyam, Mukhopadhyay, Okeson, Perez-Guerra, Piziak, Starr (head), Verdonk, Walsh, Watson, Goran Westblom, Williams, Winn, Woods.
Associate Professors:	Alpini, Browne, Caraveo, Chandler, Chen, Crisp, Cryar, Culp, Dostal, Erickson, Gantt, Hajra, Havemann, Holmes, Holleman, Jackson, Jundt, Lenehan, LeSage, Malabonga, Morgan, Myers, Nickel, Ogden, Osman, Posey, Posavar, Rohack, Schlabach, Schuchmann, Tak, White, Wilkinson.
Assistant Professors:	Abercrombie, Aguirre, Albers, Albracht, Alexander, Al-Himyary, Attas, Avots-Avotins, Baker, Balcells, Barenholtz, Barker, Barton, Baum, Berigan, Bhatt, Bolton, Booz, Bowling, Brannon, Briggs, Cain, Callender, Campbell, Carpentier, Cashion, Cesani, Chalasani, Chatham, Childs, Childs, Chune, Clark, Clark, Cohen, Concepcion, Conklin, Curlee, Dave, Davis, Desai, Dijon, Drake, Droemer, Dugall, Duke, Dusold, Dvoracek, Eller, Ellis, Erwin, Eska, Falcone, Fernandez, Forest, Foster, Friedman, Fukuzawa, Gaffney, Gaffney, Gaines, Galt, Ganguli, Garrido, Genest, George, Giebel, Gilman, Go, Godly, Gown, Gudewich, Gunaje, Hackethorn, Hackney, Hair, Hall, Hall, Hancher, Hannigan, Harris, Harris, Harrison, Harrison, Hearne, Herrington, Herrington, Hodges, Holder, Holguin, Houck, Husain, Jenkins, Jermain, Jesse, Jew, Jones, Jones, Jose, Kaiser, Keyser, Kimmey, Koehler, Kwan, Lammoglia, Lawliss, Lawrence, Lechin, Lee, Lee, Lemper, Light, Lindzey, Litel, Lowe, Lowery, Lundeen, Luo, Mackey, Madsen, Marek, Martin, Martinez, May, McMahan, McNeal, Meade, Meade, Mehta, Mehta, Moss, Mott, Narayanan, O'Brien, O'Donnell, Panelli, Patel, Patterson, Perurena, Petersen, Pfanner, Pokala, Pokala, Posada, Prasad, Prasad, Prasad, Price, Price, Rana, Randall, Rawls, Resendes, Richards, Riggs, Roby, Roche, Rodriguez, Roe, Roe, Rose, Rowlett, Ryan, Scott, Shamsie, Shanmugam, Shoultz, Shinkawa, Singh, Singpurwala, Slavecha, Smith, Smith, Spann, Stanley, Stauffer, Stewart, Swena, Tompkins, Turner, VanCleave, Van Wormer, Velasquez, Walker, Wegener, Weinblatt, Weiss, Weldon, Westwick, Williams, Win, Wong, Young, Zahang.
Instructors:	Garcia, Kastner.

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.

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.

992.301 CORE 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.

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.

Medical Biochemistry and Medical Genetics (MBCH)

Professors:	Bayley (head), Ficht, Ihler, Johnson, Kuehl, Kukolich, Pace, Sinden, Skow, Struck, Wells, Womack.
Associate Professors:	Dobin, Gershon, Gimble, Kapler, LeSage, Scholtz.
Assistant Professors:	Ball, Jiang, Liu, Martin.

The Department of Medical Biochemistry and Medical Genetics offers innovative courses in medical biochemistry and in medical genetics, conducts a vigorous and productive research program, and contributes to undergraduate, graduate and postdoctoral education. The department offers basic instruction in the sciences of biochemistry, nutrition and genetics, and provides insight into human disease as seen by the medical biochemist and geneticist. In medical genetics, students are presented with the fundamentals of human genetics as well as applications of recombinant DNA technology and genomics to problems in medical genetics.

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. Small-group tutorials and individual instruction are provided to students in academic difficulty. First-year medical students take medical biochemistry and medical genetics concurrently and receive a single grade for the two courses. Medical students are required to sit for the National Board Special Administration Examination as the final examination for both courses. Graduate students have the option to take medical biochemistry and medical genetics as separate courses.

Each faculty member in the department maintains an active research program. Current departmental research interests include DNA replication, gene amplification, regulation of gene expression, epigenetics, protein engineering, protein folding and stability, protein secretion, membrane protein biosynthesis, molecular parasitology, drug carrier systems, blood clotting

and bacterial exotoxins. Funding for these programs is derived from external grants awarded to individual faculty members. Graduate students perform their thesis research under the direction of medical biochemistry faculty members through graduate programs in the medical sciences, genetics, biochemistry and biophysics, chemistry and veterinary medicine.

Course Descriptions

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, RNA splicing and translation; original research articles presented focusing on experimental approaches, interpretation of results and overall significance.

671 MACROMOLECULAR FOLDING AND DESIGN / (1-0). Credit 1. The Macromolecular Folding and Design Journal Club serves as a mechanism for oral dissemination of current knowledge regarding the structure and function of biological macromolecules. Prerequisite: Approval from 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 will give an oral presentation on current literature in molecular biology, biochemistry and/or biophysics. Prerequisite: Approval from instructor. Cross-listed with BICH 672.

689 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topics in an advanced area of biochemistry or genetics. Prerequisite: Approval from instructor.

911 MEDICAL BIOCHEMISTRY AND NUTRITION / (5-0). Credit 5. 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. Prerequisite: Admission to the medical curriculum or approval of department head.

913 MEDICAL GENETICS / (5-0). Credit 5. 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: MBCH 911 or approval of the department head.

981 SEMINAR / (1-0). Credit 1. Presentation by advanced students, faculty, and visiting scientists of reports on current research in biochemistry. Prerequisite: Approval of department head.

985 PROBLEMS / Credit 1 or more. Directed individual study of advanced topics in medical biochemistry. Prerequisite: Approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topics in an advanced area of medical biochemistry. Prerequisite: Approval of department head.

991 RESEARCH / Credit 1 or more. Original laboratory investigation in specific areas of medical biochemistry. Prerequisite: Approval of department head.

Medical Microbiology and Immunology (MMIM)

Professors:	Black, McCallum, McMurray, Quarles (interim head), Russell, Wilson.
Associate Professors:	Baumler, Huber, Samuel, Tesh.
Assistant Professors:	Hendrix, Skare, Tsolis.

The Department of Medical Microbiology and Immunology 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. 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. 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.

Course Descriptions

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 (cytokines, chemokines), isotypic and idiotypic regulation, hormonal effects, immunoregulatory defects, experimental manipulation of immunoregulatory networks. Prerequisites: VTMI 649 or BIOL 610 and permission 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. Prerequisites: Graduate classification. Cross-listed with VTPH 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 or biochemistry, or approval of the instructor. Cross-listed with VTMI 663.

923 MEDICAL MICROBIOLOGY I / (4-2). Credit 4. 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.

924 MEDICAL MICROBIOLOGY II / (4-2). Credit 4. Continuation of 923. Prerequisite: MMIM 923.

981 SEMINAR / (1-0). Credit 1. Presentation by advanced students, faculty, and visiting scientists of reports on current research in microbiology and immunology. Prerequisite: Approval of department head.

985 PROBLEMS / Credit 1 or more. Directed individual study of advanced topics in microbiology and immunology. Prerequisites: MMIM 923, 924 and approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topics in an advanced area of medical microbiology or immunology. Prerequisites: MMIM 923, 924 and approval of department head.

991 RESEARCH / Credit 1 or more. Original laboratory investigation in specific areas of medical microbiology or immunology. Prerequisites: MMIM 923, 924 and approval of department head.

Medical Pharmacology and Toxicology (MPHM)

Professors:	Chiou (head), Frye, Griffith, Hester, Hicks, Way.
Associate Professor:	Trzeciakowski.
Assistant Professors:	Brandt, McCool, Parrish, Winzer-Serhan.

The Department of Medical Pharmacology and Toxicology prepares students for the clinical study of therapeutics by providing them with a basic knowledge of drugs and the manner in which drugs modify functions in the human body. The clinically important drugs are grouped into five major categories according to their therapeutic effects. These include autonomic agents, renal and cardiovascular drugs, central nervous systems agents, endocrine preparations and chemotherapeutic drugs. The mechanism of drug actions and the therapeutic usefulness of the drug in the treatment of diseases are stressed. Students are made aware that side effects of drugs involve organ systems at sites of action other than the primary one. This information is imparted through lectures, laboratory experiments, small group discussions and term paper presentations.

The pharmacology course is taught in the second year of study simultaneously with microbiology, pathology and family and community medicine. Students are taught basic mechanisms of drug actions as well as the clinical correlations of these drugs through periodic clinical conferences.

Electives in pharmacology include chemical pharmacology, physiological pharmacology, neuropsychopharmacology, medical toxicology, problems, special topics and research in specialized areas closely related to the research interests of faculty members. The department also offers a seminar course that covers selected topics of current interest.

Faculty members in the department are engaged in research in the areas of neuropharmacology, ocular pharmacology, and toxicology. Specific research topics include alcoholism, anti-Alzheimer's drugs, antiglaucoma drugs, antianxiety drugs, anti-inflammatory agents, cancer, cellular calcium homeostasis, complex system analysis, development neuropharmacolgy, drug efficacy, remedies for dry eye syndrome, and steroids. Student participation in research is encouraged, particularly during the summer months after the first year of study.

Course Descriptions

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.

605 MOLECULAR MECHANISMS OF DRUG AND TOXIN ACTION I / (4-0). Credit 4. Introduction to the major tools and concepts of pharmacology. By the end of the course, 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: Permission of coordinator.

606 MOLECULAR MECHANISM 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: Permission of coordinator.

923 MEDICAL PHARMACOLOGY I / (3-0) Credit 3. General concepts of pharmacological agents and substances; pharmacokinetics; pharmacodynamics; antimicrobial and antineoplastic agents; autonomic drugs; and toxicology. Prerequisite: Admission to medical curriculum or MPHY 901, MANA 922, MBCH 911, or approval of department head.

924 MEDICAL PHARMACOLOGY II / (3-3) Credit 4. Continuation of MPHM 923; endocrine pharmacology, renal pharmacology, cardiovascular pharmacology, respiratory pharmacology, neuropharmacology. Prerequisite: MPHM 923.

981 SEMINAR / (1-0). Credit 1. Selected topics of current interest will be presented. Presentation and defenses of a scientific paper. Prerequisite: Approval of department head.

985 PROBLEMS / Credit 1 or more. Research in specialized areas of pharmacology. Prerequisites: MPHM 925 and approval of department head.

989 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topic in an advanced area of medical pharmacology. Prerequisites: MPHM 925 and 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.

Medical Physiology (MPHY)

Professors:	Davis, Granger (head), Kuo, G. Meininger (associate head), Parker, Peterson, Smith.
Associate Professors:	Alpini, C. Meininger, Yuan, Zawieja.
Assistant Professors:	Forough, Hawker, Muthuchamy, Wilson.
Research Assistant Professors:	Gashev, Hein, Jamroz, Tinsley, Wu.

Physiology is the branch of science concerned with the physical and chemical bases of life processes. As a fundamental discipline in medicine, physiology emphasizes the integration and coordination of biological activities at the molecular, cellular, organ, system and organism levels. The normal functioning of the human body is dependent on the interplay of elegant control mechanisms operating at all hierarchical levels of organization. In medical practice, the first sign of a disease is usually an abnormal body function. Moreover, amelioration of dysfunction requires detailed knowledge of the physiochemical processes and control mechanisms responsible for the normal and abnormal behavior of organisms.

The basic concepts of medical physiology are presented during the first academic year. The first segment of the course emphasizes the principles of molecular and cell physiology; this is followed by a detailed exposition of the functions and interactions of the nervous, cardiovascular, renal, respiratory, digestive, endocrine and reproductive systems. Lectures, small-group conferences, computer simulations, demonstrations, field trips and clinical correlations are utilized to develop a complete picture of basic physiology and pathophysiology. Although the student is expected to develop a critical fund of physiologic facts, the course is designed to explore in depth the logic of the human body and its subsystems. The major focus of the course in medical physiology is on elucidating the behavior of the normal organism; however, selective examples of pathophysiology highlight each section of the course, thereby providing insight into the strong physiologic framework of modern medicine.

The research program of the Department of Medical Physiology focuses on the cardiovascular system. Specific areas of research interest include molecular and cell biology of vascular smooth muscle and endothelium, angiogenesis, microcirculation, cardiac development, transgenic analysis of cardiac contractility, coronary circulation, hypertension, inflammation and the development of computer and engineering technology for cardiovascular research. The investigations of faculty members are supported by grants and awards from the National Institutes of Health and the American Heart Association.

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.

Course Desriptions

601 METHODS IN CELL PHYSIOLOGY / (3-3). Credit 4. Fundamental laboratory techniques used to investigate cellular physiology; cell culture and isolation; light microscopy including brightfield, phase, DIC, fluorescent, confocal and widefield deconvolution 3-D techniques; digital and video image processing; immunofluorescence; ELISA; gel electrophoresis; immunoprecipitation; agarose gel electrophoresis; northern, southern, and western blotting, transfections and plasmid preps. Prerequisites: Graduate classification in medical physiology or medical sciences and approval of department head.

604 ADVANCED CARDIOVASCULAR BIOLOGY I / (4-0). Credit 4. Biology of cardiogenesis, vasculogenesis and hematopoiesis. Function of cardiac and vascular system with integrated molecular and cellular mechanisms that regulate cardiovascular network. Prerequisite: MPHY 901 or VTPP 910 & 912 and MSCI 601 & 602 or approval of department head.

606 ADVANCED CARDIOVASCULAR BIOLOGY II / (4-0). Credit 4. Interactions of the heart and vascular system including neural and humoral control systems. Molecular genetics and pathophysiology of cardiovascular system during the development of diseases. Gene therapy approaches in cardiovascular biology. Prerequisite: MPHY 604 or approval of department head.

681 SEMINAR / (1-0). Credit 1. Presentation by advanced students, faculty and visiting lecturers of reports on contemporary research in physiology. Prerequisite: Approval of department head.

685 PROBLEMS / Credit 1 or more. Directed individual study of advanced topics in specialized areas of physiology. Prerequisites: MPHY 901 and approval of department head.

689 SPECIAL TOPICS IN... / Credit 1 to 4. Selected topics in an advanced area of medical physiology. Prerequisites: MPHY 901 and approval of department head.

691 RESEARCH / Credit 1 or more. Original investigation in specific areas of physiology. Prerequisites: MPHY 901 and approval of department head.

901 MEDICAL PHYSIOLOGY / (6-0). Credit 8. Function and regulation of the systems of the human body with special emphasis on their relationships and feedback control mechanisms. Clinical correlation lectures in pathophysiology. Prerequisite: Admission to medical curriculum or approval of department head.

Medicine-Interdisciplinary (MEID)

911.301 BECOMING A CLINICIAN I/INTRODUCTION TO PHYSICAL DIAGNOSIS / (2-2) Credit 3. (Year One). Physical assessment and medical history-taking using bedside examination of normal volunteers. Prerequisite: MFCM912.

911.302 BECOMING A CLINICIAN II/INTRODUCTION TO CLINICAL MEDICINE / (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 SPECIAL TOPICS IN... / Credit 1 to 4. Special topics in an identified area of interdisciplinary medicine.

901-301 and
-302 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.

989-301 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.

Obstetrics and Gynecology (OBGY)

Professors:	Baker (head), Capen, Knight, Kuehl, Shull.
Associate Professors:	Brakemeier, Leavelle, Pliego, Rayburn, Sanders, Sulak, Wincek.
Assistant Professors:	Allen, Anderson, Appleton, Bachofen, Beaird, Bertsch, Bonds, Baiza, Castellanos, Coates, Davis, Doss, Dunn, Ghattas, Greene, Howard, Huddleston, Johnson, Micus, Montgomery, Morales, Patterson, Schrier, Sheppard, Smith, West, 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 careerlong 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.

Course Desriptions

921 INTRODUCTION TO OBSTETRICS AND GYNECOLOGY / 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)

College Station

Professors:	Davis, Gordon (head), Leibowitz.
Associate Professor:	Kochevar.
Assistant Professors:	Bernstein, Maxwell, Wells.
Senior Lecturer:	Lindner.

Scott & White - Temple; VA - Temple

Professors:	Scott & White: Greene, Koss, Ladd, Rappaport, Spiekerman. Temple VA: Astarita.
Associate Professors:	Scott & White: Beissner, Dobin, Donner, McCombs, Speights.
Assistant Professors:	Scott & White: Jones, Morgan, Rao, Sayage-Rabie. Temple VA: Gutkin, Johnson, Rachut.
Instructors:	Scott & White: Chen.
Assistant Instructors:	Scott & White: Larsson, Lopez-Camarillo.
Other Clinical:	CS Medical Center: Cohen, Crumbaker.

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. Approximately half of instructional time is allotted to laboratory study.

General 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.

This foundation facilitates the survey in systemic pathology of the principal disorders of each organ system, instruction in the clinical laboratory procedures necessary to diagnose these conditions, and the intelligent and cost-efficient use of laboratory tests in patient care.

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.

Elective clerkships offered in the fourth year include anatomic pathology, blood bank, clinical chemistry, clinical immunology, clinical microbiology, hematopathology, laboratory testing in endocrinology, academic pathology and an elective in research.

Research interests of department members include the role of tyrosine kinases on the transformation of chick embryo fibroblasts by Rous sarcoma virus and the influence of vanadate; identification and characterization of an antigen found in cells derived from cancer of the kidney; the role of integrins in leukocyte diapedesis and tumor cell metastasis; novel staining techniques for the identification of neoplastic cells in cytology; p53 oncogene in lung cancer; angiogenesis; cell cycle; and a variety of clinically oriented studies involving the gastrointestinal tract, bone marrow, prostate and cancer of the lung.

Course Desriptions

923 HUMAN PATHOLOGY I / Credit 4. Language of disease, identification of morphological lesions in common diseases and relation of their causes and pathogenesis to resulting clinical manifestations. Basic laboratory skills. Prerequisite: Year one of medical curriculum or approval of department head.

924 HUMAN PATHOLOGY II / Credit 4. Human diseases, their causes, pathogenesis, lesions and resulting manifestations. Prerequisite: MPAT 923 or approval of department head.

925 HUMAN PATHOLOGY III / Credit 4. Continuation of MPAT 923 and 924. Prerequisite: MPAT 924.

MSCI

610 PATHOGENESIS OF HUMAN DISEASE GRADUATE COURSE / Credit 3. The goal of the course is to provide graduate and advanced undergraduate students with an in-depth understanding of the pathobiology and basic mechanisms of disease processes.

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... / 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 will determine 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, 924 and 925 in the hospital laboratory setting. Prerequisite: First two years of the medical curriculum.

Pediatrics (MPED)

Professors:	Allen, Brasher, Frankel, Koops, Krauss, Montgomery, Ponder, Weir, Wilson (head).
Associate Professors:	Asbury, Beeram, Brien, Crisp, Custer, Dobin, Hardy, O'Lavin, Oltorf, Karovam, Self, Thompson.
Assistant Professors:	Bierworth, Bishop, Black, Blevins, Brindley, Browne, Candas, Cardwell, Cipriani, Cohen, Coles, Copenhaver, DeLeon, DeLeon, Deline, Dirksen, Douty, Easley, Etuknwa, Fajardo, Fitzsimon, Foster, Foulks, Gaglani, Garcia, Garcia, Gonzalez, Gracious, Hagen, Hardy, Hays, Hihum, Hobbs, Holmes, House, Hutchinson, Jakubowski, Kastner, Lawrence, Leffel, Lijewski, Lopez-Guera, Lueck, Marquardt, McNeil, Medina, Meyer, Milano, Morris, Muhamad, Nelson, Owens-Collins, Pastovek, Patel, Paull, Pliska, Purcell, Purcell, Nickel, Ransom, Santema, Santiago, Scrovan, Sicilio, Smith, Svendsen, Wakefield,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.

Course Desriptions

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 will perform histories and physicals, learn problem-solving techniques, and participate 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)

Professors:	DeVaul, Elkins, Knutsen, Rosen, Russell, Woods, Hicks.
Adjunct Professors:	Reid, Sartorius.
Associate Professors:	Bodden, Chintapalli, Gamino, Krych, Meek (interim head), Orman, Rajab.
Adjunct Associate Professor:	Sutton.
Assistant Professors:	Antunes, Brown, Burke, Castiglioni, Cooney, Denny, Eisenhauer, Fluet, Johnson, Green, Gregory, Lawn, Llana, Madisetty, Mathew, Moczygemba, Montgomery, Moore, Pfrommer, Parker, Parks, Rajalo, Reddy, Ripperger-Suhler, Robbins, Root, Ross, Rye, Snuggs, Spencer, Svoboda, Tamimi, Tolciu, Tsai, Willoughby, Wills, Worchel, Young, Zaphiris.
Instructors:	Bradburn, Brook, Browning, Goza, Hill, Holcomb, Huber, Knapp, Warnock.
Clinical Associate:	Gist.
Clinical Assistants:	Crane, Miller, Naik.

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; 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 Health Science Center. These facilities are Scott & White Memorial Hospital, Olin E. Teague Veterans' Center, Darnall Army Community Hospital 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.

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.

Course Desriptions

911 INTRODUCTION TO CLINICAL SKILLS IN PSYCHIATRY / 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)

Professor:	Montgomery, Stoebner.
Associate Professors:	Bourland, Carpentier, Cheung, Holbert, Holbert, Hopens, Kuhnhein, McCord, Middleton, Naul (head), Schoolar, Teaford, Wright.
Assistant Professors:	Borowski, Bose, Bosse, Calderwood, Clausen, Dwyer, Glass, Hajdik, Hutka, Ko, MacGregor, Metzger, Middleton, Mistry, Montgomery, Neese, Nipper, Parman, Phillips, Rangala, Ratajczak, Schnitker, Shah, Simonetta, Simonetta, Snuggs, Stewart, Trotter, Truitt, Ufema, Wu, Young, Young.

The Department of Radiology is responsible for the education of students in all fields of medical imaging, including conventional radiography, nuclear radiology, ultrasound, computerized tomography and magnetic resonance. The department also instructs students in therapeutic radiology.

Medical imaging is one of the most important diagnostic tools available to the clinician. The field of medical imaging is rapidly expanding; the development of ultrasound and computerized tomography has revolutionized medical diagnosis. Advances in technology are rapidly changing the field of radiology with the development of new techniques such as digital radiology and sophisticated invasive procedures such as transluminal angioplasty. The field of nuclear medicine also continues to expand rapidly, particularly in the area of cardiac scanning and physiological studies. Radiation therapy 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 students in the third year. The course stresses the fundamentals of roentgen interpretation and indications for the various imaging procedures. Several electives are offered to fourth-year students including diagnostic radiology, nuclear medicine and therapeutic radiology. The four-week elective in diagnostic radiology emphasizes image interpretation. Students work directly with radiologists and also make extensive use of the comprehensive teaching film file available in the department.

Course Descriptions

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)

Professors:	Anderson, Brindley, Buckley, Coffield, Cooney, Dieckert, Hansen, Harrison, Johnston, Klugo, Lenis, Lowry, Lynch (head), Miller, Roberts, Ruff, Snyder, Stark, Verheyden, White.
Adjunct Professor:	Gildenburg.
Professor Emeritus:	Brindley Jr.
Associate Professors:	Allinson, Anderson, Ashcraft, Baisden, Bolton, Brindley, Brindley, Childs, Coleman, Custer, Feldtman, Fisher, Ford, Frick, Goforth, Grothaus, Hendricks, Hermans, Johnson, Kallina, Knight, Lloyd, Manning, Probe, Raney, Reilly, Smith, Symmonds, Weber, White, Yuan.
Assistant Professors:	Allinson, Armstrong-Paap, Birkholz, Black, Bohne, Boysen, Bramhall, Brammeier, Brice, Camazine, Cochran, Coffman, Cox, Daniels, Davis, Dittmar, Ditzler, Dreher, Dries, Dunlop, Ellis, ElNiHum, Eshbaugh, Fedorchik, Fornfeist, Foster, Fulcher, Giles, Gillette, Glenn, Gordon, Grinovich, HaJi, Hamilton, Harris, Hitt, Hoganson,

Hollingsworth, Hutchinson, Hutkoff, Jaffers, Jew, Kirby, Kirkpatrick, Knieriem, Koehler, Lichota, Lindsay, Lueck, Lynch, Marr, Martin, Mehta, Meuse, Meyer, Miller, Moul, Munson, Murdoch, Neufeld, Nicholson, Norris, Odom, Opersteny, O'Shea, Overbeek, Pandya, Patel, Patterson, Perkins, Peterson, Pinkston, Purdue, Rahm, Rahm, Read, Reeve, Reiter, Riess, Rodriguez, Rogers, Rosa, Rudder, Sewell, Schultz, Sherrard, Shipman, Shutt, Smith, Spaw, Staniunas, Tuggle, Venus, Vestal, Vold, Waxman, Wegener, Wilkerson, Williams, Wittpenn, Wright, Wurster, Wuthrich.

Instructor: Wardell.

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.

Course Desriptions

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.

Graduate School of Biomedical Sciences

2001-2003 Catalog

Graduate School of Biomedical Sciences

009 Medical Sciences Library
College Station, Texas 77843-1114
979-845-0370
Fax: 979-845-6509
http://tamushsc.tamu.edu/gsbs/gsbs.html

Table of Contents

Administrative Structure

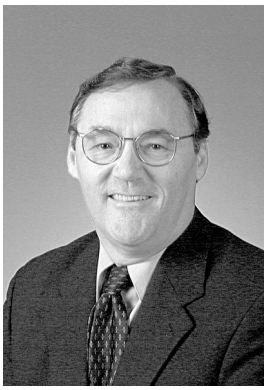
John M. Quarles, Ph.D. Interim Dean

The school is in the formative phase and other positions are in the process of being established.

The dean of the Graduate School of Biomedical Sciences is the administrative head responsible for implementation of all GSBS policies. The associate deans/directors for graduate studies of The Texas A&M University System Health Science Center components, as well as members of the graduate faculty, comprise the Academic Program Council, which advises the dean. Training leading to master's and doctoral degrees in the biomedical sciences, as well as the specialized graduate degrees at Baylor College of Dentistry and the School of Rural Public Health, are integral components of the A&M System HSC. GSBS is a division within the HSC with activities that complement and coordinate those of the Baylor College of Dentistry, College of Medicine, Institute of Biosciences and Technology and School of Rural Public Health to ensure excellence in graduate education.

Dean's Biography

John M. Quarles, Ph.D.
Interim Dean, Graduate School of Biomedical Sciences



Dr. John M. Quarles was appointed interim dean of The Texas A&M University System Health Science Center Graduate School of Biomedical Sciences in February 2001. He also is professor and interim department head in the Department of Medical Microbiology and Immunology at the HSC's College of Medicine.

A COM faculty member since 1976, Quarles has served as director of the Center for Flow Cytometry and Image Analysis, director of graduate studies, and coordinator of the Department of Medical Microbiology and Immunology's teaching program. Prior to joining COM, he did postdoctoral work at the University of Tennessee and Oak Ridge National Laboratory, served as head of Virology and Serology Laboratories at the U.S. Naval Medical School in Bethesda, Md., and was a research scientist at the federal Centers for Disease Control in Atlanta.

Quarles has received numerous awards for teaching and service over the course of his career, including the Texas A&M University Association of Former Students' Distinguished Teaching Award. Some of his areas of personal research interest include intervention in viral diseases, influenza virus, flow cytometry, development of methods for rapid identification of microorganisms and computer applications in medical student education.

Quarles earned a bachelor of science degree in bacteriology in 1963 from Florida State University, followed by a master of science degree in the same subject at the university in 1965. He earned his doctor of philosophy degree in microbiology at Michigan State University in 1973.

Academic Calendar

Depending upon individual programs of study, students function under the academic calendars of The Texas A&M University System Health Science Center, Texas A&M University, Baylor College of Dentistry, or The University of Texas Medical School at Houston. Students should see individual academic calendars for specific details.

History

In May 1971, the 62nd Texas Legislature began the process that led to the creation of the Texas A&M University College of Medicine. In October 1985, the College of Medicine received approval from the Texas Higher Education Coordinating Board to award the master of science and doctor of philosophy degrees in medical sciences and biomedical sciences. On Jan 1, 1999, The Texas A&M University System Board of Regents established The Texas A&M University System Health Science Center, which included Baylor College of Dentistry, College of Medicine, Graduate School of Biomedical Sciences, Institute of Biosciences and Technology and School of Rural Public Health.

The Graduate School of Biomedical Sciences is accredited as a component of the A&M System HSC by the Southern Association of Colleges and Schools.

Mission Statement

The Graduate School of Biomedical Sciences is dedicated to providing a rigorous and stimulating research and training environment for qualified candidates in the biomedical sciences, dentistry and rural public health. 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 A&M System HSC and to provide a new generation of leaders in the biomedical sciences. 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 and College Station
- School of Rural Public Health, College Station

Facilities

The 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.

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 Albert B. Alkek Institute of Biosciences and Technology is located in a modern 11-story research tower at the Texas Medical Center in Houston. IBT serves as an interface for the A&M System 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-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.

Admissions

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 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. The graduate program in biomedical sciences at 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. The GRE general test scores are required for master's and doctoral programs. Required courses vary with the individual program.

Procedure for Making Application

Contact:

Office of Admissions
Graduate School of Biomedical Sciences
The Texas A&M University System Health Science Center
009 Medical Sciences Library
College Station, Texas 77843-1114
979-845-0370
Fax: 979-845-6509
E-mail: gradofficeHSC@medicine.tamu.edu
http://tamushsc.tamu.edu

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

Assistant Director for Graduate Program
Institute of Biosciences and Technology
The Texas A&M University System Health Science Center
2121 W. Holcombe Blvd.
Houston, Texas 77030-3303
713-677-7777
http://www.tamu.edu/ibt/ibt.htm

Associate Dean for Academic Affairs
School of Rural Public Health
The Texas A&M University System Health Science Center
3000 Briarcrest Drive, Suite 300
Bryan, Texas 77802-3000
979-845-2387
http://tamushsc.tamu.edu/srph

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 a 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.

Bases for Admission

A combination of factors is considered for admission. The basis for admission includes the undergraduate or graduate record with a strong GPR, 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 GPR of 3.0 or better and a combined minimum score of 1100 on the verbal and quantitative sections of the GRE.

Add/Drop Policy

Add/drop policies are determined by the components and typically are administered through the office of the associate dean or director.

Expenses

Tuition and fees are required of all full-time graduate students at The Texas A&M University System Health Science Center. The 2001-02 tuition for Texas residents is $84 per semester credit hour. Nonresident and international student tuition is $253 per semester credit hour, but those nonresident and international students who hold graduate assistantships pay the same tuition as Texas residents. The total cost of tuition and fees for Texas residents and graduate students who hold a graduate assistantship is approximately $3,250 to $3,500 per year. 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.

Financial Assistance

Assistantships, fellowships, and traineeships are available from local and national sources. For information contact the Office of Graduate Studies or associate dean/director of graduate education for the component or program of interest. Loans

also are available for graduate students. Contact the Office of Financial Aid at The Texas A&M University System Health Science Center for information.

Housing

A wide variety of off-campus accommodations are available 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 and to the dean of the graduate school for details of additional rules and procedures.

Scholarship

Grading System

Courses are normally graded as A (4.0 points), B (3.0 points) C (2.0 points), D (1.0 points), or F (0.0 points). Certain courses may be graded on a satisfactory/unsatisfactory (S/U) basis.

Student Grade Information

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 eligible to be applied toward a graduate degree. Credit hours to which grades of withdraw failing (WF) are assigned shall be included in computing the GPR. Those involving withdraw passing (WP), satisfactory (S), unsatisfactory (U), and Q-drop (Q) or other non-penalty drop shall be excluded.

Satisfactory Academic Progress

Graduate students must maintain a grade point ratio (GPR) of 3.000 (B average based on a 4.000 scale) for all courses, which 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 of a student's cumulative GPR or the GPR 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 GPR is not attained in a reasonable length of time, the student may be dropped from graduate studies.

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 have passed a written and oral preliminary examination by the Advisory Committee, and must have 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 Graduate School of Biomedical Sciences and paying the required graduation fee no later than Friday of the second week of a fall or spring term or the Friday of the first week of the first summer session.

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.

Programs of Study

College of Medicine

The 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 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, in as much 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 because of 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 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 the basic medical sciences of anatomy, biochemistry, physiology, microbiology, pathology and pharmacology. 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 College of Medicine emphasizes interdisciplinary and multidisciplinary studies and research.

Baylor College of Dentistry

Baylor College of Dentistry offers the M.S. degree in biomedical sciences awarded through the Graduate School of 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 full- or part-time participation and the applicant's prior training. The M.S. in biomedical sciences is offered in BCD's Department of Biomedical Sciences through GSBS with multiple areas of concentration.

Baylor College of Dentistry also offers a Ph.D. degree in biomedical sciences awarded through GSBS. This program is available for advanced students with an interest in academic research careers in the oral health sciences. The Ph.D. is administered through BCD's Department of Biomedical Sciences. However, it 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

Students have the option of pursuing the M.S. and Ph.D. degrees in medical sciences at the Institute of Biosciences and Technology. Students may take courses in graduate specialty areas of the A&M System HSC's 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. (Requirements are as described under the section on GSBS.)

School of Rural Public Health

The M.S. and Ph.D. degrees in public health are under development. Please contact the associate dean for academic affairs for current information.

Requirements for Graduation from GSBS

The Ph.D. programs require a minimum of 96 semester hours. To ensure the multidisciplinary nature of the medical sciences program, each student will be typically required to complete courses from at least four discipline areas. This program combines the strengths of the basic research and rigorous educational programs. A continuing goal of the Graduate School of Biomedical Sciences is to further develop the graduate program and to enhance research initiatives to help alleviate shortages in broadly trained basic medical sciences. Upon application to the program, each student will declare an area of research interest from the basic disciplines in medical sciences (COM) and biomedical sciences (BCD). The graduate adviser for that discipline area will design a course of study with the student.

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 College of Medicine, through GSBS, 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 GSBS at 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 dean of the graduate school.

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 graduate school 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 graduate school prior to registration (or preregistration) for a third term, excluding summer terms, and no later than 90 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 graduate school prior to registration (or preregistration) for a fifth term, excluding summer terms, and no later than 90 days prior to the date of the preliminary examination.

Transfer of Credit

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 dean. 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 (for example: 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 University System Health Science Center are normally not included in computing the GPR. An official transcript from the university at which transfer courses are taken must be sent directly to the Office of Admissions and Academic Records.

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 dean of the Graduate School of Biomedical Sciences. The student must submit the degree plan using the accepted degree plan format as provided by the graduate school.

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 graduate school at least 14 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 graduate school.

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 GPR must be at least 3.000 for courses on the degree plan and 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 graduate school.

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 GPR 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 six 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 dean of the graduate school. 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 dean of the graduate school. 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 dean of the graduate school, 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 graduate school each semester or summer session. To be eligible to take the final examination, a student's official GPR 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 graduate school. 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 the preliminary examination, (3) completed all formal course work and (4) filed the approved dissertation proposal with the graduate school.

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 graduate school.

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 Graduate School of Biomedical Sciences.

Petitions

Exceptions to published rules may be requested by proper petition to the dean of the Graduate School of Biomedical Sciences. Each petition will be considered on its own merits by the dean and the Executive Committee. 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 Graduate School of Biomedical Sciences faculty consists of faculties from the Baylor College of Dentistry, College of Medicine, Institute of Biosciences and Technology and School of Rural Public Health, as well as from other A&M System HSC components that participate in teaching, training and evaluation, and supervision of research and committee work related to graduate education in the A&M System HSC. There are approximately 150 full-time faculty who hold appointments to the graduate faculty of the Graduate School of Biomedical Sciences and/or to the graduate faculty of Texas A&M University. In addition, more than 650 part-time and contract clinical science faculties are available to participate in appropriate research and educational projects. The graduate faculty represents diverse areas of scholarship that contribute knowledge to the biomedical sciences and who are qualified as educators by their scholarly or creative work and their effectiveness in graduate education. Members must be appointees of The Texas A&M University System, the A&M System HSC or such other institutions as may be authorized by the Board of Regents.

The faculty conducts numerous research activities and programs. In 2000, research expenditures totaled approximately $18 million; however, this figure does not include the sponsored research efforts of faculty associated with Scott & White Hospital. This effort is estimated at $5.5 million per year. Faculty members serve as principal investigators and researchers in

federal, state and private grants. A great potential exists for collaborations between basic scientists and clinical scientists in the A&M System HSC and with Texas A&M University System faculties.

Curriculum Listings and Course Descriptions

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.
Dechow 0.5 sem. hr.

5127 SCANNING ELECTRON MICROSCOPY AND ASSOCIATED TECHNIQUES / Principles and methods of scanning electron microscopy. Technical instruction will include 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 will include 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 student.
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 nonoral 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 will be 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 will provide 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 / Prerequisite: 5603 or equivalent. 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.
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 the biomedical properties of the tissue and for the development of degenerative changes will be 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 will be 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 / Prerequisite: 5306 or equivalent. Intermediary metabolism of protein, protein synthesis, nucleic acid metabolism and biochemical endocrinology.
Miller 2 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.

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.

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.
Svoboda 2 sem. hrs.

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.

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.

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 will acquire knowledge in a variety of different disciplines including agriculture, food science, nutrition, biology, chemistry, medicine and toxicology.
Miller 3 sem. hrs.

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.

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.

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/ Prerequisites: 5208 or equivalent; 5306, 5307 or equivalent. A general survey intended to provide background information concerning the methods and theory of modem 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.

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 / Prerequisite: 5270. Normal prenatal growth and development of the craniofacial region; processes and mechanisms of palatal development; maxillomandibular development; factors influencing sutural development.
Opperman variable

5V72 CRANIOFACIAL ANOMALIES / Prerequisites: 5271 and 5273. 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.
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 will be 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	BMS5V36	Topics in Molecular Biology	UTD
BMS5631	Eukaryotic Molecular and Cell Biology	UTD	CMB5096	Cellular and Molecular Biology	UTSW
BMS5632B	Biochemistry/Proteins and Nucleic Acids	UTD	AE1312	Statistics	UTA
MS5633	Molecular Biology	UTD	AE2312	Dynamics	UTA

BMS5634	Cell Biology	UTD	ME2312	Structural Statistics	UTA
BMS5V35	Methods in Molecular and Cell Biology	UTD	ME5340	Finite Element Application	UTA

*UTA University of Texas, Arlington
UTD University of Texas, Dallas
UTSW 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 will be 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.

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.

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 RESERCH / (2-0). Credit 2. Present status of research in a variety of significant medical sciences fields. Content will depend on the availability of visiting lecturers who will be selected because of distinguished international recognition in their field of research. May be repeated for credit. Prerequisite: Graduate classification in appropriate fields.

Human Anatomy and Medical Neurobiology (MANA)

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.

602 HISTOCHEMISTRY / (1-2). Credit 2. Basic histochemistry demonstrating tissue components and morphology; precise identification, localization of tissue components, photomicrographic techniques. Prerequisites: MANA 911 and approval of instructor.

603 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.

604 HUMAN EMBRYOLOGY / (1-0). Credit 1. Basic embryology; clinically oriented, includes human gametogenesis; fertilization; normal and abnormal development of the organs and systems of the body; the causes of congenital anomalies. Prerequisite: Approval of instructor.

607 METHODS OF BEHAVIORAL BRAIN RESEARCH / (0-3). Credit 1. Advanced course in brain and behavior research with a focus on neural plasticity and mechanisms of learning and memory; direct supervision in brain surgery techniques, electrical stimulation, recording, behavioral training; computerized data collection and analysis. Uses laboratory animals. Prerequisites: MANA 922 and approval of instructor.

608 METHODS IN NEUROBIOLOGY / (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 NEUROCHEMISTRY / (2-0). Credit 2. Emphasis on mammalian neurotransmitter systems. Prerequisites: MANA 922 or equivalent and approval of instructor.

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 HISTOLOGY / (2-4). Credit 1. Provides teaching and supervisory experience for graduate students; instructs students in teaching and supervising medical students in Microanatomy (MANA 911); student(s) observe in the laboratory and present at least one lecture. Prerequisites: Completion of MANA 911 with a grade of "B" or better and approval of course coordinator.

623 TEACHING IN MEDICAL NEUROSCIENCE / (5-3). Credit 2. Assist in the teaching of Medical Nueroscience (MANA 922), to include lecture(s), laboratories and examination setup and proctoring. Prerequisite: MANA 922.

642 OSTEOPOROSIS AND BONE BIOLOGY / (2-0). Credits 2. Introduction to the discipline of bone biology as it pertains to the development and pathophysiology of osteoporosis; will include peak bone mass, estrogen deficiency, epidemiology, nutrition, and prevention; discussion to include all aspects of bone biology. Prerequisite: Graduate classification in human anatomy and medical neurobiology or medical sciences or approval of instructor.

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 department head.

911 MICROSCOPIC ANATOMY / Credit 5. Morphologic detail of human cells, tissues and organs as demonstrated by light and electron microscopic techniques; function of structural components. Prerequisite: Admission to medical curriculum or approval of department head.

922 NEUROSCIENCE / Credit 7. Neural substrates for total regulation of somatic and visceral bodily function and mechanisms underlying the integrated action of the central nervous system; neurologic significance. Prerequisite: Admission to medical curriculum or approval of department head.

Medical Biochemistry and Genetics (MBCH)

601 MEDICAL MOLECULAR BIOLOGY / (3-0). Credit 3. Application of recombinant DNA techniques to the diagnosis and study of human genetic and transmissible diseases; molecular biology as applied to the study of human pathogens and to the function of the human immune system. Prerequisite: MBCH 913 or equivalent or approval of the instructor.

604 DEVELOPMENTAL AND CELLULAR BIOLOGY / (3-0). Credit 3. Basic structure and function of eukaryotic cells with special emphasis on biochemical communication between internal cell compartments and between cells and their environment; molecular basis of differentiation; oncogenes and disorders of differentiation in humans. Prerequisites: MBCH 911/912 or approval of the instructor.

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. Course may be taken eight times for credit. Prerequisites: BICH 431 or GENE 431 or equivalent and approval of instructor. Cross-listed with BICH 625.

671 MACROMOLECULAR FOLDING AND DESIGN / (1-0). Credit 1. The Macromolecular and Folding 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.

672 BIOLOGICAL MEMBRANES / (1-0). Credit 1. Seminar-based course examining recent discoveries in the structure, function and assembly of biological membranes; students will give an oral presentation on current literature in molecular biology, biochemistry and/or biophysics. Prerequisite: Approval of the instructor. Cross-listed with BICH 672.

911 MEDICAL BIOCHEMISTRY I: MACROMOLECULES, MOLECULAR BIOLOGY AND MOLECULAR GENETICS / Credit 4. Properties and metabolism of proteins, DNA, and RNA. Recombinant DNA technology and applications to human medicine; introduction to the metabolic basis of inherited disease. Prerequisite: Admission to the medical curriculum or approval of department head.

912 MEDICAL BIOCHEMISTRY II: INTERMEDIARY METABOLISM / Credit 4. Metabolic basis of inherited disease continued. Prerequisite: MBCH 911 or approval of department head.

913 MEDICAL GENETICS / Credit 2. Fundamentals of medical genetics, including diseases resulting from inborn errors of metabolism that affect individual enzymes, chromosomal abnormalities, including aneuploidy and translocations; human gene mapping, and applications of recombinant DNA technology to problems of medical genetics. Prerequisite: MBCH 911.

Medical Microbiology and Immunology (MMIM)

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.

923 MEDICAL MICROBIOLOGY I / (2-4). Credit 4. 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.

924 MEDICAL MICROBIOLOGY II / (2-4). Credit 4. Continuation of 923. Prerequisite: MMIM 923.

Medical Pharmacology and Toxicology (MPHM)

601 PHYSIOLOGICAL PHARMACOLOGY / (4-0). Credit 4. Pharmacologic effects of selected therapeutic agents on relevant physiology and pathophysiology of the nerve and the eye; emphasis on integration of characteristic actions noted at the whole body or organ level with specific cellular and molecular mechanisms of action. Prerequisites: MPHM 923, 924 and 925 or equivalents.

602 CHEMICAL PHARMACOLOGY / (4-0). Credit 4. Application of theories of drug-receptor interaction to the classification of drugs and receptors and quantitation of drug action; computer analysis of dose-response and ligand-binding data; physiochemical factors influencing receptor activation by drugs. Prerequisites: CHEM 227, 228, 323 and 324; STAT 302 or equivalents.

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 MEDICAL TOXICOLOGY / (4-0). Credit 4. Application of theoretical conceptual basis of chemical intoxication; mechanism of antagonism; computerized bibliographic retrieval of NLM and STN data banks; and intricacies of preparation of extramural grant proposals. Prerequisites: MPHM 923, 924 and 925 or equivalents.

923 MEDICAL PHARMACOLOGY I / (4-0). Credit 3. General concepts of pharmacological agents and substances; pharmacokinetics, pharmacodynamics; autonomic drugs; ocular pharmacology and cardiovascular pharmacology. Prerequisites: Admission to medical curriculum or MPHY 901, 902; MANA 922; MBCH 911, 912 or approval of department head.

924 MEDICAL PHARMACOLOGY II / (4-3). Credit 4. Continuation of MPHM 923; anesthetics; neuro-psychopharmacology; analgesics; chemotherapy, endocrine pharmacology; autacoids; drug abuse and medical toxicology. Prerequisite: MPHM 923.

Medical Physiology (MPHY)

601 METHODS IN CELL PHYSIOLOGY / (3-3). Credit 4. Fundamental laboratory techniques used to investigate cellular physiology; cell culture and isolation; light microscopy including brightfield, phase, DIC, fluorescent confocal and widefield deconvolution 3-D techniques; digital and video image processing; immunofluorescence; ELISA; gel electrophoresis; immunoprecipitation; agarose gel electrophoresis; northern, southern, and western blotting. Prerequisite: Graduate classification in medical physiology or medical sciences or approval of instructor.

604 ADVANCED CARDIOVASCULAR BIOLOGY I / (4-0). Credit 4. Biology of cardiogenesis, vasculogenesis and hematopoiesis. Function of cardiac and vascular system with integrated molecular and cellular mechanisms that regulate cardiovascular network. Prerequisite: MPHY 901 or VTPP 910 & 912 and MSCI 601 & 602 or approval of department head. Cross-listed with VTPP 655.

606 ADVANCED CARDIOVASCULAR BIOLOGY II / (4-0). Credit 4. Interactions of the heart and vascular system including neural and humoral control systems. Molecular genetics and pathophysiology of cardiovascular system during the development of diseases. Gene therapy approaches in cardiovascular biology. Prerequisites: MPHY 604 or approval of department head.

901 MEDICAL PHYSIOLOGY / (8-0). Credit 8. Function and regulation of the systems of the human body with special emphasis on their relationships, feedback control mechanisms and pathophysiology. Prerequisite: Admission to medical curriculum or approval of department head.

Pathology and Laboratory Medicine (MPAT)

923 HUMAN PATHOLOGY I / Credit 4. Language of disease, identification of morphological lesions in common diseases and relation of their causes and pathogenesis to resulting clinical manifestations. Basic laboratory skills. Prerequisite: Year 1 of medical curriculum or approval of department head.

924 HUMAN PATHOLOGY II / Credit 4. Human diseases, their causes, pathogenesis, lesions and resulting manifestations. Prerequisite: MPAT 923 or approval of department head.

925 HUMAN PATHOLOGY III / Credit 4. Continuation of MPAT 923 and 924. Prerequisite: MPAT 924.

Institute of Biosciences and Technology

2001-2003 Catalog

Institute of Biosciences and Technology

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Table of Contents

Administrative Structure

Richard H. Finnell, Ph.D.	Director
Richard R. Sinden, Ph.D.	Associate Director and Assistant Director for Graduate Studies

The Institute of Biosciences and Technology is composed of centers, each with a specific research focus and director: animal biotechnology, cancer biology and nutrition, extracellular matrix biology, informatics, and genome research.

Currently, IBT has 15 faculty located in Houston. Most have joint academic appointments in departments at Texas A&M University or other components of The Texas A&M University System Health Science Center. 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.

IBT faculty also are full members of the Graduate School of Biomedical Sciences at the University of Texas-Houston Health Science Center; some have appointments at Baylor College of Medicine, Rice University and the University of Houston.

Director's Biography

Richard H. Finnell, Ph.D.
Director, Institute of Biosciences and Technology

Dr. Richard H. Finnell, director of the Institute of Biosciences and Technology, has a distinguished career researching environmentally induced birth defects. He earned a bachelor of science degree in biology from the University of Oregon in 1975, a master of science degree in genetics from the University of British Columbia in 1978 and a doctor of philosophy degree in genetics from the University of Oregon Health Sciences Center in 1980.

Following a postdoctoral fellowship in Switzerland, a visiting professorship in Berlin and an associate professorship at Washington State University, Finnell held various positions within Texas A&M University from 1991 through 1998. These included professor and assistant head, Department of Veterinary Anatomy and Public Health, College of Veterinary Medicine; acting associate dean for research at the College of Veterinary Medicine; professor, Department of Environmental and Occupational Health, School of Rural Public Health; and professor, Department of Biomedical Sciences, Baylor College of Dentistry. From 1998 through May 2001, he was director of the Center for Human Molecular Genetics and professor of cell biology and anatomy at the University of Nebraska Medical Center in Omaha, Neb.

Finnell holds several National Institutes of Health grants and received the Pfizer Animal Health Award for Research Excellence in 1995 and the Texas A&M University Distinguished Achievement Award in Research in 1997.

Academic Calendar

Depending upon individual programs of study, students function under the academic calendars of The A&M University System Health Science Center 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 in 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 IBT, 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 University System Health Science Center.

Mission

The Institute of Biosciences and Technology undertakes creative research on molecular aspects of agriculture and medicine, provides a forum for the exchange of ideas between the agricultural and medical communities, and encourages technology transfer of agricultural and medical discoveries from the laboratory to the marketplace. In the United States, the institute is unique in its research mission combining agriculture and medicine through links with the Texas Medical Center.

In April 1992, Texas A&M University opened the institute in the Texas Medical Center in Houston. This joining of America's largest agricultural university with America's largest medical center has improved the A&M System's ability to meet fundamental needs for high-quality food and health care. Scientists from IBT and the Texas Medical Center undertake interdisciplinary research on molecular, cellular, systemic, organismic and whole animal biology that bridges the gap between basic science and the application of "new biotechnology" in agriculture and medicine.

Location

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 in Texas, include cypress swamps, dramatic canyons, hill country, and high desert and mountains of Big Bend National Park.

Facilities

Houston

The 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 M.D. Anderson Cancer Center and the University of Texas Health Science Center. Approximately 19,000 students and 10,000 faculty are involved in courses ranging from the high school level through postdoctoral studies. Thus, IBT's location in the medical center makes it an ideal location and environment for conducting excellent research.

The 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 micro-manipulator and micro-injection system mounted on a vibration-dampening table is reserved for transgenic animal work.

Telecommunications Infrastructure

The W.M. Keck Center for Informatics serves as the focal point for informatics and liaison with the Institute for Scientific Computation. This interaction between IBT and ISC has provided a leadership role in the medical center in next-generation networking and telecommunications technology (especially Asynchronous Transfer Mode networks) for telemedicine, distance learning (K-12, high school, college), and computational biology.

Research Organization

IBT conducts research in 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. IBT's research is organized by centers, each with its own research director. The institute's centers focus on animal biotechnology, animal genetics, arthritis and bone diseases, cancer biology and nutrition, genome research, genome informatics and structural biology. Emerging research areas will necessitate the development of new centers as IBT 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 IBT faculty have productive working relationships with biotechnology companies, several licensing agreements have been established based on IBT research and a new company has been incorporated.

Graduate Education

Graduate and postdoctoral education is conducted at IBT in cooperation with university programs in College Station. Most IBT faculty have affiliations with departments in The Texas A&M University System Health Science Center College of Medicine or in Texas A&M University. Some also have adjunct appointments in departments at Baylor College of Medicine, the University of Texas-Houston Health Science Center, and the University of Texas-M.D. Anderson Cancer Center – all of which also are located in the Texas Medical Center.

Economic Impact

The 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 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. IBT's broad-based research is helping to improve economic diversity and the return from new Texas-based biotechnology businesses.

Admissions

For application information please contact:

Office of Admissions
Graduate School of Biomedical Sciences
The Texas A&M University System Health Science Center
College Station, Texas 77843-1114
979-845-0370
Fax: 979-845-6509
E-mail: gradofficeHSC@medicine.tamu.edu
http://tamuhsc.tamu.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.

IBT Graduate Program

Students applying to the Institute of Biosciences and Technology 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. IBT also requires GRE General Test scores.

Correspondence and requests for additional information should be addressed to:

Assistant Director for Graduate Program
Institute of Biosciences and Technology
The Texas A&M University System Health Science Center
2121 W. Holcombe Blvd.
Houston, Texas 77030-3303
713-677-7612
Fax: 713-677-7725
E-mail: gradprog@ibt.tamu.edu
http://www.tamu.edu/ibt/ibt.htm

For details of rules and requirements for the degree program, please see the Graduate School of Biomedical Sciences section of this catalog.

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 the Advisory Committee.

Bases for Acceptance

A combination of factors is considered for admission. These include undergraduate or graduate record, standardized test results (GRE), 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 Institute of Biosciences and Technology. Depending upon their level of advancement toward degree completion, various requirements may be waived.

Expenses

Tuition and fees are required of all full-time graduate students at The Texas A&M University System Health Science Center. The cost of tuition is $76 per credit hour. The total cost of tuition and fees is approximately $3,250 per year. Full health benefits are provided 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 director for graduate program at the 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

Grading System

Courses are normally graded as A (4.0 points), B (3.0 points), C (2.0 points), D (1.0 points) or F (0.0 points). Certain designated courses may be graded on a Satisfactory/Unsatisfactory (S/U) basis.

Student Grade Information

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 GPR for a graduate student is computed by using all graded graduate and advanced undergraduate course work eligible to be applied toward a graduate degree. Semester credit hours to which grades of Withdraw Failing (WF) are assigned shall be included in computing the GPR. Those involving Withdraw Passing (WP), Satisfactory (S), Unsatisfactory (U) and Q-drop (Q) or other nonpenalty drop shall be excluded.

Review of Academic Progress (Satisfactory Academic Progress)

Graduate students must maintain a grade point ratio (GPR) 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 of a student's cumulative GPR or the GPR 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 GPR 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 Office of Graduate Studies and paying the required graduation fee no later than Friday of the second week of a fall or spring term or the Friday of the first week of the first summer session.

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 Institute of Biosciences and Technology offers a program of study leading to a Ph.D. in Medical Sciences through the Graduate School of Biomedical Sciences. 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 Texas A&M University System Health Science Center 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 A&M System HSC, including IBT's program in Houston, is designed specifically to remedy this deficiency by bridging traditional disciplinary lines through both course work and research.

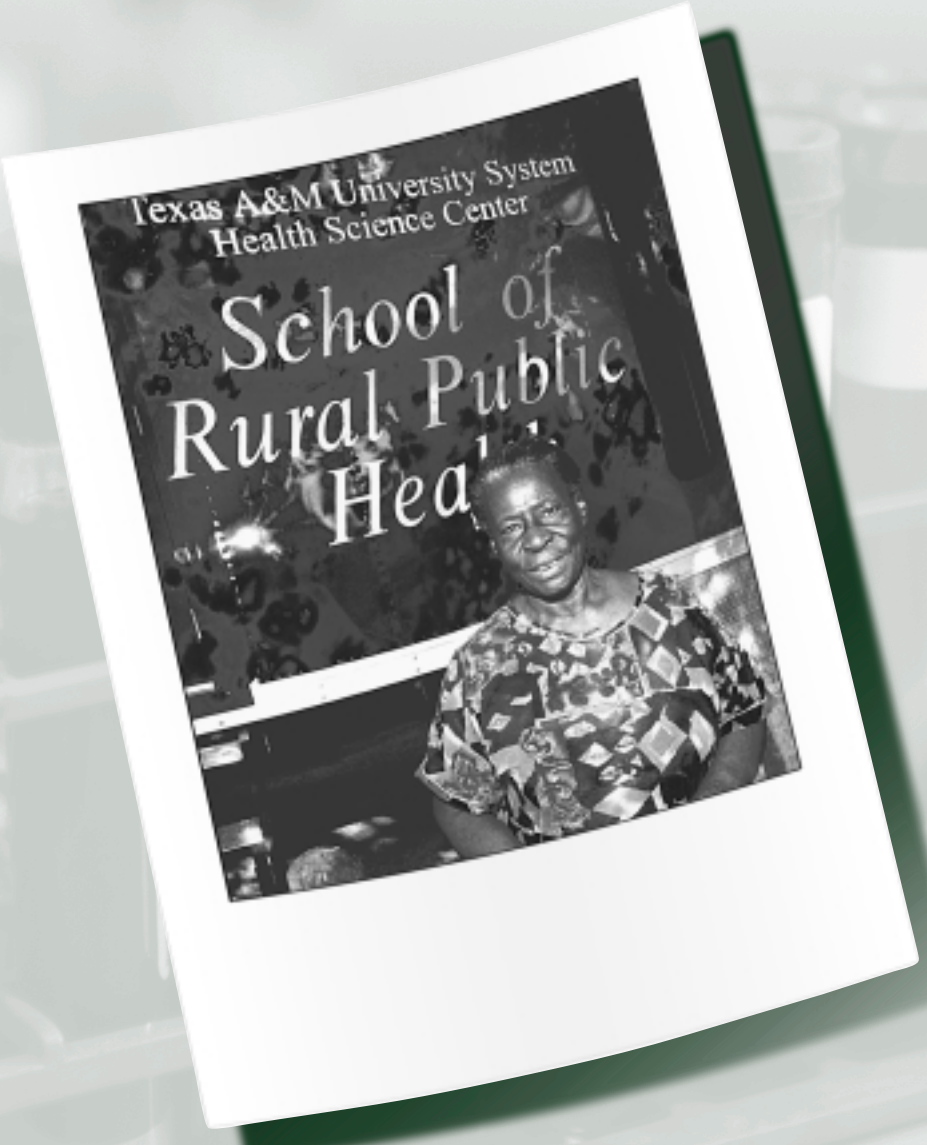
The College of Medicine and GSBS also offer a combined M.D./Ph.D. program by allowing highly motivated medical students to enroll in graduate programs simultaneously with studies toward the M.D. degree. IBT may be selected by students who wish to pursue an M.D./Ph.D. program and conduct their research 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.

A continuing goal of the A&M System HSC is to further develop the graduate program and enhance research initiatives to help alleviate shortages in researchers broadly trained in basic medical sciences. Upon application to the program, each student will declare an area of research interest from the centers and research interests of the faculty. The graduate adviser for that area will design, along with the student, a course of study.

Curriculum and Course Descriptions

Students of the Institute of Biosciences and Technology can take courses on the College Station campus or at the University of Texas-Houston Health Science Center as directed by their respective graduate advisory committees, within the approved requirements for the Ph.D. in medical sciences.

School of Rural Public Health



2001-2003 Catalog

School of Rural Public Health

Wells Fargo Plaza
3000 Briarcrest Drive, Suite 300
Bryan, Texas 77802-3000
979-845-2387
Fax: 979-458-1878
http://tamushsc.tamu.edu/srph

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Administrative Structure

Dean's Office

Ciro V. Sumaya, M.D., M.P.H.T.M.	Dean and Cox Endowed Chair
Kenneth R. McLeroy, Ph.D.	Associate Dean for Academic Affairs
James Robinson III, Ed.D., F.A.A.H.E.	Assistant Dean for Student Affairs
Alicia M. Dorsey, Ph.D.	Coordinator for Institutional Effectiveness
Clay D. Hanks, M.P.A.	Senior Academic Business Administrator
Charles Phillips, Ph.D.	Director of Health Services Research Program
Andrea T. Pool, M.S.	Communications Specialist
Barbara J. Quiram, Ph.D.	Director of Special Programs
Mary E. Wolf, M.B.A., M.P.H., R.N.	Director of Distance Education

Department Heads

Craig H. Blakely, Ph.D., M.P.H.	Head, Health Policy and Management
Kirby C. Donnelly, Ph.D.	Interim Head, Environmental and Occupational Health
James Robinson III, Ed.D., F.A.A.H.E.	Interim Head, Social and Behavioral Health
Kenneth R. McLeroy, Ph.D.	Acting Head, Epidemiology and Biostatistics

Dean's Biography

Ciro V. Sumaya, M.D., M.P.H.T.M.
Dean, School of Rural Public Health

A native of Brownsville, Dr. Ciro V. Sumaya is dean of The Texas A&M University System Health Science Center School of Rural Public Health and holder of the Cox Endowed Chair in Medicine. Previously, Sumaya was a presidential appointee at the U. S. Department of Health and Human Services, serving as administrator of Health Resources and Services Administration and subsequently as deputy assistant secretary for health, spearheading the federal Initiative on the Future of Academic Health Centers.

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.

Academic Calendar

2001-2002 Academic Calendar

	Fall Semester 2001*
August 24	Friday. Last day to register for fall semester classes and pay fees without paying late fees.
August 27	Monday. First day of fall semester classes.
August 30	Thursday. Last day for dropping courses with no record.
August 31	Friday. Last day for adding new courses for the fall semester.
September 3-4	Monday-Tuesday. Classes not in session.
September 7	Friday. Last day to apply for comprehensive exams and December graduation.
October 22-25	Monday-Thursday. Comprehensive exams.
November 5	Monday. Last day for dropping courses with no penalty. Last day to officially withdraw.
November 19	Registration begins for 2002 spring semester.
November 21-23	Wednesday-Friday. Thanksgiving Holiday; classes not in session.
December 6	Thursday. Last day of fall semester classes.
December 10-13	Monday-Thursday. Fall semester final examinations.
December 17	Monday. Final grades due by noon.
December 24-January 1	Monday-Tuesday. Faculty and staff holiday.
	Spring Semester 2002*
January 11	Friday. Last day to register for spring semester classes and pay fees.
January 14	Monday. First day of spring semester classes.
January 17	Thursday. Last day for dropping courses with no record.
January 18	Friday. Last day for adding new courses for spring semester.
January 21	Monday. Dr. Martin Luther King Jr. Day Holiday; classes not in session.
January 25	Friday. Last day to apply for comprehensive exams and May graduation.
March 4-8	Monday-Thursday. Comprehensive exams.
March 11-15	Monday-Friday. Spring break (for students only).
April 2	Tuesday. Last day to drop courses with no penalty. Last day to officially withdraw.
April 15	Registration begins for the 2002 Summer Session I, Summer Session II, the 10-week summer session and fall 2002 semester.
April 29	Monday. Last day of spring semester classes.
May 2, 6-8	Thursday, Monday-Wednesday. Final examinations.
May 10	Friday. Grades for graduating students due by noon. Last day to apply for summer comprehensive exams and August graduation.
May 12	Sunday. SRPH commencement.
May 13	Monday. Final grades for all non-graduating students due by 5 p.m.
	Summer Session 2002*
May 27	Monday. Memorial Day Holiday.
May 31	Friday. Last day to register for Summer Session I and the 10-week summer session and pay fees without incurring late fees.
June 3	Monday. First day of Summer Session I and 10-week summer session classes.
June 5	Wednesday. Last day for dropping courses with no record for the first term and 10-week semester.
June 6	Thursday. Last day for adding new courses for Summer Session I and the 10-week summer session.
June 17-19	Monday-Wednesday. Comprehensive examinations.
June 21	Friday. Last day to drop courses with no pena1ty for Summer Session I. Last day to officially withdraw from Summer Session I.

July 3	Wednesday. Last day of Summer Session I classes.
July 4	Thursday. Independence Day Holiday.
July 8	Monday. Summer Session I final examinations. Last day to register for Summer Session II without incurring late fees.
July 9	Tuesday. First day of Summer Session II classes.
July 11	Thursday. Last day to drop courses with no record for the second term.
July 12	Friday. Last day for adding new courses for the second term. Summer Session I grades due by noon.
July 23	Tuesday. Last day to drop courses with no penalty for 10-week summer session. Last day to officially withdraw from the 10-week summer session.
July 29	Tuesday. Last day to drop courses with no penalty for Summer Session II. Last day to officially withdraw from Summer Session II.
August 8	Thursday. Last day of Summer Session II and 10-week summer session classes.
August 12-15	Monday-Thursday. Summer Session II and 10-week summer session final examinations.
August 19	Monday. Second term and 10-week semester final grades due by noon.

*All dates and times are subject to change.

History

The Texas A&M University System Health Science Center School of Rural Public Health is the first of its kind in the nation. The Texas Legislature established SRPH 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, SRPH welcomed its inaugural class in September 1998. In January 1999, The Texas A&M University System Health Science Center was formed as a separate academic institution within The Texas A&M University System.

While still a classic school of public health, SRPH concentrates on the health needs of traditionally underserved rural areas. The school currently offers a master's degree in public health. Within the M.P.H., students choose one of six areas of concentration: environmental and occupational health, epidemiology, biostatistics, health policy and management, social and behavioral health, and community public health and management. All students spend a semester equivalent working in a rural public health setting as a part of a requisite practicum.

Over the course of 2000 and 2001, SRPH was actively involved in recruiting faculty, developing curricula, and building the necessary infrastructure in its continuing efforts to build a strong school of public health that emphasizes the needs of rural communities and underserved populations. The school experienced a number of successes as a result of these efforts. In June 2001, SRPH was added to the elite list of 29 schools of public health accredited by the Council on Education in Public Health, the sole accrediting body for public health academic programs and institutions.

Also in June 2001, the Texas Higher Education Coordinating Board granted approval to SRPH to offer two new degree programs: a master of science in public health and a master of health administration. In addition, the school has submitted proposals to the Texas Higher Education Coordinating Board for two doctoral degrees: a doctor of philosophy in public health with a concentration in health services research, and a doctor of public health. Actions on these proposals are expected in spring 2002.

Focus of the School of Rural Public Health

Mission Statement

The mission of The Texas A&M University System 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 School of Rural Public Health 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 within the school.

- To recruit, train, and retain a diverse student body.
- To develop and implement a curriculum that emphasizes competencies for working with rural, diverse and under-served populations as well as sensitivity to diverse cultures.
- To assure a curriculum that represents state-of-the-art practices, addresses priority public health and health services needs, reflects the current knowledge base in public health and related disciplines, and emphasizes ethical public health practices.
- To foster research activities that have as a major focus collaborative problem-solving and reflect community needs, interests and agenda.
- To establish and maintain a focus on rural health and policy-relevant research.
- To identify, establish and develop ongoing research, teaching and service programs within select rural Texas communities.

The interdisciplinary faculty of 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 School of Rural Public Health's administration and faculty are primarily located in the Wells Fargo Plaza, approximately four miles from the Texas A&M University campus. Most classes are held in classrooms at this location, one of which is fully equipped with videoconferencing technology to support the school's distance education program.

Resources

Library Resources

The *Evans Library* is centrally located on the main Texas A&M University campus. It houses approximately 2,300,000 volumes, 4,600,000 microforms and 22,000 serial titles. The Learning Resources Department on the sixth floor provides audiovisual equipment and multimedia resources for student use. The computer lab provides more than 60 IBM and Macintosh computers. The library also has a Special Collection and Archives Department as well as collections of maps, documents and microtext.

The *Medical Sciences Library* is adjacent to the Reynolds Medical Building on the university's west campus. It houses approximately 200,000 books and 1,800 current subscriptions to periodicals. Electronic bibliographic databases are provided through a number of sources. As of fall 2000, the Medical Sciences Library provides electronic access to more than 1,300 on-line journals, covering all areas of human and animal health, with more than 100 titles of direct relevance to public health.

The *West Campus Library* also is available. It serves mainly the Lowry Mays College and Graduate School of Business and certain departments in the College of Agriculture and Life Sciences. Its collection is specialized to business and agriculture.

Computing Resources

The School of Rural Public Health maintains a computer lab for students, which is located in the Wells Fargo Plaza. This lab houses 10 computers, two printers, and scanning and CD-writing capabilities. There are also several locations on the TAMU campus that provide computing resources for students. Students have access to the microcomputing laboratory in the Media Resources Library, the Learning Resources Department at Evans Library and more than 20 computing labs and help desks on the main TAMU campus and on the west campus. The Texas A&M University computing facilities are among the best of any educational institution in the nation.

Additional Resources

The *South Texas Center for Rural Public Health*, located in McAllen, is a branch of the School of Rural Public Health. Through the center's programs focused on serving the Lower Rio Grande Valley, students have access to a wealth of outreach, education and research opportunities.

Admissions

Applicants for any of the degree programs offered by SRPH must hold a bachelor's or graduate degree from an accredited college or university with a grade point average of 3.0 (B) or better based on the applicant's last 60 semester credit hours of coursework. The Graduate Record Examination currently is not required for admission to the Master of Public Health Degree Program. However, students 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 Degree Program; either the GRE or the GMAT is required for admission to the Master of Health Administration Degree Program.

Applicants whose native language is not English are required to submit scores of 570 or higher on the Test of English as a Foreign Language.

Students who possess an advanced degree from an accredited university may be eligible for advanced placement in the M.P.H. program. Under conditions of advanced placement, a student may be given up to nine credit hours toward the completion of their degree. Advanced placement credits are based upon previous academic training and experience and must be approved by the student's department head and the associate dean for academic affairs.

Applications can be obtained from the School of Rural Public Health or downloaded from the SRPH web site at http://tamushsc.tamu.edu/srph. They must be received in the Office of Student Affairs within the School of Rural Public Health by June 30 to be considered for the fall semester (and by Oct. 31 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 true if the applicant is interested in a graduate assistantship. The following information should be included as part of the application packet:

1. A completed graduate application
2. A complete set of official transcripts from each academic institution attended
3. A nonrefundable application fee of $50
4. Three completed letters of recommendation
5. Official copies of either GRE or GMAT (if applicable) scores taken within the past five years
6. A description of prior work experience (particularly if applying for the M.H.A. degree program)

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, accessibility 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 on the College Station campus, or are attending one of the distance education campuses, and under the direction of the student's major adviser. For specific residency requirements, students should contact the Office of Student Affairs.

Bases for Acceptance

Complete student applications are reviewed by faculty members of the respective departments to which applications are made. Departments consider a number of factors during their evaluation process. Among these factors are grade point average (in particular, the GPA resulting from the applicant's last 60 semester credit hours of coursework), undergraduate major, letters of recommendation, related experience (in particular prior work experience for the M.H.A. degree program), GRE scores (particularly for the M.S.P.H. degree program), and either GRE or GMAT scores for the M.H.A. 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:

- The applicant's socioeconomic conditions as an undergraduate student
- The applicant is a first generation family member to graduate from an undergraduate program
- The applicant has multilingual proficiency
- The applicant had special family responsibilities as an undergraduate student, e.g., single parent
- The applicant's region of residency at the time of application
- The applicant's involvement in community activities
- The applicant's demonstrated commitment to public health
- The applicant was automatically admitted to a general teaching institution as an undergraduate under Section 51.803 Texas Education Code

Interviews

Typically, interviews are not required. If the selection committee needs additional information to determine the level of predicted success of an applicant, the committee may conduct a personal interview. Applicants also can request a personal interview if elements of their application need clarification.

Transfer Students

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 SRPH from other graduate degree granting institutions (other than Texas A&M University; classes taken through the university are not considered transfer credits). All requests must be approved by the department and the associate dean for academic affairs.

Matriculation

Except for rare instances (e.g., late applications), applicants will be notified of their application status at least 30 days prior to the start of the semester. All students are expected to attend a mandatory orientation meeting to be announced at the time they receive their acceptance letter. At the time of admission, each student will be assigned an academic adviser who will help guide the student through his/her graduate studies.

Expenses

Tuition

The cost of attending SRPH can vary depending on a student's classification, residency status, personal needs and spending habits. Below are estimates that are intended to provide a reasonable idea of cost. The most current rates and information available at the time of publishing were used and are subject to change.

Tuition: Texas Residents

Resident students pay $84 per semester credit hour, but the total of such charge shall not be less than $120 per semester or $60 per summer term. In addition, there are student fees assessed by The Texas A&M University System Health Science Center and Texas A&M University for certain services.

Tuition: Nonresident/International

Nonresident and international students pay $253 per semester credit hour. In addition, students pay all required fees. The Financial Aid Office's basic annual budget for new graduate students including tuition and fees, books, supplies, transportation, room and board, and incidental and living expenses comes to about $13,385. The annual cost for new nonresident and international students is about $18,800. A detailed summary of fees and the most current information can be found on the Internet at http://vpfn.tamu.edu/sfs/.

Fees and Deposits

There are institutional fees that are assessed to all students who enroll in HSC courses. These fees help support Texas A&M University services provided to HSC students. See the Tuition and Fees section in the General Student Information section of this catalog.

Books, Equipment and Supplies

Students may incur varying costs associated with their academic studies. These costs are related to text books, laboratory/computing equipment, and supplies. For estimates of these costs, contact the Office of Student Affairs.

Financial Assistance

Financial aid for students in the School of Rural Public Health is processed through The Texas A&M University System Health Science Center's Financial Aid Office (979-845-7743). The first step in the financial aid process is to complete a Free Application for Federal Student Aid after Jan. 1 in the year of the expected enrollment. Students accepted to the School of Rural Public Health and who complete a FAFSA are considered automatically for a combination of loans, grants and scholarships. More detailed information is provided when applicants are accepted to the School of Rural Public Health.

Health Services

The A.P. Beutel Health Center provides health care services to all students who have paid the Texas A&M University Health Center fee, which automatically appears on your HSC fee statement. 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

- Health Center, Monday-Friday, 8 a.m.-5 p.m.
- Dial-a-Nurse, Monday-Sunday, 24 hours
- Ambulance Service, Monday-Sunday, 24 hours

Appointments

- Appointments are available Monday-Friday, 8 a.m.-5 p.m.
- To make appointments, call 979-845-6111 or 845-6112, between 7:30 a.m. and 5 p.m.
- Walk-ins also are welcome.

Housing

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

Policies and Regulations

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 adviser. Students may be permitted (or in some instances required) to register for classes on the Texas A&M University campus.

Add/Drop

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 adviser. Refer to the academic calendar published at the beginning of this section for specific dates for each semester.

Withdrawal

Students needing to withdraw from individual classes (Q Drop) should meet with their academic advisers to complete the necessary paperwork. Under compelling circumstances, students are able to withdraw from the School of Rural Public Health for the semester. Depending on the time of the withdrawal, there may be a substantial loss of tuition and fees. See Refund Policy in the General Student Information section of this catalog or your academic adviser for more information.

Attendance

Students in the School of Rural Public Health are training to become health professionals. As such, it is expected that students attend all classes. On occasions that a student may need to miss a class, the student is expected to notify the professor in advance of his/her absence. There may be other attendance policies that exist in specific departments or within the individual classes.

Dress Code

As professionals, students are expected to attend all classes, department and school functions dressed appropriately.

Conduct

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.

Harassment and Discrimination

The School of Rural Public Health is committed to providing an academic and work environment that is conducive to the personal and professional growth of each individual. In that regard, everyone should be aware that any form of harassment or discrimination is inconsistent with the values and ideals of the academic community. Individuals who feel they have experienced harassment or discrimination are encouraged to contact their academic adviser, their department head or the assistant dean for student affairs.

Drug and Alcohol Use

Illegal drug use is incompatible with the ideals and values of public health. Any student found to be consuming illegal drugs on HSC and/or Texas A&M University property may be subject to dismissal. Alcohol consumption on HSC or TAMU property is not permitted, except in designated areas.

Change of Personal Information

If a student's personal information changes (e.g., name change due to marriage, 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.

Scholarship

Graduate students must receive a C or better in any given class and maintain a grade point average of at least 3.0 (B average) based upon a 4.0 scale for all courses listed on their official degree plan. In the event of a student earning either a D or an F in a required course, the student will be required to retake the course in its entirety. The grade received the second time will be the grade recorded on the students's final transcript and included in the calculation of the student's GPA. If the student

receives a D or an F the second time, this grade will remain on the transcript and be calculated into the student's GPA. However, the student will be required to get a C in the course before satisfactorily completing their degree plan.

If a student receives a D or an F in an elective course, the student may elect to remove the course from his/her degree plan with the approval of the student's academic adviser, the department head and the associate dean for academic affairs. In such a case, the failed course (representing either a D or an F) will not be included on the student's transcript nor be included in the final calculation of the student's GPA. If the student or his/her academic adviser elects to not remove the course from the student's degree plan, then the student will be allowed to retake the course once in an effort to improve the grade. Ultimately, the student will be required to receive a C in the course if it remains on the degree plan as outlined above.

Grading System

Grades in every course in the curriculum of the 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	Satisfactory	2 grade points per credit hour
F	Failure	No grade points
I	Incomplete	No grade points
S	Satisfactory	No grade points
U	Unsatisfactory	No grade points
W	Withdrawal	

As previously summarized, 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 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 will not be calculated in the computation of the cumulative grade point average, but a grade of U will be included as if it were an F.

Incomplete Grades

A temporary grade of I 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.

When an I grade is granted to a student, the instructor must submit a "Request for Incomplete Grade" form to the Office of Student Affairs along with the grade report that includes a justification for the request, specifications of assignments to be completed, and approval signatures of the student and the instructor. The Office of Student Affairs secures additional approval from the student's academic adviser, the student's department head, and the associate dean for academic affairs. All remaining work outlined on the request form must be completed by the last class day of the next academic session in which the student is enrolled. 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

All students will have their progress evaluated by their academic advisers, their home department and the Office of Student Affairs each semester. If a student's GPA falls below a 3.0 any given semester, the student will automatically be placed on probation. In the event a student earns a grade of D, F or U in one or more required courses or if his/her professional behavior is deemed unsatisfactory by the department, the student also is likely to be placed on probation. In general, students will be expected to raise their GPA (or address other issues contributing to their probation status) within one academic semester unless otherwise arranged with the department head and 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, is unable to successfully meet the probation criteria provided, he/she may be considered for dismissal.

Appeals Process

If a student wishes to appeal a grade received in a particular course or on an examination, the student should first attempt to resolve the matter by meeting with the course instructor or practicum coordinator. If the appeal is unresolved, a student may further appeal to the department head responsible for the administration of that course. If the student is still unsatisfied, he/she may file a formal written appeal with the SRPH Office of Student Affairs. The appeal must be made within 15 days from the date the grade is received and must detail the reason(s) for appeal. The assistant dean for student affairs or a designee shall investigate the matter and may dismiss it or forward it to the dean. The final decision shall be made by the dean.

Requirements for Graduation

Degree Plan

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/her first semester of coursework 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 student's department head and the associate dean for academic affairs.

Practicum

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 SRPH 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 SRPH practicum coordinator to arrange their practicum experience. Specific guidelines and information on possible practicum sites are available from the Office of Student Affairs and the practicum coordinator. Possible locations include the Centers for Disease Control and Prevention in Atlanta, local hospitals or voluntary health agencies, and the Texas Department of Health.

Comprehensive Examinations

Each student in either the M.P.H. or the M.H.A. degree program must pass a final comprehensive examination. The dates for the comprehensive exam are included on the SRPH academic calendar. Students must have at least a 3.0 GPA and no grades below C on any course on their degree plan in order to be eligible for the comprehensive exam. If a grade below C is awarded for a course on the degree plan, the student must retake the course and earn a C or better (see above). All coursework on the degree plan (except currently enrolled hours and the practicum in some instances) must be completed before the student will be permitted to take the comprehensive examination. Students are required to apply to take the examination during the semester prior to taking the exam.

Each M.P.H. and M.H.A. student must complete and pass a core comprehensive examination covering the material from the six core courses. Students must pass this core comprehensive examination in its entirety in order to graduate. A student failing any component of the core comprehensive examination will be required to take an oral exam over the relevant area. Should the student fail to demonstrate sufficient mastery of the relevant material during the oral exam, the student will be given up to one year to retake a comparable written examination. Thus, students are afforded three opportunities to pass the core comprehensive examination.

In addition to the core comprehensive examination, M.P.H. and M.H.A. students must demonstrate sufficient mastery of their respective concentration areas in order to graduate with either an M.P.H. or an M.H.A. from SRPH. Students in the M.P.H. degree program must complete and pass a second comprehensive examination covering their concentration area. A student failing the concentration comprehensive examination will be afforded the same opportunities as with the core

comprehensive examination (i.e., an oral exam followed by a subsequent written examination within one year if necessary). Students in the M.H.A. degree program, in lieu of a written concentration comprehensive examination, must demonstrate satisfactory performance in the M.H.A. capstone course (PHPM680: Health Systems Leadership) during their last semester of coursework.

Any student not passing all sections of the comprehensive examination as described here will not be granted a degree.

Master's Thesis

All students enrolled in the M.S.P.H. degree program will be required to enroll in a minimum of three hours of thesis research credit through their respective departments in order to complete a requisite thesis project. 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. Specifications regarding the content and format of the thesis proposal are available upon request from the Office of Academic Affairs.

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 SRPH 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.

DEPARTMENTS AND PROGRAMS

The following sections describe the academic departments and faculty. 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 skills needs of the students.

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 an overview course on public health and 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 adviser, the relevant department head or through the Office of Student Affairs.

PHEB 600 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. Course is for non-majors. Epidemiology majors are required to take PHEB 610 (Epidemiological Methods I) instead.

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 referenced in SRPH degree requirements refer to courses offered in the Department of Statistics at Texas A&M University.

Environmental and Occupational Health

Professor:	R.L. Autenrieth
Associate Professor:	K.C. Donnelly (interim head)
Assistant Professor:	B.J. Dabney
Lecturers:	A.M. Bokelman, G.D. Zhou
Joint/Adjunct Faculty:	W.G. Gaines, G. Hannigan, J. Levin, J.S. Moore

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, which occur in the environment, the home or the workplace. 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 joint and adjunct faculty. Major interests of the core faculty include environmental carcinogenesis, occupational safety and health, molecular and cellular toxicology, endocrine disruption and genotoxicity. The joint and adjunct faculty includes scientists from other academic units.

Applicants range from recent college graduates to experienced physicians. Criteria for admission 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).

M.P.H. Program Requirements

Five competency requirements are identified as central to the environmental and occupational health curriculum. These requirements are: general environmental sciences; toxicology; epidemiology; microbiology; and recognition, evaluation and control of hazardous exposures. Course work corresponding to these competency areas is required of all students in the Department of Environmental and Occupational Health. In addition, the concentration requirements include a final field project. Students are encouraged and assisted in contacting professionals in environmental and occupational health in the state of Texas, including agency officials, private consultants, researchers and others for project advising, career counseling and other assistance.

M.P.H. Core Courses

Course Number	Course Title	Credit Hours
PHEB 600	Introduction to Epidemiology	3
PHEO 600	Principles of Environmental and Occupational Health	3

PHPM	601	Rural Public Health Systems	3
PHPM	605	Introduction to Health Policy and Management	3
PHSB	603	Social and Behavioral Determinants of Health	3
PHEB	602 ***or***	Biostatistics I	
STAT	651	Statistics in Research I	3
		Total	**18**

M.P.H. Concentration Courses – Environmental and Occupational Health Concentration

Course Number		Course Title	Credit Hours
PHEO	610	Basic Environmental Toxicology	3
PHEO	620	Environmental/Occupational Case Studies	3
PHEO	630	Environmental and Occupational Diseases	3
PHEO	640	Industrial Hygiene	3
PHEO	650	Risk Assessment	3
PHEO	681	Seminar	Credit
PHEO	684	Practicum	3
		Electives	9
		Total	**27**
		Minimum hours required to complete the degree	**45**

M.S.P.H. Program Requirements

Each student will be required to complete nine semester credit hours across the public health disciplines, six credit hours in statistics and methods, nine credit hours in environmental health, and 6 credit hours in an elective area and directed research. In addition, students will participate in six credit hours of thesis preparation and thesis research, along with a requisite seminar (not for credit). The student, with his/her thesis adviser, will identify a research topic that will form the basis of the thesis. The outcome of this research will be a thesis document or manuscript.

M.S.P.H. Core Courses

Course Number		Course Title	Credit Hours
PHEB	600	Introduction to Epidemiology	3
PHPM	601	Rural Public Health Systems	3
PHSB	603 ***or***	Social and Behavioral Determinants of Health	3
PHPM	605	Introduction to Health Policy and Management	
PHEO	600 ***or***	Principles of Occupational and Environmental Health	3
PHEO	660	Clinical Occupational Medicine	
STAT	652	Statistics in Research II	3
		Total	**15**

M.S.P.H. Concentration Courses – Environmental Health Concentration

Course Number		Course Title	Credit Hours
PHEO	610	Basic Environmental Toxicology	3
PHEO	650	Risk Assessment	3
PHEO	686	Directed Research	3
PHEO	681	Seminar (required but not for credit)	
PHSB	605	Social and Behavioral Research Methods	3
SRPH	690	Thesis Development	3
PHEO	691	Thesis Research	3

Elective	3
Total	**21**
Minimum hours required to complete the degree	**36**

Course Descriptions

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. Cross-listed with VAPH 610.

PHEO 614 REMEDIATION AND RISK ASSESSMENT OF COMPLEX MIXTURES / 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 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 650 RISK ASSESSMENT / 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 will utilize case studies to learn the general methods of risk assessment; also reviews the importance of and methods for risk communication and management.

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 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 can cell growth differentiation. Prerequisite: Graduate course in cell biology and biochemistry. Cross-listed with VTPP 676.

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 will describe proposed research; second-year students will present results from original research. Students also will discuss thesis proposal preparation. May be repeated.

PHEO 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 coursework. Prerequisite: Approval by student's academic adviser.

PHEO 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic adviser. May be repeated for a maximum of six credits.

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 adviser. May be repeated for a maximum of six credits.

PHEO 689 SPECIAL TOPICS IN ENVIRONMENTAL AND OCCUPATIONAL HEALTH / Credit 1 – 4. Revolving topics seminar in an area of specialization within the department. May be repeated for credit.

PHEO 691 THESIS / Credit 1-6. Research for master's thesis. Prerequisite: Approval of the student's academic adviser and department head. May be repeated for credit.

Offerings in collaboration with other units.

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, STAT 651 or 652 or equivalent, or permission of instructor.

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 will be expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic adviser.

NUEN 604 RADIATION INTERACTIONS AND SHIELDING / Credit 3. Basic principles of radiation interactions and transport, especially as related to the design of radiation shields. Radiation sources, nuclear reactions, radiation transport, photon interactions, dosimetry, buildup factors and fast neutron shielding. Prerequisites: Determined by responsible unit.

NUEN 605 RADIATION DETECTION INSTRUMENTATION / Credit 3. Counting statistics; gas-filled radiation detectors; scintillation detectors; semiconductor detectors; gamma-ray spectroscopy; neutron detection and activation; charged particle detection. Prerequisites: Determined by responsible unit.

NUEN 612 RADIOLOGICAL SAFETY AND HAZARDS EVALUATION / Credit 3. State and federal regulations concerning radioactive materials; radiation safety as applied to accelerators, nuclear reactors and radioactive byproducts; rigorous methods of analysis applied to computation of biological radiation dose and dose rates from various sources and geometries; radiation effects on physical systems. Prerequisites: Determined by responsible unit.

NUEN 613 PRINCIPLES OF RADIOLOGICAL SAFETY / Credit 3. Rigorous mathematical and physical approach to various aspects of radiological safety; derivation of equations involving radiation absorption, radiation dosimetry and calculations of radiation dose due to internal emitters; mathematical modes developed for determination of maximum permissible body burdens and concentrations in air and water. Prerequisites: Determined by responsible unit.

NUEN 678 WASTE MANAGEMENT IN THE NUCLEAR INDUSTRY / Credit 3. Management of radioactive, hazardous and mixed waste generated by all segments of the nuclear fuel cycle and users of radioisotopes; includes treatment, storage and disposal technologies and the political and socioeconomic issues; evaluation of current practices and regulations using a holistic approach. Prerequisite: Graduate classification and approval of instructor.

NUEN 679 PRACTICAL APPLICATIONS OF RADIOLOGICAL SAFETY I / Credit 3. Intensive and comprehensive lecture and practical training in radiological safety operations; radioactive license application, review and compliance; actual performance of radiation safety duties at isotope laboratories, counting laboratories, nuclear reactors and high energy accelerators. Prerequisites: Determined by responsible unit.

SENG 655 PROCESS SAFETY ENGINEERING / Credit 3. Applications of engineering principles to process hazards analysis including source and dispersion modeling, emergency relief systems, fire and explosion prevention and mitigation, hazard identification, risk assessment, process safety management, etc. Prerequisites: Determined by responsible unit.

SENG 670 INDUSTRIAL SAFETY ENGINEERING / Credit 3. General concepts and techniques of safety engineering upon which more detailed and advanced applications may be based; applications of safety engineering principles to industrial and commercial systems; the concept of designing optimally safe systems. Prerequisites: Determined by responsible unit.

SENG 682 INSTRUMENTATION FOR INDUSTRIAL HYGIENE / Credit 4. 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. Prerequisites: Determined by responsible unit.

SENG 683 EVALUATION AND CONTROL OF THE OCCUPATIONAL ENVIRONMENT / Credit 4. 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. Prerequisites: Determined by responsible unit.

CVEN 603 ENVIRONMENTAL MANAGEMENT / Credit 3. Federal and state regulatory framework for environmental management techniques for environmental control; risk assessment; evaluation of critical environmental problems with multimedia aspects. Prerequisite: CVEN 301 or approval of instructor.

CVEN 605 ENVIRONMENTAL MEASUREMENT / Credit 3. Theory and practice of analytical methods used in the environmental engineering field; instrumental and wet chemical techniques used in measurement of environmental quality parameters and pollutants. Prerequisite: CVEN 620 or approval of instructor.

CVEN 608 SOLID WASTE MANAGEMENT / Credit 3. Design and operation of solid waste collection and disposal systems; review of appropriate state and federal regulations. Prerequisites: Approval of instructor.

CVEN 609 ENVIRONMENTAL CONTROL OF OIL AND HAZARDOUS MATERIALS / Credit 3. Oil and hazardous material spills in the engineering design process; prevention programs and documents, technology for spill containment and removal; contingency planning cycle including administrative site-specific plans and resource acquisition; response organization; restoration and documentation. Prerequisite: CVEN 301 or approval of instructor.

Epidemiology and Biostatistics

Professors:	K.R. McLeroy (acting head), C.V. Sumaya (dean)
Assistant Professors:	S.E. Carozza, J. Peck, L. Zhu
Joint/Adjunct Faculty:	S.N. Forjouh, R. Srinivasan, G. Holmes, R. Fan, R.S. Muttiah

Biostatistics Concentration

The goal of the Biostatistics Concentration within the Department of Epidemiology and Biostatistics is to provide students sufficient theoretical background, necessary technical data management and analytic skills, and requisite applied experience to succeed in analytical careers in various facets of public health. Coursework for students in biostatistics relies heavily on courses offered within the Statistics Department of Texas A&M University, one of the top-ranked statistics programs in the country. Through a number of joint appointed faculty between the SRPH Department of Epidemiology and Biostatistics and the TAMU Department of Statistics, students are afforded a high-quality education in statistical methods while focusing on public health and health services problems. In addition, the curriculum for students in biostatistics reflects a broad exposure to public health through the core curriculum. Students completing this program should be able to function as a staff biostatistician whether in industrial, public health, clinical or academic settings.

M.P.H. Program Requirements

Each student will be required to complete the 18 semester credit hours of the core curriculum as previously described, 18 semester credit hours of statistics and biostatistics, and six semester credit hours of elective coursework. In addition, students will complete a practicum field placement experience (three semester credit hours)

M.P.H. Core Courses – Biostatistics Concentration

Course Number		Course Name	Credit Hours
PHEB	610	Epidemiological Methods I	4
PHEO	600	Principles of Environmental and Occupational Health	3
PHPM	601	Rural Public Health Systems	3
PHPM	605	Introduction to Health Policy and Management	3
PHSB	603	Social and Behavioral Determinants of Health	3
STAT	610	Theory of Statistics I	3
		Total	**19**

M.P.H. Concentration Courses – Biostatistics Concentration

Course Number		Course Name	Credit Hours
STAT	604	Special Problems in Statistical Computations and Analysis	3
STAT	611	Theory of Statistics II	3
STAT	641	The Methods of Statistics I	3
STAT	642	The Methods of Statistics II	3
STAT	643	Biostatistics I	3
STAT	644	Biostatistics II	3
		Electives	6
PHEB	684	Practicum	3
		Total	**27**
		Minimum hours required to complete the degree	**46**

M.S.P.H. Program Requirements – Biostatistics Concentration

Each student will be required to complete six semester credit hours across the public health disciplines; 21 credit hours in statistics, methods and biostatistics; and three credit hours in an elective area. In addition, students will participate in six credit

hours of thesis preparation and thesis research. The student with his/her thesis adviser, will identify a research topic that will form the basis of the thesis. The outcome of this research will be a thesis document or manuscript.

M.SP.H. Core Courses – Biostatistics Concentration

Course Number	Course Name	Credit Hours
PHPM 601 ***or***	Rural Public Health Systems	3
PHPM 605	Introduction to Health Policy and Management	
PHEB 610 ***or***	Epidemiological Methods I	3
PHEB 613	Public Health Epidemiological Methods	
	Total	**6**

M.SP.H. Concentration Courses – Biostatistics Concentration

Course Number	Course Name	Credit Hours
STAT 604	Special Problems in Statistical Computations and Analysis	3
STAT 610	Theory of Statistics I	3
STAT 611	Theory of Statistics II	3
STAT 641	The Methods of Statistics I	3
STAT 642	The Methods of Statistics II	3
STAT 643	Biostatistics I	3
STAT 644	Biostatistics II	3
SRPH 690	Thesis Development	3
PHEB 691	Thesis Research	3
	Elective	3
	Total	**30**
	Minimum hours required to complete the degree	**36**

Epidemiology Concentration

Historically, epidemiology is the foundation science for public health and addresses the distribution and determinants of health and disease in human populations. The field of epidemiology is both a body of research methods and a body of knowledge in specific areas of epidemiology including cardiovascular, cancer, infectious, occupational, environmental, social, genetic and molecular to name some of the specialty areas. The importance of considering epidemiology as a body of research methods and content is that degree programs in epidemiology should be designed to provide students with essential methodological skills as well as exposure to the special issues, methods, and knowledge base of the areas of specialization. Thus, the Epidemiology Concentration within the Department of Epidemiology and Biostatistics is designed to provide students with the skills needed to plan for, collect, manage, analyze, and interpret a variety of quantitative health data. Graduates will be prepared to carry out basic epidemiologic activities in public health programs, research institutes, drug companies, academic settings, corporations, hospital or health care organizations, to name a few.

M.P.H. Program Requirements

Each student will be required to complete the core curriculum as previously described, eight additional semester credit hours in epidemiology, six additional semester credit hours in statistics and biostatistics, and nine semester credit hours of elective coursework. In addition, students will complete a practicum field placement experience (three semester credit hours).

M.P.H. Core Courses – Epidemiology Concentration

Course Number	Course Name	Credit Hours
PHEB 610	Epidemiological Methods I	4
PHEO 600	Principles of Environmental and Occupational Health	3
PHPM 601	Rural Public Health Systems	3
PHPM 605	Introduction to Health Policy and Management	3

PHSB	603	Social and Behavioral Determinants of Health	3
PHEB	602 ***or***	Biostatistics I	3
STAT	651	Statistics in Research I	
STAT	652	Statistics in Research II	
		Total	**19**

M.P.H. Concentration Courses – Epidemiology Concentration

Course Number		Course Name	Credit Hours
PHEB	612	Data Management/Computing	2
PHEB	613	Public Health Epidemiological Models	3
PHEB	620 ***or***	Cancer Epidemiology	3
PHEB	621	Cardiovascular Epidemiology	
STAT	607	Sample Survey Methodology	3
STAT	608	Linear Regression	3
		Recommended Electives (select three from below)	9
		PHEB 611 Epidemiological Methods II	
		PHEB 619 Infectious Epidemiology	
		PHEB 620 Cancer Epidemiology	
		PHEB 622 Reproductive Epidemiology	
		PHEO 650 Risk Assessment	
		PHPM 665 Proposal Writing and Grants Management	
		PHSB 610 Community Organization and Assessment	
		STAT 659 Categorical Data Analysis	
		PHEB 684 Practicum	3
		Total	**26**
		Minimum hours required to complete the degree	**45**

M.S.P.H. Program Requirements – Epidemiology Concentration

Each student will be required to complete six semester credit hours across the public health disciplines, and 27 credit hours in statistics, methods, and epidemiology. In addition, students will participate in three credit hours of thesis research. The student with his/her thesis adviser will identify a research topic that will form the basis of the thesis. The outcome of this research will be a thesis document or manuscript.

M.S.P.H. Core Courses – Epidemiology Concentration

Course Number		Course Name	Credit Hours
PHPM	601 ***or***	Rural Public Health Systems	3
PHPM	605	Introduction to Health Policy and Management	
PHSB	603 ***or***	Social and Behavioral Determinants of Health	3
PHEO	600	Principles of Occupational and Environmental Health	
		Total	**6**

M.S.P.H. Concentration Courses – Epidemiology Concentration

Course Number		Course Name	Credit Hours
PHEB	610	Epidemiological Methods I	4
PHEB	611	Epidemiological Methods II	3
PHEB	612	Data Management/Computing	2
PHEB	619	Infectious Disease Epidemiology	3
PHEB	620 ***or***	Cancer Epidemiology	3
PHEB	621	Cardiovascular Epidemiology	
STAT	607	Sample Survey Methodology	3
STAT	608	Least Squares and Regression Analysis	3
STAT	652	Statistics in Research II	3
STAT	659	Applied Categorical Data Analysis	3
PHEB	691	Thesis Research	3
		Total	**30**
		Minimum hours required to complete the degree	**36**

Course Descriptions

PHEB 600 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. Intended for non-majors.

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. 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 610 EPIDEMIOLOGIC METHODS I / Credit 4. 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. An alternative to PHEB 600 for M.P.H. core requirements. Prerequisite: STAT 652 or concurrent enrollment. Permission of instructor required for non-majors.

PHEB 611 EPIDEMIOLOGIC METHODS II / Credit 4. 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. Prerequisite: PHEB 610 and STAT 652 or permission of instructor.

PHEB 612 DATA MANAGEMENT/COMPUTING / Credit 2. 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 or PHEB 610.

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 PHEB 610, or permission of instructor.

PHEB 619 INFECTIOUS DISEASE EPIDEMIOLOGY / Credit 3. Principles and practices of epidemiology appropriate for the study of communicable diseases. Course will focus on methodology, public health concerns, patterns of transmission and newly discovered infectious diseases. Prerequisite: Either PHEB 600 or PHEB 610, 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 PHEB 610, 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 will also consider determinants and strategies for prevention. Prerequisite: PHEB 600 or PHEB 610, or permission of the instructor.

PHEB 622 REPRODUCTIVE 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: Either PHEB 600 or PHEB 610, or permission of the instructor.

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 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 coursework. Prerequisite: Approval by student's academic adviser.

PHEB 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic adviser. May be repeated for a maximum of six credits.

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 adviser. May be repeated for a maximum of six credits.

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.

PHEB 691 THESIS / Credit 1-6. Research for master's thesis. Prerequisite: Approval of the student's academic adviser and department head. May be repeated for credit.

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 will be expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic adviser.

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. Prerequisite: CPSC 201 and STAT 601, or concurrent enrollment in STAT 610 and 641.

STAT 607 SAMPLE SURVEY METHODOLOGY / 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 608 LEAST SQUARES AND REGRESSION ANALYSIS / 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 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. Prerequisites: 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. Prerequisites: 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. Prerequisites: 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 659 APPLIED CATEGORICAL DATA ANALYSIS / Credit 3. Introduction to analysis and interpretation of categorical data using ANOVA/regression analogs; including contingency tables, loglinear models, logistic regression; use of computer software such as SAS, GLIM, SPSSX. Prerequisite: STAT 601 or STAT 641 or STAT 652 or equivalent.

Health Policy and Management

Professors:	C.H. Blakely (head), R.J. Buchanan, C.D. Phillips, M.C. Hawes, L.D. Gamm
Associate Professors:	R.E. Tupper
Assistant Professors:	J. E. Alexander, J. Bolin, B.J. Quiram, M. Tai-Seale, M.E. Wolf, M. Zuniga
Lecturers:	W.S. Koran, G.W. Kruger, R.H. Nader
Joint/Adjunct Faculty:	W.R. Koprowski, G.R. Bellamy, D.A. Sweeney, M.H. Rajab

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 settings.

Faculty 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, MS, 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.

M.P.H. Program Requirements

Every student entering the Health Policy and Management Department will be expected to complete the schoolwide core requirements of public health instruction. These requirements include the basic core study areas (i.e., biostatistics, epidemiology, environmental and occupational health, social and behavioral health, and health policy and management). The remaining 27 hours of coursework build upon the core through the addition of track specific courses and electives. The program requires the completion of 45 credit hours. Students then complete a comprehensive exam and a practicum placement. The student will develop the details of their degree plan with his/her adviser.

M.P.H. Core Courses – Health Policy and Management Concentration

Course Number		Course Title	Credit Hours
PHEB	600	Introduction to Epidemiology	3
PHEO	600	Principles of Environmental and Occupational Health	3
PHPM	601	Rural Public Health Systems	3
PHPM	605	Introduction to Health Policy and Management	3
PHSB	603	Social and Behavioral Determinants of Health	3
PHEB	602 ***or***	Biostatistics I	3
STAT	651	Statistics in Research I	
		Total	**18**

M.P.H. Concentration Courses – Health Policy and Management Concentration

Course Number		Course Title	Credit Hours
PHPM	614	Strategic Planning and Evaluation	3
PHPM	623	Health Delivery Systems Financing	3
PHPM	633	Health Law and Ethics	3
PHPM	640	Rural Health Policy Process	3
PHPM	661	Introduction to Health Economics	3
PHPM	684	Practicum	3
		Electives	9
		Total	**27**
		Minimum hours required to complete the degree	**45**

M.SP.H. Program Requirements – Health Policy and Management Concentration

Each student will be required to complete 18 semester credit hours from across the public health disciplines, nine additional semester credit hours in health policy and management, and three credit hours in an elective area. In addition, students will participate in six credit hours of thesis preparation and thesis research. The student with his/her thesis adviser will identify a research topic that will form the basis of the thesis. The outcome of this research will be a thesis document or manuscript.

M.SP.H. Core Courses – Health Policy and Management Concentration

Course Number		Course Title	Credit Hours
PHPM	601	Rural Public Health Systems	3
PHPM	605	Introduction to Health Policy and Management	3
PHEB	610	Epidemiological Methods I	4
PHEB	612	Data Management/Computing	2

STAT	652	Statistics in Research II	3
STAT	608	Least Squares and Regression Analysis	3
		Total	**18**

M.SP.H. Concentration Courses – Health Policy and Management Concentration

Course Number		Course Title	Credit Hours
PHPM	640	Rural Health Policy Process	3
PHPM	661	Introduction to Health Economics	3
PHPM	671	Introduction to Health Services Research	3
SRPH	690	Thesis Development	3
PHPM	691	Thesis Research	3
		Elective	3
		Total	**18**
		Minimum hours required to complete the degree	**36**

M.H.A. Program Requirements

Students in the M.H.A. degree program are required to complete the same public health core curriculum as in the M.P.H. degree program. In addition, all students must complete 30 semester credit hours in health administration, including PHPM 680, the capstone course in Health Systems Leadership. Students also will be required to complete a practicum (three credit hours).

M.H.A. Core Courses

Course Number		Course Title	Credit Hours
PHEB	600	Introduction to Epidemiology	3
PHEO	600	Principles of Occupational and Environmental Health	3
PHPM	601	Rural Public Health Systems	3
PHPM	605	Introduction to Health Policy and Management	3
PHSB	603	Social and Behavioral Determinants of Health	3
PHEB	602 ***or***	Biostatistics I	3
STAT	651	Statistics in Research I	
		Total	**18**

M.H.A. Concentration Courses

Course Number		Course Title	Credit Hours
PHPM	614	Strategic Planning and Marketing	3
PHPM	616	Management of Human Resources	3
PHPM	617	Health Care Quality Evaluation and Utilization Management	3
PHPM	623	Health Delivery Systems Financing	3
PHPM	624	Managerial Accounting	3
PHPM	631	Health Information Management Systems	3
PHPM	633	Health Law and Ethics	3
PHPM	640	Rural Health Policy Process	3
PHPM	661	Introduction to Health Economics	3
PHPM	680	Health Systems Leadership (capstone)	3

PHPM	684	Practicum	3
		Total	**33**
		Minimum hours required to complete the degree	**51**

Course Descriptions

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 PLANNINGAND MARKETING / Credit 3. Analysis of strategic planning and marketing in health programs and services. Students study processes and formats employed in strategic planning. Elements of market assessment and strategy development are examined. Prerequisite: PHPM 601.

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 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 healthcare. Important health case law will be discussed. Ethical considerations will be discussed as they relate to the law and management of health delivery systems. Prerequisites: PHPM 601, PHPM 605.

PHPM 640 RURAL HEALTH POLICY PROCESS / 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 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 AMBULATORY 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. Prerequisites: 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 will address 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 healthcare 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 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 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 coursework. Prerequisite: Approval by student's academic adviser.

PHPM 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic adviser. May be repeated for a maximum of six credits.

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 adviser. May be repeated for a maximum of six credits.

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.

PHPM 691 THESIS / Credit 1-6. Research for master's thesis. Prerequisite: Approval of the student's academic adviser and department head. May be repeated for credit. Prerequisite: SRPH 690.

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 will be expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic adviser.

Social and Behavioral Health

Professors:	K.R. McLeroy, J. Robinson III (interim head)
Associate Professors:	J.N. Burdine, B. Colwell, A.M. Dorsey, D.M. Gorman
Joint/Adjunct Faculty:	C.A. Rice

Since the mid-1970s, professionals in both public health and medicine have explicitly recognized the significant contributions of behavioral factors in the health and well-being of individuals, communities, and populations. More recent attention has been devoted to health disparities and the role of economic, gender, class and ethnic group membership in health risk. Thus the goal of the M.P.H. degree program offered by the Department of Social and Behavioral Health is to focus the students' attention not only on behavioral risk factors, but also on the role of social structural factors and how they interact with behavior to affect health. Students within the department are exposed to the breadth of social and behavioral determinants of health and graduate prepared for professional roles in health promotion and disease prevention, community development, assessment and program evaluation.

The faculty in the Department of Social and Behavioral Health represent a multidisciplinary group of experienced professionals. They have national reputations for their research and professional activities. Faculty research interests include such areas as violence in rural settings, adolescent health risks, drug abuse and tobacco use prevention and intervention, and the design of effective health communication strategies.

Program Requirements

Every M.P.H. student within the Department of Social and Behavioral Health will be expected to complete the school-wide core curriculum as outlined above. Students are provided the opportunity to select one of two concentrations within the department: the Community Public Health and Management Concentration or the Social and Behavioral Health Concentration. Following completion of the coursework for either concentration, students complete a comprehensive examination as well as a field-based practicum experience. The two concentration options are outlined below.

Community Public Health and Management Concentration

As an interdisciplinary concentration focusing on health promotion processes, community assessment and development, and health services administration, this curriculum prepares students for professional roles in community-based health promotion and disease prevention while providing a background in health administration functions necessary in both private and public health settings. The students in this program strive to meet many of the same learning objectives in both the Social and Behavioral Health Concentration as well as the Community Public Health and Management Concentration.

M.P.H. Core Courses – Community Public Health and Management Concentration

Course Number	Course Title	Credit Hours
PHEB 600	Introduction to Epidemiology	3
PHEO 600	Principles of Environmental and Occupational Health	3
PHPM 601	Rural Public Health Systems	3
PHPM 605	Introduction to Health Policy and Management	3
PHSB 603	Social and Behavioral Determinants of health	3
PHEB 602 ***or***	Biostatistics I	3
STAT 651	Statistics in Research I	
	Total	**18**

M.P.H. Concentration Courses – Community Public Health and Management Concentration

Course Number	Course Title	Credit Hours
PHSB 605	Social and Behavioral Research Methods	3
PHSB 610	Community Organization and Assessment	3
PHSB 611	Program Planning	3
PHSB 612	Public Health Interventions	3
PHSB 613	Program Evaluation	3
PHPM 665	Proposal Writing and Grants Management	3
PHPM 629	Organization Assessment and Development	3
PHPM 623	Health Delivery Systems Financing	3
PHSB 684	Practicum	3
	Total	**27**
	Minimum hours required to complete the degree	**45**

M.P.H. Concentration in Social and Behavioral Health

The primary objective of the Social and Behavioral Concentration is to provide students with knowledge and skills to plan, develop, implement, monitor and evaluate a broad range of public health interventions across social-ecological levels (i.e., intrapersonal, interpersonal, organizational, community and public policy). Course sequencing moves students systematically through the planning and evaluation process while providing a sound theoretical foundation and exposure to varying philosophical and methodological perspectives. Students have the opportunity to specialize in areas of particular interest to them through a wide range of elective course options offered at the School of Rural Public Health as well as through a wide range of departments at Texas A&M University. Through field-base class assignments and the required practicum, students are given the opportunity to apply their newly acquired or refined knowledge and skills.

M.P.H. Core Courses – Social and Behavioral Health Concentration

Course Number	Course Title	Credit Hours
PHEB 600	Introduction to Epidemiology	3
PHEO 600	Principles of Environmental and Occupational Health	3
PHPM 601	Rural Public Health Systems	3
PHPM 605	Introduction to Health Policy and Management	3
PHSB 604	Social Ecology and Health Behavior	3
PHEB 602 ***or***	Biostatistics I	3
STAT 651	Statistics in Research I	
	Total	**18**

M.P.H. Concentration Courses – Social and Behavioral Health Concentration

Course Number	Course Title	Credit Hours
PHSB 605	Social and Behavioral Research Methods	3
PHSB 610	Community Organization and Assessment	3
PHSB 611	Program Planning	3
PHSB 612	Public Health Interventions	3
PHSB 613	Program Evaluation	3
PHSB 684	Practicum	3
	Electives	9
	Total	**27**
	Minimum hours required to complete the degree	**45**

M.S.P.H. Program Requirements – Social and Behavioral Health Concentration

Each student will be required to complete 13 semester credit hours in courses across the public health discipline, 15 semester credit hours in research methods and social and behavioral health, and three credit hours in an elective area. In addition, students will participate in six credit hours of thesis preparation and thesis research. The student with his/her thesis adviser will identify a research topic that will form the basis of the thesis. The outcome of this research will be a thesis document or manuscript.

M.S.P.H. Core Courses – Social and Behavioral Health Concentration

Course Number	Course Title	Credit Hours
PHSB 604	Social Ecology and Health Behavior	3
PHPM 601	Rural Public Health Systems	3
PHPM 605 ***or***	Introduction to Health Policy and Management	3
PHEO 600	Principles of Occupational and Environmental Health	
PHEB 610	Epidemiological Methods I	4
STAT 652	Statistics in Research II	3
	Total	**16**

M.S.P.H. Concentration Courses – Social and Behavioral Health Concentration

Course Number	Course Title	Credit Hours
PHSB 605	Social and Behavioral Research Methods	3
PHSB 611	Program Planning	3
PHSB 613	Program Evaluation	3
PHSB 612 ***or***	Public Health Interventions	3
PHSB 636	Communication Strategies and Practices	

SRPH	690	Thesis Development	3
PHSB	691	Thesis Research	3
		Elective	3
		Total	**21**
		Minimum hours required to complete the degree	**37**

Course Descriptions

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: STAT 651 or 652 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 to 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 will focus on issues relevant to the assessment and evaluation of health promotion interventions, and will examine 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 will be explored.

PHSB 635 COMMUNITY DEVELOPMENT / Credit 3. The nature of community development and comparative study of community development models in diverse communities. Analyses of how to create systematic and sustainable community change related to health and healthy communities, with attention to varieties of community organizing approaches. Prerequisite: Either PHSB 603 or PHSB 604; PHSB 610; or permission of instructor.

PHSB 636 HEALTH COMMUNICATION STRATEGIES / Credit 3. Framework for planning health communication interventions and designing communication strategies. 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 VIOLENCE IN RURAL SETTINGS / Credit 3. Considers dynamics and precipitating factors of family and relationship violence, critical examination of public health approaches to reducing violence, considers the unique challenges of attempts to minimize violence in rural settings. Theory, applied prevention strategies, services and public policies related to violence to be covered.

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 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 coursework. Prerequisite: Approval by student's academic adviser.

PHSB 685 DIRECTED STUDY / Credit 1-3. Student investigation of a topic not covered by other formal courses. Prerequisite: Approval by student's academic adviser. May be repeated for a maximum of six credits.

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 adviser. May be repeated for a maximum of six credits.

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.

PHSB 691 THESIS / Credit 3-6. Research for master's thesis. Prerequisite: Approval of student's academic adviser and department head.

Offerings in collaboration with other units:

PHEB 610 EPIDEMIOLOGICAL METHODS I / Credit 4. 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. An alternative to PHEB 600 for M.P.H. core requirements. Prerequisite: STAT 652 or concurrent enrollment. Permission of instructor required for non-majors.

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.

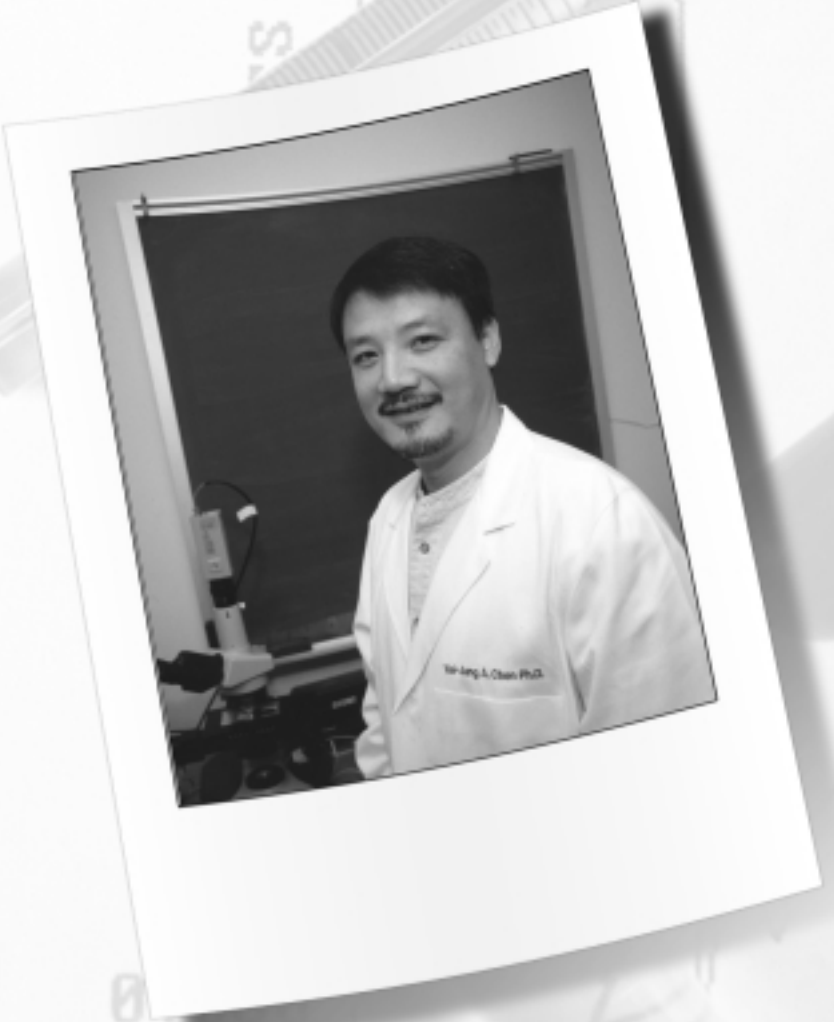
PHPM 629 ORGANIZATIONAL ASSESSMENT AND DEVELOPMENT / Credit 3. This course provides skills needed to support collaborative processes in diagnosing organizational needs and problems and introducing innovative structures, processes and other changes to enhance organizational responsiveness and accountability.

PHPM 665 PROPOSAL WRITING AND 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.

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 will be expected to draft their thesis proposal by the conclusion of the course. Prerequisite: Approval of student's academic adviser.

Faculty Listings



2001-2003 Catalog

FACULTY LISTINGS

Baylor College of Dentistry

The use of the word "adjunct" identifies part-time basic science faculty; "clinical" identifies part-time clinical faculty.

Adams, Terry B. Clinical Assistant Professor, Orthodontics. B.A., Texas Tech University; D.D.S., University of Missouri, M.S.D., Baylor College of Dentistry.

Alexander, C. Moody Clinical 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, R.G. Clinical 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 and Pharmacology. 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. Associate Professor, Periodontics. B.D.S., University of Baghdad (Iraq); Diploma Oral Surgery, Ibid.; M.S., State University of New York at Buffalo; Ph.D., Ibid.

Allen, E. Pat Clinical Professor, Periodontics. B.S., Southern Methodist University; D.D.S., Baylor College of Dentistry; Certificate in Periodontics, Ibid.; Ph.D., Baylor University; Fellow, American College of Dentists.

Anderson, Cheryl Assistant Professor, Orthodontics. B.S., University of Minnesota; M.S., University of Boston.

Arcoria, Charles J. Clinical Associate Professor, Restorative Sciences. B.A., Case Western Reserve University; D.D.S., Baylor College of Dentistry; M.B.A., University of Dallas.

Aron-Tanur, Monique Clinical Assistant Professor, Pediatric Dentistry. D.D.S., Universidad Tecnologica de Mexico.

Ashworth, Stanley Assistant Professor, General Dentistry. B.A., North Texas State University; D.D.S., Baylor College of Dentistry.

Attaway, H. Eldon Clinical Associate Professor, Orthodontics. D.D.S., Baylor College of Dentistry; M.S.D., University of Nebraska; Diplomate, American Board of Orthodontics.

Aubrey, Richard B. Clinical Associate Professor, Orthodontics. D.D.S., Baylor College of Dentistry; M.S.D., Baylor University; Diplomate, American Board of Orthodontics.

Baker, Frank L. Assistant Professor, General Dentistry. D.M.D., University of Louisville. Certificate in Prosthodontics, Martin Army Hospital.

Barbash, Bruce M. Visiting Clinical Assistant Professor, Restorative Sciences. B.A., State University of New York; D.D.S., Case Western Reserve; Certificate in Prosthodontics and Maxillofacial Prosthetics, University of Texas-M.D. Anderson Cancer Center; Diplomate, American Board of Prosthodontics.

Barnes, James B. B.S., Southern Methodist University; D.D.S., Baylor College of Dentistry, Certificate in Periodontics, Ibid.

Barrington, Craig Clinical Assistant Professor, General Dentistry. B.S., University of Texas at San Antonio; D.D.S., University of Texas Health Science Center San Antonio Dental School.

Barrington, Jennifer Clinical 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, General Dentistry; B.F.A., Southern Methodist University; J.D., University of Texas at Austin.

Bass, Kenneth D. Clinical Associate Professor, Oral and Maxillofacial Surgery and Pharmacology. B.A., University of Connecticut; M.S., Ibid.; D.D.S., University of Maryland; Certificate in Oral and Maxillofacial Surgery, University of Pennsylvania; Diplomate, American Board of Oral and Maxillofacial Surgery.

Bates, James D. Clinical Assistant Professor, Oral and Maxillofacial Surgery and Pharmacology. D.D.S., University of Texas Health Science Center at Houston; Certificate in Oral and Maxillofacial Surgery, Ibid.; M.D., Texas Tech University School of Medicine; Diplomate, American Board of Oral and Maxillofacial Surgery.

Behrents, Rolf G. Professor, Chair, Orthodontics. B.A., St. Olaf College; D.D.S., Meharry Medical College; M.S., Graduate School of Case Western Reserve University; Ph.D., University of Michigan.

Bell, Colin S. Clinical Associate Professor, Oral and Maxillofacial Surgery and Pharmacology. 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. Professor, Biomedical Sciences. B.S., University of California, Davis; Ph.D., Ibid.

Beninger, Christine K. Clinical Assistant Professor, Restorative Sciences. B.S., University of Southern California; D.D.S., University of Southern California.

Benson, Byron W. Professor, 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.

Berry, Charles W. Associate Dean, Academic Services; Professor, Biomedical Sciences. B.A., Hendrix College; M.S., Louisiana Tech University; Ph.D., Baylor University.

Binnie, William H. Professor, Chair, Diagnostic Sciences. B.D.S., University of Glasgow (Scotland); D.D.S., McGill University (Canada); M.S.D., Indiana University; F.R.C. Path; F.D.S. (Glasgow); Diplomate, American Board of Oral Medicine.

Birkholz, Howard Clinical Assistant Professor, Public Health Sciences. D.D.S., Marquette University School of Dentistry; Oral Surgery Internship, Confederate Memorial Medical Center.

Bishop, Charles D. Research Assistant Professor, Biomedical Sciences. B.S., University of South Alabama; M.S., University of Alabama at Birmingham; Ph.D., Ibid.

Bolak, William M. Visiting Clinical Assistant Professor, Restorative Sciences. B.A., Cornell University College of Arts and Sciences; D.M.D., Fairleigh Dickinson University School of Dental Medicine; Certificate in Endodontics, State University of New York at Buffalo; Ph.D. Candidate, State University of New York at Buffalo.

Boley, Jimmy C. Clinical Assistant Professor, Orthodontics. B.S., Texas Tech University; D.D.S., Baylor College of Dentistry; M.S., University of Missouri at Kansas.

Bolin, Kenneth A. Clinical 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.

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 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. Clinical Associate Professor, Periodontics. B.S, Tulane University; D.D.S., Baylor College of Dentistry; M.S.D., Baylor University.

Bowles, William H. Associate Professor, Biomedical Sciences. B.A., LaSierra College; M.S., University of Arizona; Ph.D., Ibid.; D.D.S., Baylor College of Dentistry.

Brady, Patrick R. Clinical Assistant Professor, Orthodontics. D.D.S., University of lowa; M.S.D., Ibid.; Diplomate, American Board of Orthodontics.

Bridgeman, Lee Gregory Clinical Assistant Professor, Restorative Sciences. D.D.S. Baylor College of Dentistry.

Brooks, Ernestine Director, Student Development; Assistant 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.

Buchanan, Richard N. Professor, General Dentistry. B.A., The University of Texas; D.M.D., The University of Pennsylvania School of Dental Medicine.

Buschang, Peter H. Associate Professor, Orthodontics. B.A., University of Texas at Austin; M.A., Ibid.; Ph.D., Ibid.

Buser, Daniel A. Visiting Clinical Associate Professor, Periodontics. B.S., Kantonsschule, Berne (Switzerland); D.D.S., University of Berne, Berne (Switzerland); Ph.D., Ibid.; Dr. Med. Dent., Ibid.

Buskin, Rowan Hilton Clinical Assistant Professor, Restorative Sciences. B.D.S., University of Witwatersrand (South Africa); M.Sc., Ibid.; Certificate in Prosthodontics, Louisiana State University School of Dentistry.

Butler, Jacqueline K. Clinical Assistant Professor, Restorative Sciences. B.S., University of North Texas; D.D.S., Meharry School of Dentistry.

Buxt, Paul Visiting Clinical Assistant Professor, Restorative Sciences. B.D.S., University of Witwatersrand School of Dentistry (South Africa); Certificate in Endodontology, Temple University of Dentistry; D.M.D., Ibid.

Cai, Zhuo (John) Assistant Professor, Biomaterials Science. B.D.S., Beijing Medical University; M.S., Ibid.; M.S., The Ohio State University; Ph.D., Ibid.

Campbell, Patricia R. Associate Professor, Clinic Coordinator, Caruth School of Dental Hygiene. A.S., University of Southern Indiana; B.S., Ibid.; M.S., Old Dominion University.

Carlson, David S. Gaylord Professor, Chair, Biomedical Sciences. B.A., University of Massachusetts; M.A., Ibid.; Ph.D., Ibid.; Postdoctoral, University of Michigan.

Castro, George Clinical Assistant Profesor, General Dentistry. B.S., University of Wisconsin; D.D.S., Marquette University School of Dentistry; Certificate in Advanced Education in General Dentistry, Wilford Hall Medical Center, San Antonio.

Chatterton, Debra Clinical Instructor, Caruth School of Dental Hygiene. B.S., Baylor College of Dentistry.

Cederberg, Robert A. Associate Professor, Director of Quality Assurance, Limited Care, Diagnostic Sciences. B.S., University of North Texas; M.A., Southern Methodist University; D.D.S., Baylor College of Dentistry.

Ceen, Richard F. Professor, Orthodontics. B.S., University of Tennessee; D.D.S., Ibid.; Certificate in Orthodontics, Columbia University.

Chingbingyong, Marianne I. Clinical Assistant Professor, Pediatric Dentistry. D.D.M., University of the Phillipines; Certificate in Pediatric Dentistry, M.Sc.D., Boston University; D.Sc., Ibid.

Cho, Jun Young Associate Professor, Periodontics. D.D.S., Seoul National University (South Korea); Certificate in Periodontics, 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 Clinical Assistant Professor, Restorative Sciences. D.D.S., Baylor College of Dentistry.

Cole, James S. Dean. B.S., Stephen F. Austin State University; D.D.S., Baylor College of Dentistry.

Coleman, Gary C. Associate Professor and Director, Oral Diagnosis, Diagnostic Sciences. D.D.S., University of lowa; M.S., Ibid.; Diplomate, American Board of Oral and Maxillofacial Radiology.

Collins, Monte K. Clinical Assistant Professor, Orthodontics. B.S., University of Texas at Arlington; D.D.S., Baylor College of Dentistry; M.S.D, Ibid.; Diplomate, American Board of Orthodontics.

Cope, Jason Adjunct Clinical Assistant Professor, Orthodontics. B.A., Southern Methodist University; D.D.S., Baylor College of Dentistry; Ph.D., Ibid.

Cosentino, Biagio J. Clinical Professor, Oral and Maxillofacial Surgery and Pharmacology. D.D.S., Temple University; Certificate in Oral and Maxillofacial Surgery, United States Public Health Service.

Crane, Stephen L. Clinical Assistant Professor, Public Health Sciences. B.A., Southern Methodist University; D.D.S., Baylor College of Dentistry.

Crosby, Douglas R. Clinical 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 Clinical Assistant Professor, Periodontics. B.S., Baylor University; D.D.S., Ibid.; M.S., Certificate in Periodontology, University of Nebraska.

Cundiff II, E. James Associate Professor, Pathology, Diagnostic Sciences. D.D.S., Baylor College of Dentistry; M.S.D., Indiana University; Diplomate, American Board of Oral and Maxillofacial Pathology.

Dahl, Eugene W. Clinical Associate Professor, Restorative Sciences. B.S., Kent State University; D.D.S., Ohio State University; Certificate in Prosthodontics, University of Texas Health Science Center at Houston; Diplomate, American Board of Prosthodontics.

Daley, Patricia Adjunct Clinical Assistant Professor, Restorative Sciences, Graduate Prosthodontics. B.A., University of Illinois; D.D.S., University of Paris (France); D.M.D., University of Mississippi.

Davenport, Rodney J. Clinical Assistant Professor, Oral Diagnosis, Diagnostic Sciences. B.S., University of Texas at Arlington; D.D.S., Baylor College of Dentistry.

Dechow, Paul C. Associate 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., University of Iowa; D.D.S., Ibid.; M.S., Baylor University.

Diekwisch, Thomas G.H. Assistant Professor, Biomedical Sciences. D.D.S., Philipps-University of Marburg (Germany); M.A., Ibid.; Ph.D., Ibid.

Douthitt, James C. Visiting Clinical Assistant Professor, Restorative Sciences. B.S., Texas Christian University; D.D.S., Baylor College of Dentistry; M.S., Baylor University; Certificate in Endodontics, Baylor College of Dentistry.

Dumbrigue, Herman Assistant Director, Advanced Education in General Dentistry; Associate Professor, General Dentistry. D.D.M., University of Philippines; Prosthodontic Certificate, University of California, San Francisco; Maxillofacial Prosthetics Certificate, University of Iowa Hospitals and Clinics.

Eden, Becky A. DeSpain Associate Professor, Public Health Sciences. B.S., Baylor College of Dentistry; M.Ed., University of Central Oklahoma.

Ellis III, Edward E. Adjunct Associate Professor, Biomedical Sciences. B.S., University of Toledo; D.D.S., University of Michigan; M.S. in Oral Surgery, Ibid.

English, Jeryl D. Associate Professor, Clinical Director, Orthodontics and Oral and Maxillofacial Surgery and Pharmacology. B.S., University of New Mexico; D.D.S., M.S. in Oral Biology, Certificate in Orthodontics, University of Missouri-Kansas City; Diplomate, American Board of Orthodontics.

Esteso, Mary Carmen Clinical Assistant Professor, Restorative Sciences. D.D.S., U.T. Mexico; D.D.S., Baylor College of Dentistry.

Ettelbrick, Kelli L. Clinical Assistant Professor, Pediatric Dentistry. D.D.S., University of Iowa; Certificate in Pediatric Dentistry, Baylor College of Dentistry; M.S., Ibid.

Ezzo, Paul Research Assistant Professor, Biomedical Sciences. D.D.S., Baylor College of Dentistry; Certificate in Periodontics, University of Texas Health Science Center, San Antonio; Ph.D., Ibid.

Fanous, Ramsey N. Clinical Assistant Professor, Oral and Maxillofacial Surgery and Pharmacology. B.B.A., Baylor University; D.D.S., Baylor College of Dentistry; Certificate in Oral and Maxillofacial Surgery, University of Wisconsin.

Ferrara, Nancy A. Clinical Assistant Professor, Restorative Sciences. B.S., Francisco Marroquin University of Guatemala; D.D.S., Ibid.; Certificate in General Practice Residency, Ibid.; Certificate in Endodontics, Baylor College of Dentistry; M.S., Ibid.

Folke, A. Lars E. Professor, Director, Center for TeleHealth, Public Health Sciences. L.D.S., University of Lund (Sweden); D.D.S., University of Minnesota; Certificate in Periodontology, Eastman Dental Center; M.S.D., University of Minnesota; Ph.D., Ibid. Diplomate, Swedish Board of Periodontology.

Franco, Pedro F. Assistant Professor, Oral and Maxillofacial Surgery and Pharmacology. D.D.S., Pontificia Universidad Javeriana, Bogota (Colombia), Certificate in Oral and Maxillofacial Surgery, Ibid.

Frederiksen, Neil L. Professor, Director, Oral and Maxillofacial Radiology, Diagnostic Sciences. B.S., University of Minnesota; D.D.S., Ibid.; Ph.D., State University of New York at Buffalo; Diplomate, American Board of Oral and Maxillofacial Radiology.

Freeman, Larry Clinical Assistant Professor, General Dentistry. B.S., Texas Southern University; D.D.S., Meharry Medical College.

Frohberg, Uwe Assistant Professor, Oral and Maxillofacial Surgery and Pharmacology. M.D., Ibid.; D.M.D., University of Duesseldorf (Germany).

Frysh, Howard Clinical Associate Professor, General Dentistry. D.D.S., Baylor College of Dentistry; B.D.S., University of Witwatersrand (South Africa).

Gage, Tommy W. Professor, Vice Chair, Oral and Maxillofacial Surgery and Pharmacology. B.S., University of Texas at Austin; D.D.S., Baylor College of Dentistry; Ph.D., Baylor University.

Gaines, George Y. Visiting Clinical Associate Professor, Periodontics. B.S., Texas Christian University; M.D., University of Texas Southwestern Medical Center at Dallas; Diplomate, American Board of Anesthesiology.

Gaitan, Julio R. Visiting Clinical Assistant Professor, Restorative Sciences. B.S., Francisco Marroquin University of Guatemala; D.D.S., Ibid.; Certificate in General Practice Residency, Ibid.; Certificate in Endodontics, Baylor College of Dentistry; M.S., Ibid.

Galbreath, Ann-Margaret Clinical Assistant Professor, Restorative Sciences. B.S.N. Vanderbilt University; D.D.S., Baylor College of Dentistry.

Gallup, Allen I. Assistant Professor, Pediatric Dentistry. D.D.S., Creighton University; M.S., Nebraska University; Certificate in Orthodontics, Baylor College of Dentistry.

Gandini Jr., Luiz G. Adjunct Clinical Assistant Professor, Orthodontics. M.S.D., University State of Sao Paulo-UNESP; Ph.D., University State of Sao Paulo-UNESP, Araraquara, School of Dentistry.

Gandini, Marcia S. Adjunct Clinical 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. Clinical Assistant Professor, Restorative Sciences, B.A., Texas Tech University; D.D.S., Baylor College of Dentistry.

Garcia-Penna, Frank Clinical Assistant Professor, Restorative Sciences. B.S., Tulane University; D.D.S., Baylor College of Dentistry.

Gatchel, Robert J. Adjunct Professor, Biomedical Sciences. B.A., State University of New York; M.A., University of Wisconsin; Ph.D., Ibid.

Geller, Mark S. Assistant Clinical Professor, Orthodontics. B.A., University of Oklahoma; D.D.S., Baylor College of Dentistry; M.S.D., Ibid.; Diplomate, American Board of Orthodontics.

Genecov, Edward R. Clinical 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 Clinical Assistant Professor, Orthodontics. B.A., University of Texas at Austin; D.D.S., Baylor College of Dentistry; M.S., Ibid.

German, Dwight C. Adjunct Professor, Biomedical Sciences. B.A., Southern Methodist University; M.S., University of Oklahoma; Ph.D., University of Oklahoma Health Science Center.

Gibson, Gretchen Clinical Associate Professor, Public Health Sciences and Periodontics. D.D.S., Louisiana State University School of Dentistry; General Practice Certificate, Audie Murphy Memorial Veterans Hospital; Dental Geriatric Fellowship Certificate, Denver Veterans Affairs Medical Center; M.P.H., University of North Texas Health Science Center.

Glass, Marcia J. Clinical Associate Professor, Periodontics. M.D., University of Sydney (Australia); Certificate in Dermatology, University of Texas Southwestern Medical Center at Dallas.

Goates, Larry J. Clinical Assistant Professor, Orthodontics. B.A., Baylor University; D.D.S., Baylor College of Dentistry; M.S.D., Baylor College of Dentistry; Diplomate, American Board of Orthodontics.

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