

MSDS 5020
Biomedical Core Course
Fall 2016

CLASS DAYS

and TIME: Tuesday and Thursday 8.00am-8.50am
Friday I 8.00am-8.50am
Friday II 9.00am-9.50am

CLASSROOM: Dental School Bldg 4.670U

COURSE FACULTY:

Course Director Dr. Peter Gakunga

Section Leaders Dr. Xiao-Dong Chen
Dr. Bennett Amaechi
Dr. Chih-Ko Yeh
Dr. Jefferey Hicks

OFFICE LOCATION and HOURS: Course Director: 4.606U By Appointment
Section Leaders: Information on first page of each section

EMAIL: Gakunga@uthscsa.edu

TELEPHONE: 567-3507

**READ THIS DOCUMENT CAREFULLY - YOU ARE RESPONSIBLE FOR ITS
CONTENTS.**

COURSE DESCRIPTION AND OBJECTIVES

The Biomedical Core Course will provide a multidisciplinary approach to basic science instruction as it relates to the practice of dentistry. Both basic science and clinical science faculty will participate to provide a sound base of knowledge required by each residency program. Individual programs will supplement the Biomedical Core Course in the basic science areas particular to that discipline. This combination of core instruction with individual supplementation should provide the advanced education student with the appropriate background in biomedical science.

Pre-requisites – None

Semester credit hours – 4

By the end of this course, each student should be able to:

- Demonstrate an understanding of the basic principles of biomedical sciences as they relate to clinical dentistry.

- **Growth and Development:** Discuss the basic principles of growth and development of the craniofacial apparatus.
- **Saliva:** Discuss the basic principles of the formation, neurological control, and bioactivity of saliva.
- **Tissues of the head and neck:** Discuss the basic principles of the hard and soft tissues of the head and neck including bone, collagen, oral mucosa, the periodontium, and the pulp.
- **Wound Healing:** Discuss the basic principles of wound healing including physiology and biochemistry of wound repair, healing and repair of bone, complications in wound repair, and proper wound management.
- **Plaque and Calculus:** Discuss the basic principles of the formation and maturation of plaque and calculus.
- **Infections:** Discuss the basic principles of head and neck infection including anatomical factors, immunology, oral bacterial infections, oral fungal infections, oral viral infections, pharmacologic control of infections, and infection control.
- **Systemic Disease in Dentistry:** Discuss the basic principles of dental management of patients with systemic disease including cardiovascular disease, respiratory disease, bleeding disorders, diabetes, musculoskeletal disease, renal disease, complications of radiation and chemotherapy, neurological disease, gastrointestinal disorders and chemical abuse.

COURSE ORGANIZATION

The main teaching modalities used in this course include:

- 1) Conventional didactic lectures
- 2) Online review material and self-study activities

Materials – The section leaders will provide study and lecture materials. These will be placed on CANVAS

Computer Access – The course materials will be placed on CANVAS. All students enrolled in this course will have access to the course page on CANVAS. The course director will communicate to students via CANVAS email.

Reading Assignments – Required reading assignments will be posted onto CANVAS. Unless stated by the instructor, any information in the required readings is testable in the exams.

ATTENDANCE

Attendance at every class session is expected. Any anticipated absence due to individual residency program activities, or personal reasons should be communicated to the course director as early as possible.

Lateness to class is considered unprofessional behavior

TEXTBOOKS

There are no required textbooks. All material and reading will be assigned by the instructors

GRADING POLICIES AND EXAMINATION PROCEDURES

Each section leader has provided their section's exam policy at the heading to each section.

The final grade will be the mean of scores from all six section exams

For in-class exams: No electronic devices, books or backpacks will be permitted. Late arrival will not accrue additional time.

Make-up Exams: A student with an excused absence to a scheduled exam, from the course director, will have a make-up exam as soon as possible. Any unexcused absence from exam will receive a grade of zero

Grading System

A = 90-100% B = 80-89% C = 70-79% F = < 69%

REQUESTS FOR ACCOMODATIONS FOR DISABILITIES

In accordance with policy 4.2.3, **Request for Accommodation Under the ADA and the ADA Amendments Act of 2008 (ADAAA)**, any student requesting accommodation must submit the appropriate request for accommodation under the American with Disabilities Act (ADA, form 100). to his/her appropriate Associate Dean of their School and a copy to the ADA Coordinator. Additional information may be obtained at <http://uthscsa.edu/eoo/request.asp>.

ACADEMIC INTEGRITY AND PROFESSIONALISM

Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT System Rules and Regulations of the Board of Regents. Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, signing attendance sheets for another student, and any act designed to give unfair advantage to a student or the attempt to commit such an act. Additional information may be obtained at <http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/academicdishonestypolicy/>

TITLE IX AT UTHSCSA

Title IX Defined:

Title of the Education Amendments of 1972 is a federal law that prohibits sex discrimination in education. It reads "no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

University of Texas Health Science Center San Antonio's Commitment:

University of Texas Health Science Center San Antonio (UTHSCSA) is committed to maintaining a learning environment that is free from discriminatory conduct based on gender. As required by Title IX, UTHSCSA does not discriminate on the basis of sex in its education programs and activities, and it encourages any student, faculty, or staff member who thinks that he or she has been subjected to sex discrimination, sexual harassment (including sexual violence) or sexual misconduct to immediately report the incident to the Title IX Director.

In an emergency, victims of sexual abuse should call 911. For non-emergencies, they may contact UPD at 210-567-2800. Additional information may be obtained at <http://students.uthscsa.edu/titleix/>

EMAIL POLICY

Communication between student and faculty using the University's email system is considered official business. Students are expected to check their university email inboxes on a regular basis to access any information regarding this course in a timely way.

USE OF RECORDING DEVICES

Recording of learning activities in this course by any means is only permitted if approved by the instructor or for compliance with Americans with Disabilities Act (ADA).

ELECTRONIC DEVICES

Cell phones must be turned off during all class activities. Computers and electronic devices are allowed only for participating in class activities

MSDS 5020
BIOMEDICAL CORE COURSE
2016 CLASS SCHEDULE

Section I: Craniofacial Growth and Development

Section Leader: Dr. Gakunga

Office hours: By appointment
 Office 4.606U
gakunga@uthscsa.edu

Exam policy: Take-home short answers on current literature in craniofacial growth and development.
 Exam will be available Sept 13, 8:00am. Due back in room 4.606U by Sept 16, 5:00pm

Date			Title	Presenter
Aug 23	Tuesday	8:00am	Introduction	Dr. Gakunga
Aug 25	Thursday	8:00am	Growth of craniofacial complex	Dr. Gakunga
Aug 26	Friday I	8:00am	Neurocranium I	Dr. Gakunga
Aug 26	Friday II	9:00am	Neurocranium II	Dr. Gakunga
Aug 30	Tuesday	8:00am	Dentition	Dr. Chen
Sept 01	Thursday	7:00am	Midface I	Dr. Salome
		8:00am	Midface II	Dr. Salome
Sept 02	Friday I	8:00am	Mandible	Dr. Almuğla
Sept 02	Friday II	9:00am	CTP	
Sept 06	Tuesday	8:00am	Craniofacial anomalies	Dr. Gakunga
Sept 08	Thursday	8:00am	CTP	
Sept 09	Friday I	8:00am	Clinical correlations I	Dr. Britton
Sept 09	Friday II	9:00am	Clinical correlations II	Dr. Britton
Sept 13	Tuesday		Examination	

Section II: Structure and Function of Oral Tissues

Section Leader: Dr. Chen

Office hours: By appointment
Office STR 2.262
chenx4@uthscsa.edu

Exam policy: Take-home multiple choice, and essay questions. Exam will be made available Oct 06, 8:00am and due back in room 4.606U by Oct 11, 5:00pm.

Date			Title	Presenter
Sept 15	Thursday	8:00am	Wound Healing Around Implants	Dr. Huynh-Ba
Sept 16	Friday I	8:00am	Introduction to Radiology	Dr. Deahl
Sept 16	Friday II	9:00am	Radiology	Dr. Deahl
Sept 20	Tuesday	8:00am	Structure and Function in Enamel Formation	Dr. Chun
Sept 22	Thursday	8:00am	Dental Stem Cells and Regenerative Endodontics	Dr. Diogenes
Sept 23	Friday I	8:00am	Collagen & Extracellular Matrix	Dr. Dean
Sept 23	Friday II	9:00am	Wound Healing	Dr. Dean
Sept 27	Tuesday	8:00am	Saliva I	Dr. Yeh
Sept 29	Thursday	8:00am	Saliva II	Dr. Yeh
Sept 30	Friday I	8:00am	Bone Biology: Introduction and Mechanism	Dr. Harris
Sept 30	Friday II	9:00am	Bone Biology: Regulators of Bone	Dr. Harris
Oct 04	Tuesday	8:00am	Stem Cell-based Therapies	Dr. Chen
Oct 06	Thursday	8:00am	Examination	Dr. Chen

Section III: Oral Infections I**Section Leader: Dr. Amaechi**

Office hours: By appointment
Office: Room 2.608U
Tel: 567 3185
Amaechi@uthscsa.edu

Exam policy: Final Examination will be two take-home essay questions. Each will carry 50% grade to total 100%. The examination will be placed on CANVAS.

Date	Title	Presenter
Oct 07 Friday I	8:00am Formation/Maturation of Plaque/calculus I	Dr. Jones
Oct 07 Friday II	8:00am Formation/Maturation of Plaque/calculus I	Dr. Jones
Oct 11 Tuesday	8:00am Control of white spot lesions formation during treatment with oral appliances	Dr. Amaechi
Oct 13 Thursday	8:00am Canal infections: Relevance and Clinical Management	Dr. Diogenes
Oct 14 Friday I	8:00am Relationship between inflammatory periodontal diseases and systemic health: part I	Dr. Mealey
Oct 14 Friday II	9:00am Relationship between inflammatory periodontal diseases and systemic health: part II	Dr. Mealey
Oct 18 Tuesday	8:00am Odontogenic Infections Part I: Introduction and Principles of Therapy	Dr. Startzell
Oct 20 Thursday	8:00am Role of antimicrobials in the prevention and control of periodontal diseases	Dr. Deas
Oct 21 Friday I	8:00am Role of antimicrobials in the prevention and control of dental caries	Dr. Saha
Oct 21 Friday II	9:00am Role of Denture Care in Oral Health Maintenance	Dr. Haney
Oct 25 Tuesday	8:00am Odontogenic Infections Part II: Fascial Space and Deep Neck infections	Dr. Startzell
Oct 27 Thursday	8:00am Probiotics for oral health (Caries & Periodontal diseases): the road so far	Dr. Saha
Oct 28 Friday I	8:00am Oral Immunology I	Dr. Berton
Oct 06 Friday II	9:00am Oral Immunology II	Dr. Berton

Section IV: Oral Infections II

Section Leader: Dr. Yeh

Office hours: By appointment

Audie Murphy VA Hospital Room A312

7400 Merton Minter Boulevard, San Antonio, Texas 78229

210-617-5300, ext. 16684

yeh@uthscsa.edu

Exam policy: Take-home multiple choice questions. The exam will be made available on Thursday, Nov 17, 2016 8:00am. Exam due back by 12:00 noon Friday, Nov 18 in room 4.606U

Date			Title	Presenter
Nov 01	Tuesday	8:00am	HIV infection	Dr. Yeh
Nov 03	Thursday	8:00am	Infection control in dentistry (I)	Dr. Porteous
Nov 04	Friday I	8:00am	Oral viral infection	Dr. McGuff
Nov 04	Friday II	9:00am	Viral hepatitis (I)	Dr. Wright
Nov 08	Tuesday	8:00am	Infection control in dentistry (II)	Dr. Porteous
Nov 10	Thursday	8:00am	Oral manifestations of HIV (I)	Dr. Sankar
Nov 11	Friday I	8:00am	Oral manifestations of HIV (II)	Dr. Sankar
Nov 11	Friday II	9:00am	Nutrition	Georgina Gross
Nov 15	Tuesday	8:00am	Viral hepatitis (II)	Dr. Wright
Nov 17	Thursday	8:00am	Oral fungal infection	Dr. Kadosh
Nov 18	Friday I	8:00am	Examination	
Nov 18	Friday II	9:00am	Examination	

Section V: Dental Considerations with Systemic Disease

Section Leader: Dr. Hicks

Office hours: By appointment
Office 2.660U
hicksj@uthscsa.edu

Exam Policy: In-class examination of approximately 30 multiple choice questions.

Date			Title	Presenter
Nov 22	Tuesday	8:00 am	Liver Disease	Dr. Hicks
Nov 29	Tuesday	8:00 am	Diabetes	Dr. Mealey
Dec 01	Thursday	8:00 am	Diabetes	Dr. Mealey
Dec 02	Friday I	8:00 am	Cardiovascular Disease	Dr. Huber
Dec 02	Friday II	9:00 am	Cardiovascular Disease	Dr. Huber
Dec 06	Tuesday	8:00 am	Respiratory Disease	Dr. Luce
Dec 08	Thursday	8:00 am	Pregnancy	Dr. MacNeill
Dec 09	Friday I	8:00 am	Anthithrombotic Medicines	Dr. Lasho
Dec 09	Friday II	9:00 am	Anthithrombotic Medicines	Dr. Lasho
Dec 13	Tuesday	8:00 am	Stroke	Dr. Luce
Dec 15	Thursday	8:00 am	Radiation Therapy	Dr. Hicks
Dec 16	Friday I	8:00 am	Radiation Therapy	Dr. Hicks
Dec 16	Friday II	9:00 am	Final Exam	Dr. Hicks