

## **SYLLABUS**

COURSE: DHBS 4308 Pharmacology  
SEMESTER: Fall  
CREDIT HOURS: 2.0

FIRST EDITION: 2003  
REPRINTED: 2009

COURSE DIRECTOR: Jarvis T. Chan, D.D.S., Ph.D.

## GOAL

This course in pharmacology is designed to familiarize second-year dental hygiene student with the major groups of drugs used in dentistry and dental hygiene, as well as medical drugs which impact on the practice of dental hygiene. These drug groups are listed as topics for lectures in the sections of this syllabus entitled "Outline" and "Study Plan and Requirements". These areas of study encompass a wide variety of subjects, from principles of drug action to prescription writing.

It is the specific overall objective of this course to prepare dental hygienists for competent care of their patients, especially as that care relates to understanding of the patient's overall systemic and oral health and the drugs being used to treat the patients' various medical conditions. Dental hygienists will also be provided with a thorough understanding of drugs commonly used in the practice of dental hygiene and dentistry so that those medications can be used safely and effectively for dental hygiene patients.

## OUTLINE

- I. Introduction and Principles
  - A. Overview of Course
  - B. General principles of drug action
- II. Pharmacokinetics
  - A. Absorption
  - B. Distribution
  - C. Metabolism
  - D. Excretion
- III. Autonomic Drugs
  - A. Overview of Autonomic Nervous System
  - B. Adrenergic Drugs
  - C. Anti-Adrenergic Drugs
  - D. Cholinergic Drugs
  - E. Anticholinergic Drugs
- IV. Local Anesthetics
  - A. Injectable Agents and Actions
  - B. Topical Agents
- V. Fluoride and Hormones
  - A. Systemic and Topical
  - B. Hormones
- VI. Sedative-Hypnotic Drugs
  - A. Non-Benzodiazepines
  - B. Benzodiazepines
- VII. Analgesics
  - A. Non-Steroidal Anti-inflammatory Drugs
  - B. Opioids

- VIII. Antimicrobial Drugs
  - A. Penicillins
  - B. Other Antimicrobials
- IX. Cardiovascular Drugs
- X. General Anesthetics and Nitrous Oxide
  - A. General Anesthetics
  - B. Nitrous Oxide
- XI. Summary Subjects
  - A. Prescription Writing
  - B. Drug Laws
  - C. Emergency Drugs
  - D. Drug Abuse

## OBJECTIVES

Behavioral objectives will be distributed at the beginning of each lecture period for the topic to be discussed during that lecture. Failure of a lecturer to distribute objectives should be reported to the course director.

## RESOURCES

### I. Media Resources

#### A. Printed media

##### 1. Required textbook

Elena Bablenis Haveles  
*Applied Pharmacology for the Dental Hygienist, 5<sup>th</sup> ed.*  
C.V. Mosby Co., St. Louis, 2007

##### 2. Handouts

### II. Human Resources

Jarvis T. Chan, D.D.S., Ph.D.  
Phone: 713-500-4508, Room DBB 403  
Email: Jarvis.Chan@uth.tmc.edu

Vahn A. Lewis, Pharm. D., M.S., Ph.D.  
Phone: 713-500-4517, Room DBB 414  
Email: Vahn.A.Lewis@uth.tmc.edu

Theodore D. Pate, Ph.D.  
Phone: 713-500-4519, Room DBB 3.112H  
Email: Ted.D.Pate@uth.tmc.edu

Norman W. Weisbrodt, Ph.D.  
Phone: 713-500-6324, Room MSB 4.222  
Email: Norman.W.Weisbrodt@uth.tmc.edu

## STUDY PLAN AND REQUIREMENTS

As in most college-level courses, the content of the course is derived from your lecture notes, handout materials and the relevant material in the textbook. In general, the lecture (and objectives for the lecture) will provide the framework for your studies, which is extended to the material in the textbook. Where a disagreement between the textbook and the lecturer(s) occurs, the lecturer(s) information takes precedence over the textbook, as textbooks cannot be updated as regularly as lecture materials. Read each textbook chapter before the lecture on the material to optimize your learning in class.

**Attendance:** Your attendance is required and will be monitored at the discretion of the lecturer and/or the course director. By UTDB policies, course grade penalties can be assessed for any unexcused absences, and will be in this course. Attendance at examinations is absolutely required and only under extraordinary circumstances (e.g., medical emergencies) will a remake exam be given to a student. All remake examinations will be essay questions and will be given at the convenience of the instructor or course director.

**Distractions in Class:** In general, any behavior by a student that is distracting or disruptive to a class will not be tolerated, and a course grade penalty will be applied for each occurrence. **PENALTIES FOR UNEXCUSED ABSENCES AND DISRUPTIVE BEHAVIOR WILL BE THREE-POINT DEDUCTIONS FROM THE FINAL COURSE GRADE FOR EACH OCCURRENCE.**

**DHBS 4308 PHARMACOLOGY**  
**2009 Fall Semester Lecture Schedule**

Wednesday, 1-2:50 pm  
Room 446, unless otherwise indicated.

<b>Date</b>	<b>Lecture Topic</b>	<b>Faculty</b>
Aug 19	Introduction and Principles	Chan
Aug 26	Pharmacokinetics	Lewis
Sep 2	Local Anesthetic Drugs	Chan
Sep 9	Hormonal Drugs	Chan
Sep 16	<b>Exam I</b> <span style="float: right;"><b>Room 340</b></span>	Chan, Lewis
Sep 23	Autonomic Drugs	Weisbrodt
Sep 30	Neurologic Drugs	Lewis
Oct 7	Analgesics	Chan
Oct 14	<b>Exam II</b> <span style="float: right;"><b>Room 340</b></span>	Chan
Oct 21	Anticaries, Antiplatelet Agents (first hour)	Chan
	Antimicrobials (second hour)	Chan
Oct 28	Antimicrobials	Chan
Nov 4	Cardiovascular Drugs	Pate
Nov 11	<b>Exam III</b> <span style="float: right;"><b>Room 340</b></span>	Chan, Pate
Nov 18	General Anesthetics, Nitrous Oxide	Chan
Nov 25	Prescription Writing and Drug Laws	Chan
Dec 2	Drug Abuse	Chan
	Emergency Drugs	
	<b>Course Evaluation</b>	
<b>Fri, Dec 11</b> <b>8-10:00 am</b>	<b>Exam IV</b> <span style="float: right;"><b>Room 340</b></span>	Chan

## EVALUATION METHODS

Each of the four exams will be objective-style, at the discretion of the faculty member(s) whose questions appear on the examination. Generally, examination answers will be given on Scantron cards, which will be considered the final answer for each question (answers marked on exam papers will not be counted unless the style of the question requires it to be marked there). The objectives are to be used to prepare for the examinations, with lecture notes, handouts and textbook reading as the resources for the objectives.

Examinations will NOT be reviewed in class because of time restrictions; however, the faculty member(s) giving the examination may elect to review the examination immediately after all examination papers have been turned in, if time permits.

Individual students may make an appointment with the course director and/or faculty to review an examination if the student wishes to dispute the correct answer or if a specific problem has occurred.

Examination grades will be posted on Blackboard.

During the examinations, students shall NOT ASK any question and the instructors will NOT ANSWER any question. Students may challenge any question(s) after the examination in writing, through e-mail. The instructor or course director will make necessary adjustments when such challenge is deemed valid.

EACH EXAM CONSTITUTES 25% OF THE FINAL COURSE GRADE, and each exam covers only the material that preceded it on the schedule (the fourth exam, for example, covers only the material from November 18 – December 2).

Furthermore, students enrolled in this course will submit a term-paper on a topic related to drugs discussed in this course. The term paper should consist of 4 pages, with 1.5 line-spacing and a font size of 12.

Make-up examinations will be given in form of short essay questions.

### **Course Evaluation**

This course will be evaluated by the students during the final section of the lectures. Students are encouraged to participate in the course evaluation.