

**STATE UNIVERSITY OF NEW YORK  
COLLEGE OF TECHNOLOGY  
CANTON, NEW YORK**



**COURSE OUTLINE**

**DHYG 221 – DENTAL PHARMACOLOGY**

Prepared by: **Kasey Penoyer, RDH, BTech, MS**

**SCHOOL OF SCIENCE, HEALTH & CRIMINAL JUSTICE  
DENTAL HYGIENE AAS PROGRAM  
MARCH 2015**

## DHYG 221 – DENTAL PHARMACOLOGY

- A. **TITLE:** DENTAL PHARMACOLOGY
- B. **COURSE NUMBER:** DHYG 221
- C. **CREDIT HOURS:** 2
- D. **WRITING INTENSIVE COURSE:** NO
- E. **COURSE LENGTH:** 15 WEEKS
- F. **SEMESTER(S) OFFERED:** FALL
- G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**  
2 Hours of lecture each week
- H. **CATALOG DESCRIPTION:** General concepts of drugs and drug action are discussed. Special emphasis will be given to drugs used in dentistry and drugs that may alter dental treatment. The course include specific mechanisms of action and clinical applications of drugs which affect the central and peripheral nervous systems, the heart, the circulatory and renal systems, the respiratory and GI systems and the endocrine system. Drugs to treat cancer and carious infections are also discussed. Special consideration will be given to the topic of drugs for the pregnant patient and the student will examine important drug interactions.
- I. **PRE-REQUISITES/CO-COURSES:** Matriculation in Dental Hygiene or permission of the instructor.
- J. **GOALS (STUDENT LEARNING OUTCOMES):** By the end of this course, the student will meet the following course learning outcomes which are linked to the institutional learning outcomes. This course provides the foundational skills to perform the following program competencies: 1.1, 1.7, 1.15, 3.7, 5.2, 5.4 and 8.1.

| Student Learning Outcomes   | Institutional Outcomes                     |
|---|--|
| 1. Explain general concepts, definitions and mechanism of the drug action in general pharmacology   | 2. Critical Thinking<br>3. Prof Competency |
| 2. Identify the functions and physiology of the autonomic and central nervous systems   | 3. Prof Competency                         |
| 3. Identify and demonstrate drug classifications and specific drug actions to the affected systems to include therapeutic actions and side effects. | 2. Critical Thinking<br>3. Prof Competency |
| 4. Identify common drugs and those that may alter dental treatment.   | 3. Prof Competency                         |
| 5. Demonstrate competence when utilizing the PDR (Physician's Desk Reference).  | 3. Prof Competency                         |

- K. **TEXTS:**  
Haveles, Elena, Applied Pharmacology for the Dental Hygienist, 6<sup>th</sup> Ed, Mosby Inc, 2011.
- L. **REFERENCES:**  
Asperheim, Mary K., Introduction to Pharmacology, 11<sup>th</sup> Edition. Elsevier, 2009

Pickett, et.al. Basic Principles of Pharmacology with Dental Hygiene Applications. Lippincott Williams & Wilkins, 2009

Mosby's Dental Drug Reference, 10<sup>th</sup> Edition Mosby/Elsevier Publishers. 2011

Physician's Desk Reference, 69<sup>th</sup> Edition. Thomson PDR Publisher, 2015

Drug Information Book for Dentistry, 16<sup>th</sup> Edition. Wynn et al. Lexi-Comp Publishing, 2010.

Additional Internet Resources:

[www.fda.gov](http://www.fda.gov) Food and Drug Administration

[www.rxlist.com](http://www.rxlist.com) Internet Drug Index

**M. EQUIPMENT:** none

**N. GRADING METHOD:** A – F

A letter grade will be issued utilizing the following conversion table. All students must achieve a minimum C grade in this course to maintain matriculation in the program.

|    |             |
|----|-------------|
| A  | 94 - 100    |
| B+ | 90 - 93     |
| B  | 84 - 89     |
| C+ | 80 - 83     |
| C  | 75 - 79     |
| D  | 74 - 70     |
| F  | 69 or lower |

**O. MEASUREMENT CRITERIA/METHODS:**

Weekly Quizzes

Final Exam

PDR Based Pharmacology Case Study of a patient seen in DHYG 251

Therapeutic Class Presentation

**P. DETAILED COURSE OUTLINE:**

**I. General Principles**

- A. Prescription Writing
- B. Drug Action and Handling
- C. Adverse Reactions

**II. Drugs Used In Dentistry**

- A. Autonomic Drugs
- B. Nonopioid Analgesics
- C. Opioid (Narcotic) Analgesics
- D. Antiinfective Agents
- E. Antifungal and Antiviral Agents
- F. Local Anesthetics
- G. General Anesthetics
- H. Antianxiety Agents

**III. Drugs That May Alter Dental Treatment**

- A. Cardiovascular Drugs
- B. Anticonvulsant Drugs
- C. Psychotherapeutic Agents
- D. Autacoids and Antihistamines
- E. Adrenocorticosteroids

- F. Other Hormones
- G. Antineoplastic Drugs
- H. Respiratory and GI Drugs

**IV. Special Situations**

- A. Pregnancy and Breast Feeding
- B. Drug Interactions
- C. Bisphosphonates (BP)

**V. Utilization of the Physician's Desk Reference (PDR)**

**Q. LABORATORY OUTLINE:** Not applicable