



Dental Hygiene Department

Student Course Document

COURSE CODE & TITLE: DEN 2315 PHARMACOLOGY

TERM: Fall 2016

INSTRUCTOR: LORNA FLAMER-CALDERA, DDS, FAGD, FACD

CONTACT INFORMATION: Office: Pearl 201
(718) 260- 3839
lflamer-caldere@citytech.cuny.edu

OFFICE HOURS: Mondays, 10:00 am to 11:00 am
Thursdays, 7:00 am to 8:00 am

CLASS HOURS: 2 hours/week

CREDITS: 2

PREREQUISITES: DEN 1200, DEN 1217, DEN 1218

REQUIRIED TEXTBOOK: **1.** Drug Information Handbook for Dentistry, 21st Edition;
Wynn et al. Lexicomp.
2. Pharmacology for the Dental Hygienist, 7th Edition;
Bablenis Haveles. Elsevier Mosby.

Course Description:

Pharmacological action of drugs on functions of the body. Therapeutics of drugs commonly employed in dental practice. Emphasis is on pharmacodynamics, pharmacotherapy, and pharmacokinetics as understood through the systems of the human body. Didactic material includes drug properties, indications for use, mechanism of action, adverse effects, contraindications, and interactions with other drugs,

Evaluation Procedures

College Grading Scale

93-100.....	A
90-92.9.....	A-
87-89.9.....	B+
83-86.9.....	B
80-82.9.....	B-
77-79.9.....	C+
70-76.9.....	C
Below 70.....	Fail

Course Assessment Method:

A minimum final grade of 70 is required to pass DEN 2315.

Each quiz will be weighted equally with the total being worth 15% of the final grade.

Quizzes.....	15%
Exam #1.....	15%
Exam #2.....	20%
Exam #3.....	20%
Exam #4.....	20%
Written assignment/ Oral presentation.....	10%

Course Policies:

- a) **Attendance policy:** Attendance in DEN 2315 is expected. Two absences are permitted in this course. In the event of an absence the student is responsible to obtain and learn the material presented. For each absence after two, the final grade will be reduced by a single grading scale component. (Example: an A would become an A-; a B+ would become a B)
- b) **Lateness policy:** Punctuality is expected in DEN 2315. Two latenesses are equivalent to one absence.
- c) **Professionalism:** Professional behavior in the Dental Hygiene department refers to a standard of conduct. In DEN 2315 you are expected to follow that standard which includes ethics, courtesy, civility, rapport with instructors, Unprofessional behavior,

including stealing, cheating, inappropriate use of electronic devices, and general incivility will not be tolerated. Noncompliance with this standard will be reflected in a deduction of 5-10 points from the final grade.

d) Examination Policies:

1. All students are expected to take each examination at its scheduled time.
2. Students who arrive late to an examination will not be given extended time and will be expected to complete the exam in the remaining scheduled exam time.
3. **Dental Hygiene Department Policy on Retesting:** No student in any dental hygiene course will be retested in any examination for any reason. A failing grade on a quiz/examination will remain and be averaged with all other course grades.
4. **Make-up exams:** The instructor is to be notified by e-mail in the event of an unforeseen emergency which causes an absence for an examination. Requests for a make-up examination must be submitted to the instructor and include medical or legal documentation to support the absence. Documentation deemed acceptable by the instructor will result in a scheduled make-up examination. The make-up exam may be given in a format differing from the original examination.
5. Students who miss an examination and do not provide acceptable documentation will have a score of zero entered for that examination.
6. **Cheating:** Penalty for a student observed cheating on a DEN 2315 examination will be a zero grade for that exam plus 5 -10 points off the final grade for professionalism.

e) New York City College of Technology Policy on Academic Integrity: Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

Learning Experience:

This course will utilize several approaches to teaching including but not limited to BlackBoard, PowerPoint, group discussions, and lectures in order to accomplish the stated objectives.

DEN 2315 Course Objectives

	TOPIC	MONDAY 8:00-9:50 a.m.	THURSDAY 2:15- 3:55 p.m
1	Introduction to Pharmacology- Unit I Drug Action and Handling- Unit II	8/29/16	8/25/16
2	Adverse Reactions- Unit III Prescription Writing- Unit IV Autonomic Nervous System- Unit V-start	9/12/16	9/1/16
3	Autonomic Nervous System- Unit V- complete	9/19/16	9/8/16
4	Nonopioid Analgesics- Unit VI	9/26/16	9/15/16
5	Examination #1 Narcotic Analgesics- Unit VII	10/6/16 (Thu)	9/22/16
6	Anti-infective agents- Unit VIII (Antifungal/Antiviral agents)- self-study- Unit IX	10/17/16	9/29/16
7	CNS Disorder Drugs- Unit X Antianxiety Drugs-self- study- Unit XI	10/24/16	10/13/16
8	Examination #2 Anticonvulsants- Unit XII	10/31/16	10/20/16
9	(Stimulants/Amphetamines)- self-study- Unit XIII Cardiovascular drugs- Unit XVI	11/7/16	10/27/16
10	Cardiovascular drugs	11/14/16	11/3/16
11	Examination #3 Gastrointestinal Disorder Drugs- Unit XVI	11/21/16	11/10/16
12	Endocrine drugs- Unit XIV (HIV/AIDS)- self-study- Unit XVIII	11/28/16	11/17/16
13	(Bisphosphonates)- self- study- Unit XV Emergency Drugs- Unit XIX	12/5/16	12/1/16
14	Examination #4	12/12/16	12/8/16
15	To be announced	12/19/16	12/15/16

Unit I- Science and the study of Drugs- Discipline Knowledge

1. Define the terms Drug and Pharmacology (HP 5)
2. State the importance of the RDH in understanding the basics of pharmacology (HP1;HP2)
3. Evaluate and assess specific components of the medical history (HP 5; PC3)
4. State the branches of pharmacology and their specific functions (C2)
5. Know what sources drugs are derived from (C4)
6. Discuss data found in a drug monograph (C4)
7. Explain the names provided to drugs during the development and marketing process (C4)
8. What is meant by Tall-Man lettering (PC3)
9. Explain the phases that constitute the Drug Approval Process (p. 6) (C2)
10. Discuss criteria for drug substitution with a generic drug (C2)
11. Discuss the Controlled Substance Act of 1970 and distinguish the five drug schedules (C2)
12. Explain “Off-Label Use” of a drug.

Gen Ed SLOs:

Information Literacy
Inquiry and Analysis

Unit II- Drug Actions and Handling- Discipline Knowledge

1. Define drug potency, efficacy, interaction, agonist, antagonist, prototype drug, (C4)
2. What is meant by Mechanism of Action (C4)
3. Mathematically determine drug half-life. (Ex. A patient is taking a drug that has a half-life of 6 hours. In how many days will this drug be approximately 97% eliminated from the body? What is the trace percentage amount remaining?) (C4)
4. Explain cellular changes that occur when a drug binds to a receptor site.(C4)
5. Explain the “Lock and Key” mechanism of drug binding (C4)
6. List routes of drug administration that are likely to be used in dentistry (HP6)
7. Break down the pharmacokinetic steps a drug passes through after entrance into the body (C4)
8. Describe the methods of transport that drugs use to elicit a pharmacologic effect (C4)
9. Explain the plasma distribution of a drug as it relates to bound vs. unbound states and levels of therapeutic activity within these states.(C4)
10. Discuss the primary route of metabolism and excretion for most drugs (C4))
11. Discuss drug dosage as it relates to impaired body function (C4)

Gen Ed SLOs:

Information Literacy
Quantitative Literacy
Critical Thinking

Unit III- Adverse Reactions- Discipline Knowledge

1. Define adverse drug reactions (HP6)
2. Differentiate between therapeutic and adverse effects and allergic responses to a drug (HP6)
3. Describe in simple terms what is meant by a drug interaction (C3)
4. Identify categories required by the FDA in drug monograph listing adverse drug effects(C2)
5. Define a teratogenic effect (C3)
6. Briefly describe the differences between pregnancy categories ABCD & X (HP6)
7. Know which drug reaction is NOT dose related

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit IV- Prescription Writing- Discipline Knowledge

1. List the information required in a prescription (C2)
2. What recent method has the FDA adopted to prevent prescribing errors (C2)
3. Know metric equivalencies (such as 1 gram = how many milligrams?)
4. Know conversions between the metric and imperial systems of measurement. (child's weight in pounds vs. kilograms)
5. Identify abbreviations commonly used in prescription writing (C3)
6. Write a prescription for premedication using the anti-infective drug amoxicillin (HP6)

Gen Ed SLOs:

Quantitative Literacy

Critical Thinking

Written Communication

Information Literacy

Unit V- Autonomic Nervous System (ANS)- Discipline Knowledge

1. Discuss why dental hygienists should be familiar with the ANS (C3)
2. List the effects of drugs that **stimulate** (agonists) the **Sympathetic Nervous System (SNS)** on the following: heart rate, blood vessels, bronchioles, GI tract, pupil of the eye, saliva (C3)
3. List the effects of drugs that **block** (antagonists) the **sympathetic** division on the following: heart rate, blood vessels, bronchioles, GI tract, pupil of the eye, saliva (C3)
4. List the effects of drugs that **stimulate** (agonists) the **Parasympathetic Nervous System (PNS)** on the following: heart rate, blood vessels, bronchioles, GI tract, pupil of the eye, saliva (C3)
5. List the effects of drugs that **block** (antagonists) the **parasympathetic** division on the following: heart rate, blood vessels, bronchioles, GI tract, pupil of the eye, saliva (C3)
6. List the chemical transmitters of the two divisions. (C3)
7. Name the enzyme that terminates the action of the neurotransmitters acetylcholine, norepinephrine and epinephrine(C3)

8. State what physiological responses will be present when acetylcholine is terminated
9. Describe a Nerve Action Potential (C3)
10. Identify the location of the nicotinic, muscarinic, alpha and beta receptors(C3)
11. Identify a cholinergic drug occasionally used in dentistry and state reason for use(C3)
12. Identify occasions when anticholinergic drugs are used in dentistry and medicine. (C3)
13. List the two pharmacological effects of epinephrine(C3)
14. Discuss the MOA of a beta adrenergic blocking agent as it relates to heart disease and name two drugs of this class(C3)
15. Name 2 alpha-adrenergic agonists(C3)

Gen Ed SLOs:

Inquiry and Analysis

Critical Thinking

Unit VI- Nonnarcotic/ Nonopioid Analgesics- Discipline Knowledge

1. Contrast the 2 classification of oral pain providing examples(C3)
2. For what type of dental pain would a nonnarcotic analgesics be used
3. Describe the mechanism of COX I and COX II inhibitors (C3)
4. Name two groups that subdivide the analgesics and discuss their sites of action
5. Describe a commonly used salicylate(C3)
6. Explain the mechanism of action (MOA) of aspirin(C3)
7. Name the four pharmacologic effects of aspirin
8. Describe the effects of aspirin on GI tract(C3)
9. List drugs that may have an interaction with aspirin(C3)
10. Identify systemic conditions in which aspirin is contraindicated(C3)
11. Know the accepted stroke prevention dosage of aspirin (C3)
12. Describe nonacetylated salicylates(C3)
13. Explain the MOA of NSAIDs(C3)
14. Name the prototype NSAID(C3)
15. Compare & contrast aspirin and acetaminophen(C3)
16. Describe organ damage from acetaminophen overdose(C3)
17. Identify the drug of choice to treat acetaminophen overdose(C3)
18. Name and explain the syndrome associated with aspirin, flu symptoms and chicken pox
19. Know the analgesic drug of choice for children(C3)
20. Discuss three distinct pharmacological effects of NSAIDs(C3)
21. Describe the dose of ibuprofen for dental use; include maximum daily dose
22. List 3 adverse effects of ibuprofen(C3)
23. State 4 drug interactions with ibuprofen(C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit VII- Narcotic/Opioid Analgesics- Discipline Knowledge

1. State the prototype narcotic drug(C3)
2. Classify narcotic drugs(C3)
3. Explain when a DEA number is necessary (C2)
4. Discuss the pharmacokinetics of opioids (C3)

5. State four (4) pharmacologic effects of Narcotics(C3)
6. Describe adverse reactions to narcotics(C3)
7. Describe a common gastrointestinal adverse effect of opioids (C3)
8. Describe the name and locations of opioid receptors(C3)
9. State the narcotic commonly used in dentistry for mild pain(C3)
10. Explain the exact differences between Tylenol #, 2, 3, 4 (C3)
11. Name two popular brand name drugs used for moderate to severe pain(C3)
12. Name narcotic antagonists and explain their mechanism of action(C3)
13. Identify drugs and supplements that may interact with narcotic analgesics (C3)
14. What is the most common symptom of a narcotic overdose(C3)
15. List both illegal and legal drugs known to be addictive(C3)
16. Know what clinical findings the dental hygienist may observe to indicate addiction(C3; HP6)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit VIII- Antiinfective Agents- Discipline Knowledge

1. Define the following terms: bactericidal, bacteriostatic, superinfection, drug resistance (C3)
2. Discuss the concern for unnecessary prescribing of antibiotics (C3)
3. Discuss the pharmacologic categories of antibiotics and list examples under each (C3)
4. List and know bactericidal and bacteriostatic antiinfective drugs (C3)
5. Distinguish between narrow spectrum and broad-spectrum antibiotics (C3)
6. Name the drug of choice for treating oral infections (C3)
7. Identify adverse reactions associated with many antiinfectives (C3)
8. Recognize oral manifestations that may be present when a patient is taking an antibiotic (HP 6; PC1)
9. List common drug interactions with antibiotics
10. Describe penicillin-induced allergic reactions(C3)
11. Identify the dental procedures possessing the highest risk for developing bacterial endocarditis (C3; PC1))
12. Identify medical conditions with the highest risk for joint infection (PC1)
13. State the routine antibiotic prophylactic regimens (C3)
14. Identify drug alternatives for penicillin-allergic patients(C3; PC1)
15. Understand what distinguishes tetracycline from other antibiotics (C3)
16. Describe possible adverse effects associated with the use of tetracyclines(C3)
17. Name 2 substances that interact with tetracycline(C3)
18. Name a topical antibiotic and state the condition for which it is used(C3)
19. Name 3 agents commonly used to treat TB(C3)
20. State the TB protocol for patients with a positive skin test, negative chest x-ray but no clinical symptoms(C3)
21. Identify a potentially serious adverse effect with the use of clindamycin(C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit IX- Antiviral and Antifungal Agents- Discipline Knowledge

1. Distinguish between the cell walls of viruses and bacteria (C3)
2. Recognize the oral areas where most viral infections are detected
3. State the Mechanism of Action (MOA) of antiviral drugs (C3)
4. State the most common oral infections and likely cause(s) (C3)
5. List 2 Rx drugs and 2 OTC drugs in treatment of oral viral conditions (C3)
6. State the drug most commonly prescribed to treat herpes labialis (PC1; PC4)
7. Describe the similarity between chicken pox and herpes simplex infections (C3)
8. Identify what non-viral oral lesion is commonly mistaken for a viral lesion (C3)
9. State the agents used for treating non-viral oral lesions (C3)
10. Describe a fungus and list the 2 main groups of mycoses (C3)
11. List conditions that contribute to the emergence of oral fungal infections (C3)
12. Explain the MOA of antifungal drugs(C3)
13. List the most common fungal infection observed in a dental setting (PC1)
14. Recognize conditions commonly associated with oral fungal infections (C3)
15. List 4 antifungal agents used in dentistry to treat oral candidiasis (C3)
16. Discuss the drug used in the Swish and Swallow protocol (C3)
17. List the available drug administration routes for antifungals (C3)
18. Discuss why a yeast infection can develop after the use of an antibiotic (C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit X- Central Nervous System Disorder Drugs- Discipline Knowledge

1. Describe the etiology of schizophrenia
2. Identify the prototype phenothiazine drug used to treat psychoses
3. List three new atypical antipsychotics(C3)
4. State the common oral side effect of antipsychotic drugs (PC1; PC2; C3)
5. State significant drug interactions with the antipsychotic family of drugs (C3)
6. Identify the prototype atypical antipsychotic agent and discuss the MOA (C3)
7. Compare extrapyramidal symptoms with tardive dyskinesia. (C3)
8. Explain in detail the 3 types of depression including clinical symptoms
9. State the pathophysiology for the development of depression (C3)
10. Identify 5 major classifications of antidepressants and state the MOA of each (C3)
11. Identify 5 drugs under each pharmacologic category(C3)
12. List number one drug interactions for each of the categories(C3)
13. Compare Prozac with Elavil. Use both the generic and brand name in your comparison(C3)
14. Name the Pharmacologic Category and state adverse effects greater than 10%: of the following significant drugs: Effexor, Elavil, Prozac, Paxil, Zoloft (C3)
15. Explain the MOA of neurotransmitters relating to SSRIs & Monoamineoxydase inhibitors
16. State the recent boxed warning with the use of SSRI's (C3)
17. Name 2 food sources connected to interference with the metabolism of SSR's & MAOI's (C3)
18. Define what is meant by the "Gold Standard" for treatment of Bipolar Disorder (C3)
19. Discuss the MOA of this drug (C3)

Gen Ed SLOs:
Critical Thinking
Information Literacy

Unit XI- Antianxiety Agents- Discipline Knowledge

1. Discuss six types of anxiety disorders (C3)
2. Recognize the class of drugs used both as an antianxiety and a sedative (C3)
3. Name the four classes of drugs used to treat anxiety (C3)
4. Contrast a sedative and an hypnotic (C3)
5. Name the prototype benzodiazepine and the dental application of this drug (C3)
6. Explain the dental use of an antianxiety medication (C3)
7. Describe the MOA and adverse effects of benzodiazepines (C3)
8. Explains the potentially dangerous drug interaction with benzodiazepines (C3)
9. Describe the interaction between valproic acid and diazepam (C3)
10. List 5 CNS effects caused by alprazolam with an incidence >10 (C3)
11. List two cardiovascular effects with an incidence >10% (C3)
12. Discuss dental use of muscle relaxant drugs and a common adverse effect (C3)

Gen Ed SLOs:
Critical Thinking
Information Literacy

Unit XII- Anticonvulsants- Discipline Knowledge

1. Distinguish between a seizure and epilepsy. (C3)
2. Define epilepsy and the neurotransmitter connection (C3)
3. List two broad groups of epilepsies (C3)
4. Compare and contrast the different seizure types within each group (C3)
5. Discuss goals of drug therapy for seizure disorders (C3)
6. Identify the anticonvulsant drugs in current use (C3)
7. Describe use of phenytoin (Dilantin) (C3)
8. Describe adverse effects of phenytoin (C3)
9. Describe dental hygiene management of oral adverse effects of anticonvulsant drug therapy (C3)
10. List non-seizure uses of anticonvulsants (C3)

Gen Ed SOLs:
Critical Thinking
Information Literacy

Unit XIII- CNS Stimulants- Discipline Knowledge

1. Describe two behavioral disorders (C3)
2. Define ADHD and describe the symptoms (C3)
3. Explain the chemistry of the drugs used to treat these CNS disorders (C3)
4. Identify CNS stimulant drugs (generic and brand names) and describe their MOA (C3)
5. Identify a CNS non-stimulant drug (generic and brand name) and describe its MOA (C3)
6. State any adverse dental effects of CNS stimulant drugs(C3)
7. State the neurotransmitters thought to be associated with ADHD(C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit XIV- Endocrine Disorder Drugs- Discipline Knowledge

1. Identify the human endocrine glands (C3)
2. Describe the hormones secreted by the pituitary gland(C3)
3. Describe the conditions caused by hypo and hyperpituitarism(C3)
4. Describe the effects of Cushing's disease(C3)
5. Discuss treatment for hypo and hyperpituitarism(C3)
6. Name the thyroid hormones and their functions(C3)
7. Discuss thyroid hormone excess and insufficiency(C3)
8. Describe the autoimmune origin of Hashimoto's disease(C3)
9. Describe the autoimmune origin of Grave's disease(C3)
10. Discuss treatment for hypo and hyperthyroidism(C3)
11. Discuss dental management of patients with thyroid disease(C3)
12. Describe the female sex hormones(C3)
13. Discuss the oral tissue effects of estrogens
14. Describe dental management of patients using oral contraceptives(C3)
15. Describe the effects of androgens(C3)
16. Discuss the DEA drug schedule for androgens and describe the side effects of their use
17. Contrast Type 1 and type 2 diabetes mellitus(C3)
18. State the most common adverse effect of insulin(C3)
19. Distinguish biguanides from sulfonylureas(C3)
20. Name the prototype first generation sulfonylurea(C3)
21. Name two drugs in the biguanide family(C3)
22. Explain insulin resistance(C3)
23. Recognize dental considerations for patients with diabetes (PC1;PC2; HP6)

Gen Ed SOLs:

Critical Thinking

Information Literacy

Unit XV- Bisphosphonates

1. Define what is meant by the terms Osteoporosis and Osteopenia(C3)
2. Describe the two main categories of drugs used to treat osteoporosis differ in their MOA(C3)
3. State the goals of osteoporosis treatment (C3)
4. Describe the MOA of bisphosphonates(C3)
5. Describe the 4 main antiresorptive drugs used in osteoporosis therapy(C3)
6. State the adverse effects of Bisphosphonates (C3)
7. Describe three risk factors for Bisphosphonate Induced Osteonecrosis of the Jaw (BION) (C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit XVI- Drugs for Cardiovascular Disease (CVD) Discipline Knowledge

1. Describe 5 cardiovascular diseases. (C3: PC1;PC2))
2. Discuss the contraindications to dental treatment. (C3)
3. Describe heart failure and list the classes of drugs used to treat it. (C3)
4. Describe the historical use and MOA of the digitalis glycoside, digoxin. (C3)
5. Discuss the adverse effects of digoxin(C3)
6. Explain what an arrhythmia is describe the main goal of antiarrhythmic agents(C3)
7. Describe how antiarrhythmic agents affect nerve depolarization(C3)
8. Characterize angina pectoris(C3; PC1); PC2))
9. List 4 classes of drugs used to treat angina pectoris, stating the most common one. (C3)
10. Explain the MOA for the nitrate class of drugs(C3)
11. State the most common CVD and describe the “big four” antihypertensive groups
12. Describe the stages of hypertension(C3)
13. Describe the types of diuretic agents and how each works(C3)
14. Describe the MOA of angiotensin-converting enzyme inhibitors(C3)
15. Name commonly prescribed ACE inhibitors(C3)
16. Name the most common adverse effect of ACE inhibitors(C3)
17. Describe the MOA of calcium channel blockers and their pharmacologic effects(C3)
18. State the subgroup MOA of alpha and beta adrenergic blocking agents(C3)
19. Discuss which class of antihypertensive drugs are used to treat Raynaud’s disease(C3)
20. Discuss dental management of patients taking antihypertensive agents(PC1; PC2)
21. Describe hyperlipidemia and its effect on blood vessels(C3)
22. Describe the three main treatments for hyperlipidemia(C3)
23. Describe which anticoagulant is taken orally and which is administered by injection(C3)
24. Describe which 4 clotting factors are affected by warfarin- by which MOA(C3)
25. Discuss the MOA of each anticoagulant category. (C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit XVII- Drugs for Gastrointestinal Disorders- Discipline Knowledge

1. Describe the range of gastrointestinal diseases(C3)
2. Describe GERD(C3)
3. Discuss the treatment options for GERD(C3)
4. Describe the cause of ulcers(C3)
5. Describe the role of histamine in the gastric system(C3)
6. Discuss the MOA of H2 blocking agents(C3)
7. Discuss adverse reactions associated with H2 blocking agents(C3)
8. Describe drug interactions between H2 blockers and cimetidine(C3)
9. Describe the function of the gastric proton pump(C3)
10. Discuss the MOA of proton pump inhibitors(C3)
11. List adverse reactions linked to proton pump inhibitors(C3)
12. List the active ingredient(s) in over the counter antacids(C3)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit XVIII- Drugs to Treat HIV/AIDS- Discipline Knowledge

1. Name the causative factor in HIV infection(C3)
1. List the 3 main effects of HIV infection(C3)
2. Understand areas of the body directly damaged by HIV infection(C3)
3. Describe the difference between HIV infection and AIDS (PC1;HP6; C3)
4. Describe the HIV diagnostic process and treatment goals(C3)
5. List all body fluids that can carry HIV-infected cells(C3)
6. Recognize high-risk sexual practices (HP4)
7. Understand the goals of antiretroviral therapy(C3)
8. Know the 6 classes of antiretroviral therapy drugs(C3)
9. Know 4 common combination therapy drugs(C3)
10. Understand oral conditions caused by opportunistic infections (PC1)
11. List the categories of drug interactions with HIV medications

Gen Ed SLOs:

Critical Thinking

Information Literacy

Unit XIX- Emergency Drugs- Discipline Knowledge

1. Identify 3 general measures for emergencies(C3)
2. Recognize routine practice that help prepare for an emergency(C3)
3. Identify categories of emergencies(C3)
4. Identify the critical drugs normally found in a Level 1 emergency kit(C3)
5. Identify the equipment normally found in a Level 1 emergency kit (C3)

6. Understand the circumstances under which each drug is used (C3)
7. Describe potential emergency scenarios that can occur in a dental setting ((PC1;PC2)

Gen Ed SLOs:

Critical Thinking

Information Literacy

Integrative Learning Objectives:

The competent dental hygienist will:

1. Understand, assimilate and communicate basic pharmacological principles of drugs including their actions, interactions and effect on body systems.
Discipline Knowledge, Discipline Skill
2. Possess knowledge of drug groups most commonly found in dentistry along with conditions, diseases and drugs affecting dental treatment. The student will apply didactic knowledge in a clinical setting.
Discipline Knowledge, Discipline Skill
3. Utilize critical thinking and problem solving skills when evaluating individual patient drug therapy in order to provide appropriate treatment to a diverse patient population.
Values Ethics and Relationships
4. Obtain information and demonstrate resourcefulness relative to current pharmacotherapy from a variety of available sources utilizing and recognizing all information as evidence based.
Discipline Knowledge, Discipline Skill
5. Perform a complete medical assessment to develop strategies for improving patients' total quality of life with regard to drug dosage, interaction and utilization of local anesthesia.
Discipline Knowledge, Discipline Skills,
6. Develop an group oral presentation and written one to two page document that focuses on the pharmacodynamics and pharmacotherapy of drugs. The presentation will include, although not limited to, individual patient case studies, specific oral, systemic diseases and conditions the practicing dental hygienist may encounter.
Discipline Knowledge, Discipline Skills
7. Understand that skills taught in pharmacology are foundational and emphasis is placed on lifelong learning as drugs and their applications continually change.
Discipline Knowledge, Discipline Skills,