

**THE UNIVERSITY OF TEXAS AT TYLER SCHOOL
OF NURSING**

SYLLABUS

PHARMACOLOGICAL BASIS FOR NURSING

NURS 3307

SPRING 2017

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Office Hours: Posted on each instructor's office door
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The content of the syllabus/WEB site is subject to change at the discretion of the faculty leaders
according to current learning needs

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**Pharmacological Basis for Nursing
NURS 3307**

Semester Credit Hours: Three (3) hours didactic

Prerequisites: Admission to the nursing program

Course Description:

Pharmacotherapeutic aspects of nursing care are introduced and supported by evidenced-based findings to improve patient care. Emphasis is on principles of safe administration of medications and patient education for major drug classifications. The impact of technology, economic, and regulatory forces as well as collaboration with the health team are discussed. Ethical/legal and cultural considerations are explored across the life span.

Student Learning Outcomes for NURS 3307:

Upon successful completion of the course, students will have demonstrated the ability to:

1. Integrate knowledge from the biological sciences and principles of mathematics to pharmacological aspects of nursing practice.
2. Discuss the importance of accountability in safe medication administration.
3. Apply evidence-based findings regarding the safe administration of medications.
4. Integrate the use of technology and information systems to facilitate safe medication administration.
5. Demonstrate basic knowledge of healthcare policy, finance, and regulatory environments related to safe medication administration.
6. Discuss the importance of inter/intra-professional collaboration related to safe medication administration to diverse populations across the lifespan.
7. Integrate health promotion, maintenance, restoration, and disease prevention in educating patients regarding medications and complementary therapies to reduce risks and improve health outcomes.
8. Discuss the influence of historical, moral, ethical, and legal aspects of medication administration in delivering care to diverse populations.
9. Explain how knowledge, skills, and attitudes impact the delivery of safe, holistic, evidence-based patient-centered care when delivering medications to diverse populations across the healthcare continuum.

Approved by Undergraduate Studies 05/09/12 and Texas Board of Nurse Examiners

Required Textbooks and Materials:

ATI Nursing Education Online: Assessment Technologies Institute (ATI), LLC. Accessed from ATI website at: <http://www.atitesting.com/Home.aspx>

McCustion, L. E., Vuljoin-DiMaggion, K., Winton, M. B., & Yeager, J. J. (2018). *Pharmacology: A Patient-Centered Nursing Process Approach* (9th ed.). St. Louis, Missouri: Saunders. ISBN: 978-0-323-39916-6

School of Nursing, (2015). *Guide for Baccalaureate Students*. Summer 2015/Spring 2016. Accessed from UT Tyler website: <http://www.uttyler.edu/nursing/files/baccalaureate-student-guide.pdf>

Recommended Textbooks and Materials:

ANA Foundation of Nursing Packet (current versions purchased for Level I)

Nursing's Social Policy Statement. Washington, D.C.: American Nurses Association.

Nursing: Scope and Standards of Practice. Silver Spring, MD: American Nurses Association.

Code of Ethics for Nurses with Interpretive Statements. Silver Spring, MD: American Nurses Association.

McCustion, L. E., Vuljoin-DiMaggion, K., Winton, M. B., & Yeager, J. J. (2018). *Study Guide for Pharmacology: A Patient Centered Nursing Process Approach* (9th ed.). St. Louis Missouri: Saunders. ISBN: 978-0323399081

Grading Policy:

Completion of NURS 3307 is based on satisfactory attainment of all course criteria. Any student failing to meet the course objectives and expectations must repeat the course and may not progress to the next level.

The simple average of exam grades, before weighted calculation is performed, must be 75% or above to pass the course. Grades will not be rounded when calculating the average (74.5 – 74.9 is not rounded to 75). Students with an overall exam average of 75 or higher will have course grades calculated based on the weighted calculation of the exams and other required course work.

Students repeating this course may not use previously submitted assignments nor utilize the same patients for an assignment. Submitting the same or slightly modified assignments from previous semesters is considered self-plagiarism and is subject to academic discipline, including failing the assignment or the course.

The **Course Grade** consists of the following components:

| | |
|---|------|
| 4 Exams and 1 Comprehensive Final Exam (17% each) | 85% |
| 9 ATI Dosage Calculation modules with tests | 4% |
| ATI Case Study and Final | 1% |
| ATI Pharmacology Made Easy | 5% |
| IRat/TRat Quizzes | 2.5% |
| Group Project | 2.5% |

Letter Grades will be assigned according to the following scale:

| | |
|---|----------|
| A | 90-100 |
| B | 80-89 |
| C | 75-79 |
| D | 60-74 |
| F | Below 60 |

Grade Replacement Policy:

If you are repeating this course for a grade replacement, you must file an intent to receive a grade forgiveness with the registrar by the 12th day of class. Failure to file an intent to use grade forgiveness will result in the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness for only three undergraduate course repeats during his/her academic career: http://www.utt Tyler.edu/registrar/policies/repeatingcourses_gradeforgiveness.php

Paper/Assignment Re-Grading Policy:

Student assignments will not be re-graded. At the instructor's discretion, a draft may be written for review.

Examination and Examination Review Policy:

1. Attendance for an exam is mandatory.
2. If absence for an exam is necessary, the student is responsible for notifying the faculty prior to the exam with an acceptable reason.
3. Students will be allowed entry to the computer lab after an exam has started ONLY with faculty discretion.
4. All hats/caps must be removed during exam time. All personal items such as purses, books, backpacks, notebooks, and briefcases will be left in the front of the room during testing.
5. Silence will be enforced during the exam time. No student will be allowed to leave the room without the permission of the instructor.

6. Make-up exams will only be given at the discretion of the faculty member and may be in a different format than the original exam.
7. Students will not share calculators during exams. Students will not bring their own calculators, cell phones, or any communicating devices into an examination.
8. Exam reviews will be conducted at the discretion of the faculty. Exam review may be scheduled with the faculty during office hours and within 10 school days from the return of the exam grades.
9. Any student achieving an examination grade less than 75% must schedule an appointment with the faculty within 10 school days from the return of the exam grades.

Academic Integrity Policy:

1. Students are expected to assume full responsibility for the content and integrity of all academic work submitted as homework and examinations.
2. Students are advised to review the UT Tyler Academic Dishonesty Policy and Academic Integrity Policy in the current School of Nursing [BSN Student Guide](#) and Academic Integrity Policy for UT Tyler students at <http://www.uttyler.edu/judicial-affairs/> . These policies are fully endorsed and enforced by all faculty members within the School of Nursing.
3. Plagiarism, cheating, and collusion are unacceptable and if found violating any of these standards, the student will be disciplined accordingly (See BSN Student Guide for definitions).
4. The School of Nursing reserves the right to dismiss students from the program for any infraction of legal, moral, social, or safety nature, pursuant to the procedures detailed in the *Regent's Rules*.

Items to be avoided in all School-related Functions (including but not limited to):

Overly frayed, worn or soiled garments; costume look, transparent blouses, bare mid-drift shirts, tank tops, spaghetti straps, muscle shirts, overtly sexual styles, gang colors or logos, facial or body piercing, obscene slogans or pictures, bedroom wear, short-shorts, short skirts, or clothing that may be offensive to others.

If the dress code rules are broken and a change of clothes is not available, the student may be removed from the school-related function for the remainder of the day. **Appropriate disciplinary action will be taken for repeated violations of this code.**

General Information:

1. If lecture outlines are used, they will be posted in Canvas a minimum of two (2) working days prior to class and will be removed at midnight prior to class.
2. All submitted written materials (papers, assignments, exams, etc.) are the property of the School of Nursing. They will be maintained in an archived file in the School of Nursing.
3. The Baccalaureate Student Guide is available on the School of Nursing website at: <http://www.uttyler.edu/nursing/college/student-resources.php> .
4. All courses giving ATI exams will provide statement of dates of exams for that course.
5. Students must review and sign the Student Affirmation Form and the Social Networking Policy form and submit to Canvas Grade assignment the first week of class.
6. All students are required to use their student email accounts for all correspondence.

UT Tyler Honor Code:

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Students Rights and Responsibilities:

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: <http://www.uttyler.edu/wellness/rightsresponsibilities.php>

Campus Carry:

We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>

UT Tyler a Tobacco-Free University:

All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.

Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.

There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

Grade Replacement/Forgiveness and Census Date Policies:

Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. (For Spring, the Census Date is January 30). Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date (January 30) is the deadline for many forms and enrollment actions of which students need to be aware. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment
- Completing the process for tuition exemptions or waivers through Financial Aid

State-Mandated Course Drop Policy:

Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Student Accessibility and Resources:

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or

accommodations in a previous educational environment you are encouraged to contact the [Student Accessibility and Resources](#) (SAR) office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria apply to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu

Student Absence due to Religious Observance:

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities:

If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:

It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.

Student Standards of Academic Conduct:

Disciplinary proceedings may be initiated against any student who engages in scholastic dishonesty, including, but 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 examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

i. "Cheating" includes, but is not limited to:

- copying from another student's test paper;
- using, during a test, materials not authorized by the person giving the test;
- failure to comply with instructions given by the person administering the test;
- possession, during a test, of materials which are not authorized by the person giving the test, such as class notes or specifically designed "crib notes". The presence of textbooks constitutes a violation if they have been specifically prohibited by the person administering the test;
- using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program;
- collaborating with or seeking aid from another student during a test or other assignment without authority;
- discussing the contents of an examination with another student who will take the examination;
- divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructor has designated that the examination is not to be removed from the examination room or not to be returned or to be kept by the student;
- substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course-related assignment;

- paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program or information about an unadministered test, test key, home solution or computer program;
 - falsifying research data, laboratory reports, and/or other academic work offered for credit;
 - taking, keeping, misplacing, or damaging the property of The University of Texas at Tyler, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct; and
 - misrepresenting facts, including providing false grades or resumes, for the purpose of obtaining an academic or financial benefit or injuring another student academically or financially.
- ii. “Plagiarism” includes, but is not limited to, the appropriation, buying, receiving as a gift, or obtaining by any means another’s work and the submission of it as one’s own academic work offered for credit.
- iii. “Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.
- iv. All written work that is submitted will be subject to review by TurnItIn®, available on Canvas.

UT Tyler Resources for Students:

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu
- The Mathematics Learning Center, RBN 4021, this is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254)

Unit Student Learning Outcomes:

For all outcomes – Upon successful completion of the unit, the student will:

NURSING PHARMACOLOGY BASICS – Week 1

Safety and Quality:

1. Describe the “five plus five” rights of drug administration.
2. Analyze the safety risks with medication administration.
3. Discuss the culture of safety and include the Institute of Medicine’s “To Err is Human” and the American Nurses Association’s “Just Culture” impact on nursing.
4. Discuss safe disposal of medications.
5. Discuss high-alert drugs and strategies for safe administration.
6. Discuss the nurse’s rights when administering medications.
7. Discuss safety regulations for pregnancy.
8. Apply the nursing process to safe administration of medications.

Eye and Ear Disorders:

1. Describe the drug groups commonly used for disorders of the eye and ear.
2. Discuss the mechanism of action, routes, side effects and adverse reactions, and contraindications for selected drugs in each group.
3. Discuss the nursing process related to drugs used in treating disorders of the eye and ear.
4. Identify patient teaching needed for eye and ear drugs.

Dermatologic Disorders:

1. Differentiate between acne vulgaris, psoriasis, drug-induced dermatitis, and contact dermatitis.
2. Compare the topical antibacterial agents used to prevent and treat burn tissue infection.
3. Discuss the nursing process, including teaching, related to commonly used drugs for acne vulgaris, psoriasis, and burns.

Nursing Process and Patient-Centered Care:

1. Discuss Quality and Safety Education for Nurses (QSEN)
2. Differentiate the steps of the nursing process and their purpose in relation to drug therapy.
3. Develop patient-centered goals.
4. Discuss at least eight principles for health teaching related to drug therapy plans.
5. Describe at least six culturally sensitive health-teaching tips.
6. Analyze the nurse’s role related to drug therapy plans.

Required Pre-Class Assignments:

- Watch recorded lectures located on Canvas
- McCuiston Textbook: Chapter 9 – Safety and Quality
- McCuiston Textbook: Chapter 44 – Eye and Ear Disorders
- McCuiston Textbook: Chapter 45 – Dermatologic Disorders
- McCuiston Textbook: Chapter 8 – The Nursing Process and Patient-Centered Care

Recommended Reading:

- McCuiston Study Guide: Chapter 9 – Safety and Quality
- McCuiston Study Guide: Chapter 44 – Eye and Ear Disorders
- McCuiston Study Guide: Chapter 45 – Dermatologic Disorders
- McCuiston Study Guide: Chapter 8 – The Nursing Process and Patient-Centered Care

Evaluation:

- Exam 1

NURSING PHARMACOLOGY BASICS – Week 2

Pharmacokinetics, Pharmacodynamics, and Pharmacogenetics:

1. Differentiate the three phases of drug action.
2. Describe the four processes of pharmacokinetics.
3. Identify the four receptor families.
4. Describe the influence of protein binding on drug bioavailability.
5. Anticipate potential unique responses to drugs based on biologic variations.
6. Differentiate the four types of drug interactions.
7. Explain the three mechanisms involved with drug-drug interactions.
8. Describe the effects of drug-nutrient interactions.
9. Explain the meaning of drug-induced photosensitivity.
10. Describe the nursing implications of pharmacokinetics and pharmacodynamics.

Mediations and Calculations:

1. Discuss the metric and household systems of measurement.
2. Convert larger units to smaller units and smaller units to larger units within the metric and household systems.
3. Convert between the metric and household systems.
4. Interpret drug labels.
5. Calculate drug dosages using the dimensional analysis method.
6. Calculate drug dosages according to body weight.
7. Identify the information available on drug labels.
8. Calculate drug dosages when reconstitution is needed.
9. Discuss the difference between enteral and parenteral drugs when reconstituted.
10. Calculate drug dosages in units.
11. Describe the difference between continuous intravenous (IV) infusion and intermittent IV infusion.
12. Describe macrodrip and microdrip sets.
13. Discuss safety considerations during IV therapy.
14. Calculate drugs for direct IV injection.
15. Calculate IV flow rate in milliliters per hour.
16. Calculate IV flow rate in drops per minute.
17. Calculate the flow rate of heparin infusions.
18. Calculate dosages of critical care drugs.

Drug Names and Over-the-Counter Drugs:

1. Differentiate between chemical, generic, and brand names of drugs.
2. Define “over the counter” as it relates to drugs.
3. Explain the schedule categories of controlled substance.

Required Pre-Class Assignments:

- ATI Pharmacology Made Easy 3.0 – Introduction to Pharmacology
- McCuiston Textbook: Chapter 2 – Pharmacokinetics, Pharmacodynamics, and Pharmacogenetics
- McCuiston Textbook: Chapter 11 – Drug Calculations (Dimensional Analysis method only)
- Bring calculator to class for practice
- McCuiston Textbook: Chapter 1 Drug Development and Ethical Considerations – p. 9-13 only (Drug Names, Over-the-Counter Drugs, and Schedule Categories)

Recommended Optional Reading:

- McCuiston Study Guide: Chapter 2 – Pharmacokinetics, Pharmacodynamics, and Pharmacogenetics

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- McCuiston Study Guide: Chapter 11 – Drug Calculations

Evaluation:

- Exam 1
- Exam: ATI Case Studies and Finals
- Dosage calculation problems are on all major exams and the final exam.

GASTROINTESTINAL, NUTRITION, VITAMINS AND MINERALS – Week 3

Gastrointestinal Tract Disorders:

1. Compare the pharmacologic treatment of vomiting, diarrhea, and constipation.
2. Differentiate the actions and side effects of antiemetics, emetics, antidiarrheals, and laxatives.
3. Differentiate contraindications to the use of antiemetics, emetics, antidiarrheals, and laxatives.

Antiulcer Drugs:

1. Explain the predisposing factors for peptic ulcers.
2. Compare the actions of the seven groups of antiulcer drugs used in the treatment of peptic ulcer: tranquilizers, anticholinergics, antacids, histamine₂ blockers, proton pump inhibitors, pepsin inhibitors, and prostaglandin analogues.
3. Plan patient teaching for anticholinergic, antacid, and histamine₂ blocker drug groups.
4. Differentiate among the side effects of anticholinergics and systemic and non-systemic antacids.

Nutritional Support:

1. Explain the differences between enteral and parenteral nutrition.
2. Describe the routes for enteral feedings.
3. Discuss examples of enteral solutions and explain their differences.
4. Explain the advantages and differences of the methods used to deliver enteral nutrition.
5. Describe the complications that may occur with use of enteral and parenteral nutrition.
6. Discuss the nursing interventions for patients receiving enteral and parenteral nutrition.

Vitamin and Mineral Replacement:

1. Discuss the four justifications for the use of vitamin supplements.
2. Differentiate between water-soluble and fat-soluble vitamins.
3. Relate food sources and deficiency conditions associated with each vitamin.
4. Explain the need for iron and foods that are high in iron.
5. Explain the uses for iron, copper, zinc, chromium, and selenium.
6. Describe the nursing interventions, including patient teaching, related to vitamin and mineral uses.

Required Pre-Class Assignments:

- ATI Dosage Calculation 2.0: Dimensional Analysis (10 Modules with required tests after each module)
- McCuiston Textbook: Chapter 42 – Gastrointestinal Tract Disorders
- McCuiston Textbook: Chapter 43 – Antiulcer Drugs
- McCuiston Textbook: Chapter 14 – Nutritional Support
- McCuiston Textbook: Chapter 13 – Vitamin and Mineral Replacement
- ATI Pharmacology Made Easy 3.0 – Gastrointestinal System

Recommended Reading:

- McCuiston Study Guide: Chapter 42 – Gastrointestinal Tract Disorders
- McCuiston Study Guide: Chapter 43 – Antiulcer Drugs
- McCuiston Study Guide: Chapter 14 – Nutritional Support
- McCuiston Study Guide: Chapter 13 – Vitamin and Mineral Replacement

Evaluation:

- Exam 1

URINARY DISORDERS, and MEN'S HEALTH – Week 4

Urinary Disorders:

1. Compare the groups of drugs that are urinary antiseptics and antiinfectives.
2. Describe the side effects and adverse reactions to urinary antiseptics and antiinfectives.
3. Differentiate the uses for urinary analgesic, a urinary stimulant, and a urinary antispasmodic/antimuscarinic/anticholinergic.
4. Apply the nursing process, including teaching, to nursing care of the patient receiving urinary antiseptic/antiinfective drugs.

Men's Health and Reproductive Disorders:

1. Describe the effects of gonadal hormone supplementation of the hypothalamic anterior pituitary feedback loop.
2. Describe the role of testosterone therapy in managing developmental problems related to primary and secondary male sex characteristics and spermatogenesis.
3. Differentiate common conditions for which androgen therapy and antiandrogen therapy are indicated.
4. Describe those for whom androgen therapy is particularly risky.
5. Assess patients for therapeutic and adverse effects of androgen therapy.
6. Categorize commonly prescribed drugs that can impair male sexual function.
7. Explain the nursing process, including teaching, related to drugs used to treat male reproductive disorders.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 48 – Urinary Disorders
- McCuiston Textbook: Chapter 53 – Men's Health and Reproductive Disorders
- Watch recorded lectures located on Canvas
- ATI Pharmacology Made Easy – Reproductive and Genitourinary System

Recommended Reading:

- McCuiston Study Guide: Chapter 48 – Urinary Disorders
- McCuiston Study Guide: Chapter 53 – Men's Health and Reproductive Disorders

Evaluation:

- Exam 2

RESPIRATORY DISORDERS – Week 5

Adrenergic Agonists and Antagonists:

1. Explain major responses to stimulation of adrenergic receptors.
2. Differentiate between selective and nonselective adrenergic agonists.
3. Contrast the uses of alpha and beta antagonists.
4. Compare general side effects of adrenergic agonists and adrenergic antagonists.
5. Describe nursing interventions, including patient teaching, associated with adrenergic agonists and adrenergic antagonists.
6. Apply the nursing process for the patient taking beta-adrenergic antagonists.
7. Compare the indications of adrenergic agonists and adrenergic antagonists.

Cholinergic Agonists and Antagonists:

1. Compare the responses of cholinergic agonist and antagonist drugs.
2. Differentiate between direct-acting and indirect-acting cholinergic agonists.
3. Contrast the major side effects of cholinergic agonists and antagonists.
4. Differentiate the uses of cholinergic agonists and antagonists.
5. Apply the nursing process, including patient teaching, associated with cholinergic agonists and antagonists.

Upper Respiratory Disorders:

1. Compare antihistamine, decongestant, antitussive, and expectorant drug groups.
2. Differentiate between rhinitis, sinusitis, and pharyngitis.
3. Describe the side effects of nasal decongestants and how they can be avoided.
4. Apply the nursing process for drugs used to treat the common cold.

Lower Respiratory Disorders:

1. Compare chronic obstructive pulmonary disease (COPD) and restrictive lung disease.
2. Differentiate the drug groups used to treat COPD and asthma and the desired effect of each.
3. Compare the side effects of beta₂-adrenergic agonists and methylxanthines.
4. Describe the therapeutic serum or plasma theophylline level and the toxic level.
5. Contrast the therapeutic effects of leukotriene antagonists, glucocorticoids, cromolyn, antihistamines, and mucolytics for COPD and asthma.
6. Apply the nursing process for the patient taking drugs commonly used for COPD, including asthma, and for restrictive lung disease.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 15 – Adrenergic Agonists and Antagonists
- McCuiston Textbook: Chapter 16 – Cholinergic Agonists and Antagonists
- McCuiston Textbook: Chapter 35 – Upper Respiratory Disorders
- McCuiston Textbook: Chapter 36 – Lower Respiratory Disorders
- ATI Pharmacology Made Easy – Respiratory System

Recommended Reading:

- McCuiston Study Guide: Chapter 15 – Adrenergic Agonists and Antagonists
- McCuiston Study Guide: Chapter 16 – Cholinergic Agonists and Antagonists
- McCuiston Study Guide: Chapter 35 – Upper Respiratory Disorders
- McCuiston Study Guide: Chapter 36 – Lower Respiratory Disorders

Evaluation:

- Exam 2

ENDOCRINE DISORDERS – Week 6

Pituitary, Thyroid, Parathyroid, and Adrenal Disorders:

1. Compare the hormones secreted from the pituitary, thyroid, parathyroid, and adrenal glands.
2. Differentiate among the hormones from the adenohypophysis and the neurohypophysis.
3. Differentiate the actions and uses of the hormones from the pituitary, thyroid, parathyroid, and adrenal glands: thyroxine (T₄), triiodothyronine (T₃), calcitonin, parathyroid hormone (PTH), mineralocorticoids, and glucocorticoids.
4. Differentiate the side effects of thyroxine (T₄) and triiodothyronine (T₃).
5. Apply the nursing process, including patient teaching for drug therapy related to hormonal replacement or hormonal inhibition for the pituitary, thyroid, parathyroid, and adrenal glands.

Antidiabetics:

1. Compare type 1 and type 2 diabetes mellitus.
2. Describe the symptoms of diabetes mellitus.
3. Differentiate symptoms of hypoglycemic reaction and hyperglycemia.
4. Compare onset, peak, and duration of rapid-acting, short-acting, intermediate-acting, and long-acting insulins.
5. Compare the action of oral antidiabetic drugs and their side effects.
6. Differentiate between the actions of insulin, oral antidiabetic agents, and glucagon.
7. Apply the nursing process to the patient taking insulin and oral antidiabetic agents.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 46 – Pituitary, Thyroid, Parathyroid, and Adrenal Disorders
- McCuiston Textbook: Chapter 47 – Antidiabetics
- ATI Pharmacology Made Easy – Endocrine System

Recommended Reading:

- McCuiston Study Guide: Chapter 46 – Pituitary, Thyroid, Parathyroid, and Adrenal Disorders
- McCuiston Study Guide: Chapter 47 – Antidiabetics.

Evaluation:

- Exam 2

FLUIDS, PAIN, INFLAMMATION, NEUROMUSCULAR DISORDERS – Week 7

Fluid Volume and Electrolytes:

1. Describe osmolality and tonicity.
2. Describe the classifications of intravenous fluids.
3. Discuss the functions of major electrolytes.
4. Discuss the importance of blood and blood products.
5. Apply the nursing process to fluid volume deficit and fluid volume excess.
6. Describe major signs and symptoms of deficiency and excess of potassium, sodium, calcium, magnesium, chloride, and phosphorus.
7. Explain the methods used to correct potassium, calcium, and magnesium excess.
8. Apply the nursing process to the care of the patient experiencing electrolyte imbalances.

Antiinflammatories:

1. Compare the action of various nonsteroidal anti-inflammatory drugs (NSAIDs).
2. Explain the use of disease-modifying antirheumatic drugs (DMARDs).
3. Differentiate between the side effects and adverse reactions of NSAIDs and DMARDs.
4. Correlate the nursing processes associated with NSAIDs and corticosteroids.
5. Apply the nursing process to the patient taking DMARDs.
6. Compare the action of various antigout medications.

Analgesics:

1. Differentiate between acute and chronic pain.
2. Compare indications for nonopioid and opioid analgesics.
3. Contrast the side effects of aspirin and opioids.
4. Explain the methadone treatment program.
5. Discuss nursing interventions and patient teaching related to nonopioid and opioid analgesics.
6. Formulate a nursing process for a patient with morphine patient-controlled analgesia.

Drugs for Neuromuscular Disorders and Muscle Spasms:

1. Discuss the drug group used to treat myasthenia gravis.
2. Discuss the drug group used to treat multiple sclerosis.
3. Differentiate between muscle relaxants used for spasticity and those used for muscle spasms.
4. Apply the nursing process to drugs used to treat myasthenia gravis and muscle spasms.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 12 – Fluid Volume and Electrolytes
- McCuiston Textbook: Chapter 24 – Antiinflammatories
- McCuiston Textbook: Chapter 25 – Analgesics
- McCuiston Textbook: Chapter 21 – Drugs for Neuromuscular Disorders and Muscle Spasms
- ATI Pharmacology Made Easy – Pain and Inflammation
- ATI Pharmacology Made Easy – Musculoskeletal System

Recommended Reading:

- McCuiston Study Guide: Chapter 12 – Fluid Volume and Electrolytes
- McCuiston Study Guide: Chapter 24 – Antiinflammatories
- McCuiston Study Guide: Chapter 25 – Analgesics
- McCuiston Study Guide: Chapter 21 – Drugs for Neuromuscular Disorders and Muscle Spasms

Evaluation:

- Exam 3

ANTIINFECTIVES – Week 8

Antibacterials:

1. Explain the mechanisms of action of antibacterial drugs.
2. Differentiate between bacteria that are naturally resistant and those that have acquired resistance to an antibiotic.
3. Summarize the three general adverse effects associated with antibacterial drugs.
4. Differentiate between narrow-spectrum and broad-spectrum antibiotics.
5. Apply the nursing process for patients receiving penicillins and cephalosporins.
6. Apply the nursing process for tetracyclines, including patient teaching.
7. Summarize the nurse's role in detecting ototoxicity and nephrotoxicity associated with the administration of aminoglycosides.
8. Explain the importance for ordering peak and trough concentration levels for aminoglycosides.
9. Develop a teaching plan for a patient prescribed a fluoroquinolone.
10. Explain the pharmacokinetics of the sulfonamides.
11. Develop a teaching plan for a patient prescribed metronidazole.

Antituberculars, Antifungals, and Antivirals:

1. Compare first-line and second-line antitubercular drugs and give examples of each.
2. Differentiate between the groups of antifungal drugs.
3. Differentiate the adverse reactions of antitubercular, antifungal, and antiviral drugs.
4. Apply the nursing process for patients taking antitubercular, antifungal, and antiviral drugs.

Antimalarials, Anthelmintics, and Peptides:

1. Explain the action of antimalarial drugs.
2. Correlate transmission with prevention in people with malaria.
3. Identify side effects and adverse reactions of antimalarial drugs.
4. Apply the nursing process for people receiving antimalarial drugs.
5. Explain the action of anthelmintic drugs.
6. Identify adverse reactions of anthelmintic drugs.
7. Apply the nursing process for people receiving anthelmintic drugs.
8. Explain the use of peptides as an antibacterial.
9. Summarize the side effects and adverse reactions possible with peptides.
10. Apply the nursing process for people taking antibacterials.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 26 – Antibacterials
- McCuiston Textbook: Chapter 27 – Antituberculars, Antifungals, and Antivirals
- McCuiston Textbook: Chapter 28 – Antimalarials, Anthelmintics, and Peptides
- ATI Pharmacology Made Easy - Infection

Recommended Reading:

- McCuiston Study Guide: Chapter 26 – Antibacterials
- McCuiston Study Guide: Chapter 27 – Antituberculars, Antifungals, and Antivirals
- McCuiston Study Guide: Chapter 28 – Antimalarials, Anthelmintics, and Peptides

Evaluation:

- Exam 3

STIMULANTS AND DEPRESSANTS – Week 10

Stimulants:

1. Explain the effects of stimulants on the central nervous system (CNS).
2. Compare attention-deficit/hyperactivity disorder (ADHD) and narcolepsy.
3. Differentiate the action of drugs used for ADHD and narcolepsy.
4. Contrast the common side effects of amphetamines, anorexians, analeptics, and caffeine.
5. Apply the nursing process for the patient taking CNS stimulants.

Depressants:

1. Differentiate the types and stages of sleep.
2. Explain several nonpharmacologic ways to induce sleep.
3. Differentiate among these adverse effects: hangover, dependence, tolerance, withdrawal symptoms, and rapid eye movement (REM) rebound.
4. Discuss the use of benzodiazepines.
5. Apply the nursing process for the patient taking benzodiazepines for hypnotic use.
6. Differentiate nursing interventions related to barbiturates, benzodiazepines, nonbenzodiazepines, and melatonin agonists.
7. Compare the stages of anesthesia.
8. Differentiate general and local anesthetics and their major side effects.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 17 – Stimulants
- McCuiston Textbook: Chapter 18 - Depressants

Recommended Reading:

- McCuiston Study Guide Chapter 17 – Stimulants
- McCuiston Study Guide Chapter 18 - Depressants

Evaluation:

- Exam 3

CARDIOVASCULAR DRUGS (PART I) – Week 12

Cardiac Glycosides, Antianginals, and Antidysrhythmics:

1. Differentiate the actions of cardiac glycosides, antianginal drugs, and antidysrhythmic drugs.
2. Describe the signs and symptoms of digitalis toxicity.
3. Compare the side effects and adverse reactions of nitrates, beta blockers, calcium channel blockers, quinidine, and procainamide.
4. Apply the nursing process, including patient teaching, related to cardiac glycosides, antianginal drugs, and antidysrhythmic drugs.

Diuretics:

1. Compare the action and uses of thiazide, loop, and potassium-sparing diuretics.
2. Differentiate side effects and adverse reactions related to thiazide, loop, and potassium-sparing diuretics.
3. Explain the nursing interventions, including patient teaching, related to thiazide, loop, and potassium-sparing diuretics.
4. Apply the nursing process for the patient taking thiazide, loop, and potassium-sparing diuretics.

Antihypertensives:

1. Differentiate the pharmacologic action of the various categories of antihypertensive drugs.
2. Compare the side effects and adverse reactions to sympatholytics, direct-acting vasodilators, and angiotensin antagonists.
3. Apply the nursing process related to antihypertensives including nursing interventions and teaching.
4. Describe the blood pressure guidelines for determining hypertension.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 37 – Cardiac Glycosides, Antianginals, and Antidysrhythmics
- McCuiston Textbook: Chapter 38 – Diuretics
- McCuiston Textbook: Chapter 39 – Antihypertensives
- ATI Pharmacology Made Easy – Cardiovascular System

Recommended Reading:

- McCuiston Study Guide: Chapter 37 – Cardiac Glycosides, Antianginals, and Antidysrhythmics
- McCuiston Study Guide: Chapter 38 – Diuretics
- McCuiston Study Guide: Chapter 39 – Antihypertensives

Evaluation:

- Exam 4

CARDIOVASCULAR DRUGS (PART II) – Week 13

Anticoagulants, Antiplatelets, and Thrombolytics:

1. Compare the actions of anticoagulants, antiplatelets, and thrombolytics.
2. Differentiate the side effects and adverse reactions of anticoagulants, antiplatelets, and thrombolytics.
3. Apply the nursing process, including patient teaching, for anticoagulants and thrombolytics.

Antihyperlipidemics and Drugs to Improve Peripheral Blood Flow:

1. Describe the action of the two main drug groups: antihyperlipidemics and drugs that improve peripheral blood flow.
2. Compare the side effects and adverse reactions of antihyperlipidemics.
3. Differentiate the side effects and adverse reactions of peripheral vasodilators and blood viscosity reducer agents.
4. Apply the nursing process, including patient teaching, for antihyperlipidemics and blood viscosity reducer agents.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 40 – Anticoagulants, Antiplatelets, and Thrombolytics
- McCuiston Textbook: Chapter 41 – Antihyperlipidemics and Drugs to Improve Peripheral Blood Flow
- ATI Pharmacology Made Easy – Hematologic System

Recommended Reading:

- McCuiston Study Guide: Chapter 40 – Anticoagulants, Antiplatelets, and Thrombolytics
- McCuiston Study Guide: Chapter 41 – Antihyperlipidemics and Drugs to Improve Peripheral Blood Flow

Evaluation:

- Exam 4

MENTAL AND BEHAVIORAL DRUGS – Week 14

Antipsychotics and Anxiolytics:

1. Differentiate between antipsychotic and anxiolytic drug groups.
2. Contrast the action, uses, side effects, and adverse effects of traditional typical and atypical antipsychotics.
3. Plan nursing interventions, including patient teaching, for the patient taking antipsychotics and anxiolytics.
4. Apply the nursing process to the patient taking an atypical antipsychotic, a typical antipsychotic, and an anxiolytic.

Antidepressants and Mood Stabilizers:

1. Contrast the various categories of different antidepressants.
2. Describe the side effects and adverse reactions of antidepressants.
3. Plan nursing interventions, including patient teaching, for antidepressants (tricyclic antidepressants (TCAs), monoamine oxidase inhibitors (MAOIs), selective serotonin reuptake inhibitors (SSRIs), serotonin norepinephrine reuptake inhibitors (SNRIs), and atypical antidepressants).
4. Explain the uses of lithium and its serum/plasma therapeutic ranges, side effects and adverse reactions, and nursing interventions.
5. Apply the nursing process to the patient taking lithium, carbamazepine, and valproic acid.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 22 – Antipsychotics and Anxiolytics
- McCuiston Textbook: Chapter 23 – Antidepressants and Mood Stabilizers
- ATI Pharmacology Made Easy – Neurological System (Part 2)

Recommended Reading:

- McCuiston Study Guide: Chapter 22 – Antipsychotics and Anxiolytics
- McCuiston Study Guide: Chapter 23 – Antidepressants and Mood Stabilizers

Evaluation:

- Exam 4

SEIZURE DISORDERS, PARKINSON'S DISEASE, AND ALZHEIMER DISEASE – Week 15

Antiseizure Drugs:

1. Differentiate between the types of seizures.
2. Summarize the pharmacokinetics, side effects and adverse reactions, therapeutic plasma level, contraindications for use, and drug interactions of phenytoin.
3. Compare the actions of hydantoin, long-acting barbiturates, succinimides, benzodiazepines, iminostilbenes, and valproate.
4. Apply the nursing process to Antiseizure drugs, including patient teaching.

Drugs for Parkinson's Disease and Alzheimer Disease:

1. Contrast the actions of anticholinergics, dopaminergics, dopamine agonists, monoamine oxidase B (MAO-B) inhibitors, and catechol-O-methyltransferase (COMT) inhibitors in the treatment of Parkinson's disease.
2. Compare the side effects of various antiparkinson drugs.
3. Apply the nursing process to anticholinergics, dopaminergics, and acetylcholinesterase inhibitors.
4. Compare the side effects/adverse effects of acetylcholinesterase inhibitors used to treat Alzheimer disease.

Required Pre-Class Assignments:

- McCuiston Textbook: Chapter 19 – Anticonvulsants
- McCuiston Textbook: Chapter 20 – Drugs for Parkinson's Disease and Alzheimer Disease

Recommended Reading:

- McCuiston Study Guide: Chapter 22 – Anticonvulsants
- McCuiston Textbook: Chapter 20 – Drugs for Parkinson's Disease and Alzheimer Disease

Evaluation:

- Exam 5