Academic Unit: School of Nursing
Course Prefix: NUR 331
Course Title: Applied Pharmacology and Pathophysiology
Term Offered: Summer
Credit Hours/Clock Hours: 4 credits/60 clock Hours
Course Prerequisite: Admission to the accelerated nursing program.
Co-requisites:
Mode of Instruction: In-person Lecture
Instructor Name:
Instructor Contact Information:
Instructor Availability:

Catalog Description
Introduces students to classifications, actions, and uses of pharmacotherapeutic agents. Includes overview of administration skills, safety, and legal considerations. Emphasis is on the patient and nursing implications and related pathophysiology.

Course Purpose
In this required course, the accelerated nursing student will learn concepts of pharmacotherapeutics and pathophysiology, establishing a knowledge base in relation to the professional, legal, and interdisciplinary aspects of drug administration within the context of comprehensive nursing interventions and application to appropriate pathophysiological processes. This course provides foundational knowledge of the principles of pharmacodynamics and pharmacokinetics while placing emphasis on understanding the action of the medication, safe administration practices, competence in drug calculations, and restoration of wellness in diverse populations across the lifespan. At the completion of this course, the student will understand major drug classifications using drug prototypes, understand the five concepts of human functioning emphasizing Pathophysiological structured steps of the nursing process, and identify proper application of pharmacological knowledge to common pathophysiological processes.
Student Learning Outcomes:

Upon completion of this course, the successful student:

Clinical Practice and Prevention
- Calculate the correct dosage and amount for all drug orders.
- Identify patient-related factors, including age, that affect drug activity and patient response. Differentiate drug families and drug categories, including actions, common side effects & nursing implications, and use in treating specific disorders.
- Apply the principles of safe medication administration.

Communication
- Summarize aspects of professional communication related to safe medication administration

Critical reasoning
- Analyze the physiological and pathophysiological processes and interactions between the major drug classifications and patient disease process.
- Summarize nursing implications in drug therapy by using the nursing process as a framework.

Leadership
- Describe professional nursing in ensuring safe and appropriate patient-centered care

Professionalism and Professional Values
- Describe the legal and ethical implications for professional nurses for the safe administration of pharmaceutical agents.

Global Health
- Recognize variations in drug responses that occur with individuals of various ages, gender, and race.
- Incorporate developmental, gender, genetic, economic and other issues that affect drug therapy.
- Discuss proper disposal of the portion of medications that will not be administered.

Course Structure/Approach
This course is learner centered. The Arizona Board of Regents (ABOR) is committed to providing quality education and programs at Arizona's public universities. This commitment includes placing the student and the learning process at the center of education. The NAU - ABOR link for the definition of Learner Centered Education is as follows: http://www.azregents.edu/specialprogramsandinitiatives/default.aspx

NUR 331 will utilize a variety of approaches to meet the course objectives. These instructional methods may include but are not limited to the following: lecture, audiovisual material, guided discussion, group work, demonstration and return demonstration, laboratory experiences, role playing, simulations, self-evaluation, computer programs, decision making exercises, written tests and quizzes, and written assignments. While the faculty will provide guidance and consultation, the student is responsible for identification of learning needs, self-direction, seeking consultation and demonstration of course and clinical objectives.
Textbook and Required Materials


**Optional**

- Any anatomy and physiology textbook (copyright 2005 or later)
- Any human pathophysiology textbook (copyright 2005 or later)
- A current medical dictionary that was purchased for NUR 330 *Nursing as a Discipline and Profession*.

Assessment of Student Learning:
In order to pass NUR 331, the student must achieve the following:
1. An overall course grade of 78% or higher.
2. A score of 84% or higher on the final calculation exam.

Assessment of Student Learning Outcomes (NUR 331)
- Quizzes, assignments, participation in lectures
- Assessment occurs at regular intervals during the 10 weeks of Summer Semester

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Score</th>
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<tbody>
<tr>
<td>7-8 in class quizzes (20 points each)</td>
<td>140- 160</td>
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<tr>
<td>7-8 Module open book assignments (10 points each)</td>
<td>70- 80</td>
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<tr>
<td>4 Calculation quizzes (20 points each)</td>
<td>80</td>
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<tr>
<td>Seminars (3 points each)</td>
<td>27</td>
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Grading Scale

A = 93 +
B = 84 - 92
C = 78 - 83 (A grade of "C" or above is a passing grade in this course).
F = <78

Must receive grade of C or better to pass. Must complete all math tests and must have 84% or better on the last math test. Final grades will be rounded. 0.4 and below will be rounded down, 0.5 and above will be rounded up.
COURSE POLICIES:
1. Please see the classroom management statement in this syllabus.
2. Lecture materials, articles, and other information may be found on Blackboard Learn or distributed in class.
3. No children or visitors are allowed in class/lab at any time unless approved by the instructor.
4. It is the student’s responsibility to obtain handouts, lecture notes, and information or announcements in the event a class is missed.
5. Audio or video recording of lectures is not permitted in this course due to patient examples being utilized.
6. Students are expected to have read the assigned reading and come to class prepared to discuss medications during the questions, math examples and anatomy and physiology reviews (this means being prepared to ask relevant questions concerning content as well).
7. Students are expected to come to class on time with required preparation – including to actively participate for the seminar points.
8. All seminar assignments are due by 2359 pm on Fridays. Late assignments will not be accepted.
9. No extra credit assignments will be given for this course.
10. Rounding will only be done on the final overall grade. Final grades > 0.5 (must be exactly 0.5 or higher) will be rounded up to the next whole number; final grades < 0.5 will be rounded down to the next whole number.
11. The instructor may add to or change the syllabus and course schedule with notification to students.

Quizzes and assignments
1. All quiz dates and times are printed on the course schedule and are subject to change by the course instructor.
2. Students will be allotted ~one minute to complete each in class quiz question; may be adjusted according to instructor’s discretion.
3. The online open book assignments will be available by Tuesday 1600 through Friday 2359.
4. The online calculation quizzes will be available by Tuesday 1600 through Friday 2359.
5. The final calculation quiz will be held in class.
6. No examination or test material is to be copied from the classroom learning system environment.
7. Any student determined by faculty to have cheated on the exam will receive a score of zero for that exam and may be subject to failure from the course.
8. There are no make-up quizzes.
9. Quiz answers will be available for review after the due date. Challenges about quiz items following this review should be submitted to faculty via email along with resources from the textbook (including page number).
10. Professional communication is expected through email and in person. Written communication perceived as unprofessional will be handled according to policy. Any quiz adjustments will be made at the discretion of the faculty only for the student that provides appropriate referencing.
Important Notice: There is strict adherence to every part of the NAU Student Handbook and the NAU Nursing Student Handbook. You are also responsible for review and adherence to the professional standards and rules of the Arizona Nurse Practice Act and Board of Nursing, and the American Nurses’ Association Code of Ethics. For full handbook descriptions, visit these websites:

Attendance Policy
Under NAU Policy, students are expected to attend every session of class in which they are enrolled. Attendance is considered to be essential to the learning process, as active participation and engagement facilitate learning. As you will be responsible for the content in the lectures, it is to your advantage to attend classes.

Withdrawal Policy
If a student is unable to attend the course or must drop the course for any reason, it will be the responsibility of the student to withdraw from the course before the withdrawal deadline (see current NAU Schedule of Classes for deadline).

Plagiarism
All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty and plagiarism are prohibited and subject to disciplinary action.

University Policies:
Review the following policies available on the Northern Arizona University Policy Statement website (http://nau.edu/OCLDAAA_Forms/UCC/SyllabusPolicyStmts2-2014/):

1. Safe Environment Policy
2. Students with Disabilities Policy
3. Academic Contact Hour Policy
4. Academic Integrity Policy (also see http://home.nau.edu/images/userimages/awf/9476/ACADEMIC%20DISHONESTY.pdf)
5. Research Integrity Policy
6. Sensitive Course Materials Policy
7. Classroom Disruption Policy (also see http://nau.edu/uploadedFiles/Administrative/EMSA_Sites/Folder_Templates/For ms/Classroom_Disruption_Policy.pdf)

The Impaired Student policy will be strictly adhered to; there will be no tolerance in for any evidence of substance abuse.
CLASSROOM MANAGEMENT STATEMENT
Membership in the academic community places a special obligation on all members to preserve an atmosphere conducive to a safe and positive learning environment. Part of that obligation implies the responsibility of each member of the NAU community to maintain an environment in which the behavior of any individual is not disruptive.

It is the responsibility of each student to behave in a manner that does not interrupt or disrupt the delivery of education by faculty members or receipt of education by students, within or outside the classroom. The determination of whether such interruption or disruption has occurred has to be made by the faculty member at the time the behavior occurs. It becomes the responsibility of the individual faculty member to maintain and enforce the standards of behavior acceptable to preserving an atmosphere for teaching and learning in accordance with University regulations and the course syllabus.

At a minimum, students will be warned if their behavior is, as evaluated by the faculty member, disruptive. Serious disruptions, as determined by the faculty member, may result in immediate removal of the student from the instructional environment. Significant and/or continued violations may result in an administrative withdrawal from the class. Additional responses by the faculty member to disruptive behavior may include a range of actions from discussion of the disruptive behavior with the student to referral to the appropriate academic unit and/or the Office of Student Life for administrative review, with a view to implement corrective action up to and including suspension or expulsion.

Confidentiality Statement
Students must maintain client confidentiality at all times. No discussion regarding clients is acceptable outside the classroom or clinical setting. In clinical conferences and in the classroom references to actual client experiences, do not refer to the patient by name. See the current NAU School of Nursing Student Handbook for additional information.

Emergency Textbook Loan Program: To help students acquire the materials they need to be successful in class.
NAU has partnered with Follett to create the Emergency Textbook Loan program. The program is administered by the LEADS Center. The program assists students with unmet financial need in obtaining required textbook(s) and other materials for courses. Students must apply and meet eligibility criteria before textbooks are purchased on their behalf. Textbooks must be returned at the end of the term in which the textbooks were loaned. More information can be found online: http://nau.edu/LEADS-Center/Textbook-Loan-Program/

The Student Learning Centers, TRIO Outreach programs, and Educational Support Services main office are back in the University Union, second floor. Specific room locations are below:

Student Learning Centers
• Tutoring-room 201
• Transfer and Commuter Connections office/lounge-room 247
• Peer Jacks lounge and staff-room 201

TRIO Outreach programs
• Educational Talent Search (ETS)/Educational Opportunity Center (EOC)/Nizhoni-room 241
• Upward Bound and Upward Bound Math Science-room 201
• Educational Support Service- Main office – room 260
## Course Schedule
(subject to change per course instructor)

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<thead>
<tr>
<th>Module</th>
<th>Date</th>
<th>Readings</th>
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<tbody>
<tr>
<td><strong>Week 1</strong></td>
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<tr>
<td>Getting Started/Syllabus</td>
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<td><em>Lehne 9th ed, Craig 5th ed</em></td>
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<td>Nursing perspectives, OTC’s, and Herbals</td>
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<tr>
<td>Calculations</td>
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<td><em>Craig Chapters 2 &amp;3</em></td>
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<tr>
<td>Seminar 6/06 0900-1100</td>
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<td><em>Lehne Chapters 1-11, 107</em></td>
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<tr>
<td>Seminar Open Book Quiz due by 6/10 at 2359 (cancelled)</td>
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<tr>
<td><strong>Week 2</strong></td>
<td>6/13 1400-1600</td>
<td><em>Lehne Chapters 17-19, 42-53</em></td>
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<tr>
<td>Cardiovascular</td>
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<tr>
<td>Seminar Open Book Quiz due by 6/17 at 2359</td>
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<td>Calculation Quiz 1 due by 6/17 at 2359</td>
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<td><strong>Week 3</strong></td>
<td>Seminar 6/20 1400-1600</td>
<td><em>Lehne Chapters 70, 76-77</em></td>
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<td>Respiratory</td>
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<td>Seminar Open Book Quiz due by 6/24 at 2359</td>
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<tr>
<td><strong>Week 4</strong></td>
<td>Seminar 6/27 1400-1600</td>
<td><em>Lehne Chapters 41, 57-60, review 42</em></td>
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<tr>
<td>Endocrine</td>
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<td>Seminar Open Book Quiz due by 7/01 at 2359</td>
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<tr>
<td><strong>Week 5</strong></td>
<td>No Seminar on 07/04 - Happy Independence Day!</td>
<td><em>Craig Chapter 5 Lehne 67-68</em></td>
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<tr>
<td>Vaccinations</td>
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<tr>
<td>Read Vaccination Chapters in Lehne and posted content on BBlearn</td>
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<tr>
<td>No Seminar Open Book Quiz this week</td>
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<td>Calculation quiz 2 due by 07/08 at 2359</td>
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<td>Week 6</td>
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<tr>
<td>Neuro and Psych</td>
<td>Seminar 07/11 1400-1600</td>
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<td>Seminar Open Book Quiz due by 7/15 at 2359</td>
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<td>Calculation Quiz #3 due by 07/22 at 2359</td>
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<td>Week 7</td>
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<td>Fluid Balance, Electrolyte, and GI</td>
<td>Seminar 07/18 1400-1600</td>
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<td>Seminar Open Book Quiz due by 7/22 2359</td>
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<td>Week 8</td>
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<tr>
<td>Oncology</td>
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<td>Read Oncology Chapters in Lehne and posted content on BBlearn</td>
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<td>Seminar Open Book Quiz due by 07/29 at 2359</td>
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<td>Week 9</td>
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<tr>
<td>Pain and anti-inflammatory</td>
<td>Seminar 08/01 1400-1600</td>
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<td>Seminar Open Book Quiz due by 08/05 at 2359</td>
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<td>Week 10</td>
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<tr>
<td>Anti-infectives</td>
<td>Seminar 08/08 1400-1600</td>
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<td>No Seminar Open Book Quiz this week</td>
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<tr>
<td>Week 10</td>
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<tr>
<td>Must have 84% to pass course (only 2 attempts) allowed</td>
<td>Calculation Quiz 4 (may be proctored exam in the computer lab – time TBA)</td>
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