NURS 5322: Advanced Pharmacological Concepts

Credits: Three semester hours (3:0)

Co-requisite: NURS 5326

Faculty: Patrick Ayarzagoitia, DNP, APRN, FNP-BC, Assistant Professor
Office: 361-825-4234/Cell Phone: 361-425-1824
Office Hours: By appointment only; please request via BB course email.

Course Description: Study of pharmacotherapeutics across the life span with emphasis on clinical decision making. Laws governing nurse practitioners’ prescriptive privileges are included when appropriate. Discussion is based on current literature, research findings, and case studies.

Course Objectives (with examples of learning outcomes)

1. Evaluate pharmacodynamics and clinical pharmacokinetic principles for an advanced level of application and utilization.
   1.1 Compare and contrast application and utilization in selected special patient populations;
   1.2 Examine drug reactions (including applied pharmacogenetics and pharmacogenomics), allergic-anaphylactic reactions, and clinical toxicology;
   1.3 Summarize benefits of the clinical and toxicology laboratories.

2. Explain the appropriate pharmacotherapy for a specific client and that client’s pathophysiological problems.
   2.1 Integrate knowledge of drug interactions in safe prescribing and monitoring treatment outcomes;
   2.2 Identify appropriate physiological parameters for specific drugs, including approved pharmacogenetic testing, as applicable;
   2.3 Determine correct dosages of medications based on relevant individual client characteristics;
   2.4 Describe essential client education for expected effects, potential adverse effects, proper administration, and cost (applied pharmaco economics), to achieve expected the outcome of the use of a medication.

3. Interpret literature and resources pertaining to pharmacotherapy.
   3.1 Appraise classic texts;
   3.2 Criticize the current periodicals and symposia on drug therapy;
3.3 Explain appropriate utilization of various local and national drug information sources, including hospital pharmacists, drug-information centers, poison control, drug toxicology labs, and internet-based pharmacological databases;

3.4 Describe ethical and legal ramifications of pharmacotherapeutics, including applied pharmacogenetic testing.

**Required Texts**


*(Optional reference)*


**Teaching and Learning Strategies:**

- Assigned readings
- Review of main course text
- PowerPoint presentations
- Modules on important topics in pharmacotherapeutics
- Quizzes
- Asynchronous discussions
- WebEx sessions
- Case studies
- “Top 50 Drugs Assignment”
- Quizzes
- Proctored Tests
- Final Comprehensive Exam

**Course Requirements:**

Each student will:

1. Maintain access to a reliable computer with internet connectivity throughout the semester (Note: Portable tablets are not compatible or appropriate for most activities in this course);

2. Read all course assignments (texts, case study solutions, and other posted materials, and quizzes);
3. Complete required tests and quizzes;
4. Participate in solving the assigned group case study;
5. Regularly participate in course discussions, group discussions, WebEx sessions or other activities as assigned.

Grading:
Grading is a process of measuring the outcome of learning against standards and assigning a symbol to the level of performance achieved. The quizzes (see course schedule) do not count toward the final course grade although the material from the units/modules will be covered on course tests. The final determination of the grade, therefore, rests with the instructor. Components for student course grades include the following:

Grade Breakdown

<table>
<thead>
<tr>
<th>Grade ELEMENT</th>
<th>Percentage of FINAL GRADE</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation/Intro to the course</td>
<td>Pass/Fail</td>
<td>Pass/Fail</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5%</td>
<td>5</td>
</tr>
<tr>
<td>TEST 1</td>
<td>15%</td>
<td>15</td>
</tr>
<tr>
<td>Students must achieve and average of 75% or higher on the course tests before the grades for case studies or participation are counted.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEST 2</td>
<td>15%</td>
<td>15</td>
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<tr>
<td>TEST 3</td>
<td>15%</td>
<td>15</td>
</tr>
<tr>
<td>TEST 4</td>
<td>15%</td>
<td>15</td>
</tr>
<tr>
<td>Comprehensive FINAL</td>
<td>15%</td>
<td>15</td>
</tr>
<tr>
<td>CASE STUDY</td>
<td>10%</td>
<td>10</td>
</tr>
<tr>
<td>(case studies must be completed before other grades are counted)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOP 50 Drugs Assignment</td>
<td>5%</td>
<td>5</td>
</tr>
<tr>
<td>Participation</td>
<td>5%</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100</td>
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</table>
*Course Tests:* Each test will be made up of 75 multiple choice questions. These questions will be drawn from the course texts, case studies, supplemental materials, any other assigned readings, and discussions. **Students must achieve an average of 75% or higher on the course tests before the grades for the group case studies and for participation are counted.** The final will be comprehensive.

*Quizzes.* There will be online quizzes covering assigned course materials, which count towards the final grade.

**PROCTORED TEST SITE POLICIES AND PROCEDURES:** All tests given within the graduate nursing programs are given through proctored test sites according to the Secure Testing Sites policies and procedures document. No student may use notes, books, handouts, etc., during the tests. The Secure Testing Policy is considered a part of this syllabus, and may be found as a separate document under the same Information icon under which this syllabus and its accompanying course schedule is found.

Make-up tests are not permitted. Tests will only be given during the scheduled date and time periods. In the event that a student has a valid reason for missing a test, as determined by University policy and upon notification of the instructor of that reason early in the semester and certainly prior to the completion of the test’s availability online, the instructor will follow the established guidelines of the University and College of Nursing and Health Sciences.

Students who require additional time for tests must provide the instructor with a copy of the certification document provided by the Student Disability office at the beginning of the semester.

In order to preserve the security of the tests, students will not receive immediate feedback after taking the tests. Tests will be graded and grades posted usually within a 48 hour time period. Students who score less than 78% on a test may contact the instructor to get individualized feedback. Verbatim test questions will not be divulged or discussed with students.

*Group Work.* Group work is a common characteristic of professionals in health care delivery systems, and will be used in this course to facilitate cooperation and collegiality among group members in completing group case studies.

*Group Case Study for Grading.* In addition, one case studies will be done in assigned study groups throughout the semester. **These will be made available to students at least two weeks prior to the due-date. Students will submit the group’s solution via BB email.** Study group members will use the group’s discussion room to communicate amongst themselves in order to solve the case studies.

The solution to be submitted will incorporate the following:

1. **Content for the case study** will be based upon the grading rubric for the case studies, which can be found under the INFORMATION link from the menu to the left. The pathophysiology of the underlying condition is to be determined from the case study’s information database and explained adequately to justify the pharmacological and non-pharmacological therapy derived in the solution. References should include evidence-based resources, not just pathophysiology summarized in the pharmacology course texts.

2. **Length of the paper.** It is *required* that the answers to the issues/questions
(see the grading rubric) for the graded group case studies be limited to a total of eight (8) pages or less—excluding the cover page (which should include group number and names of students who have contributed to the case study), and excluding the reference citations. Please adhere to this page limit! No abstract is required. APA Manual for Publications (6th edition) reference style should be used for these citations, and should match the in-text reference citations used in the submission.

3. **Group assignments for the Case Studies.** The instructor will make the assignment to groups. The group assignments are final and not subject to individual requests; please refrain from making such requests.

4. **Group participation.** Participation of all student members within the case study group is expected and required. Timely collaboration in practice is needed, and is no different during nurse practitioner education irrespective of any student’s level of leadership experience. Case study group discussion postings will be monitored. Students will sign in to group discussion assignments at least every other day. Any student not felt to be fully participating will be notified by course email, and will potentially have his or her case study grade reduced accordingly, while other group members will retain their group score. If you have questions regarding this policy, email the instructor privately at the beginning of the semester or at the beginning of the assigned case study. It is suggested that, at the beginning of each new case study, a group leader who will submit the final draft of the completed case study solution, be chosen from group members. Each group leader should serve only once.

5. **Dividing group work.** If the study group decides to divide the work up by assigning a student to answer one or more areas of the case study, while other students complete other parts of the case study, on subsequent studies each student will answer another point within the grading rubric.

6. **Evaluation.** Each group of students will evaluate each other group member in their respective group. This will be submitted as part of the assignment.

“*Top 50 Drugs*” Assignment: Students will compile a list of the top 50 drugs used in clinical practice. This assignment is worth 5% of the final grade. Please see the assignment instructions on BB and the course schedule for the specific due date.

**Participation Grade:** Each student is expected to regularly participate in the activities of this course. The instructor will post important points to learn, other internet resources, including evidence-based practice guidelines, and study questions over assigned material. Students should review this information and be prepared to discuss online various aspects from these resources. The instructor will monitor each student’s use of Blackboard for the course, using the Student Tracking option available to the instructor. The instructor will email any student not felt to regularly participate in course discussions. In general, students are expected to post, on average, three times per week (at a minimum) to the course discussions, excluding emails and discussions within their assigned discussion groups for the graded case studies. Discussion postings must either answer a study/discussion question posted by the instructor, or a discussion posting on the week’s topics originated by the student, or a response to
another student’s post. Irrespective of how the posting originates, the student will provide at least one current (less than three years old) reference supporting the information posted. Any posting that fails to include referencing will not count toward the course participation grade. Students with questions regarding this policy will contact the instructor within the first two weeks of the beginning of the semester. Past psychometrics on an individual student’s online posting have repeatedly shown that a greater level of meaningful discussion participation has led to higher grades throughout the course.

Students are expected to observe standard online posting etiquette. A summary of expected etiquette can be found under the course INFORMATION link.

Discussion postings determine the participation component of the final course grade, which is determined at the end of the course. A rubric to be used in assessing the student’s participation is available under the course Information icon. The instructor will assess participation episodically, without notifying students; assessments will be included in the midterm grading, and will be made available to each student.

Please avoid using a “copy and paste” posting of material; this is a violation of copyright and does constitute a form of plagiarism, especially when quotation is not indicated appropriately (APA format) and referenced. During open discussions on this Web CT course, please avoid unnecessary duplication of material already presented. (For example, posting “Great post,” “Thanks!,” and “I wholeheartedly agree with Jane’s post,” requires each student to open the posting and review it, all without contribution of new information. Experience is valuable if it contributes to the discussion thread in ways that have not been cited before.)

In addition, please avoid simply posting the URL of a web site which in your opinion is of value to other students. Please precede the URL with a concise summary about what is contained on the site and why you find the information valuable. Similarly, do not use the “copy and paste” capabilities of your computer. This practice constitutes plagiarism unless you have the written permission of the author/owner of the material to do so.

**Grading Scale for the Student’s Final Course Grade**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>90 – 100%</td>
</tr>
<tr>
<td>B</td>
<td>83 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>75 – 82%</td>
</tr>
<tr>
<td>D</td>
<td>67 – 74%</td>
</tr>
<tr>
<td>F</td>
<td>0 – 66%</td>
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</tbody>
</table>

**Extra-credit work.** No extra-credit work will be accepted.

**OTHER INFORMATION**

**Expectations for Student Behavior:**

1. Evidence of preparation for class discussion is determined by participation. Because every student’s discussion grade will be based in part on the ability to engage classmates in
discussion, it is imperative that a student prepare for the course according to the course schedule.

2. Students are expected to have access to a computer that can support BlackBoard applications. Portable tablets and “smart phones” are not generally reliable in this method of course delivery.

3. Students must review the course introduction to learn how communication will occur and how assignments will be managed during the course. **Please do not use “texting” as a method of communication with the instructor.** Emergencies should be communicated by phone to the instructor.

4. Students will respect the time of other students in their group work by cooperating with other group members, agreed-upon schedules, etc.

5. All email communication should occur through the BlackBoard structure and should be conducted in a respectful and professional manner. Students should review course email at least every 48 hours. Students are also advised to review their Islander (University) email accounts on a regular basis as well.

6. All assignments are due on the scheduled date indicated in the course schedule unless other arrangements have been made with the course instructor ahead of the due date. Students should review the syllabus and schedule throughout the semester to insure that class assignments are completed correctly and by the due date. Print a copy of the syllabus and schedule as a reference.

7. All information disclosed through course discussions is confidential and should not be shared with others outside the context of this course. Passwords should not be shared with anyone including classmates or family members.

8. Students should notify the faculty and their discussion group if they withdraw from the course and should not attempt to access course materials once they have withdrawn.

9. The nature of the content of this course often promotes extensive debate during course discussions. Since students are assumed to be prepared for the discussions, everyone’s contributions will be considered a knowledgeable contribution. Contributions should be made in a respectful manner and the discussion should be an orderly sharing of ideas. No disrespect to classmates will be tolerated.

10. Students are expected to check their Islander email accounts regularly for information from the CONHS.

**Expectations for Course Faculty Behavior:**

1. The course faculty will monitor BlackBoard email and discussion comments regularly and will communicate in a respectful and professional manner. Students can expect a response to email messages or to students’ discussion questions within 48 hours. All attempts will be made to respond in a reasonable amount of time during regular business hours. The instructor will check for new messages periodically during weekends.

2. Students will usually receive feedback on assignments within 12 days of assignment due dates unless notified by the course faculty.

3. The course faculty is available for meetings with individual students. Requests should be made via course email or telephone. Students should make appointments for these meetings.
Students with Disabilities:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Services Office at 361.825.5816 or visit the office in Corpus Christi Hall Suite 116. Please do this well in advance of the first course test.

Academic Advising:

The College of Nursing and Health Sciences requires that students consult with an Academic Advisor regarding their degree plan and/or changes to their degree plan. The Academic Advisor will set up a degree plan and indicate plan is active by signing the plan. Once the plan is completed it will be filed in the student’s record. The College’s Academic Advising Center is located in Island Hall. The Graduate Advisor is Rachel Holman who may be reached at 361.825.5893.

Academic Integrity/Honesty:

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to a penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) For more information, please go to: http://catalog.tamucc.edu/content.php?catoid=6&navoid=177#Academic_Integrity

Grade Appeal Process:

As stated in the College of Nursing and Health Sciences (CONHS) Handbook under section VII Policies and Procedures, a student that believes he or she has an academic grade appeal is encouraged to go through the CONHS academic review process prior to pursuing University Grade Appeal. See the handbook for the process. As stated in University Rule 13.02.99.C2.01, Student Grade Appeal Procedure, a student who believes that he or she has not been held to appropriate academic standards as outline in the course syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For additional assistance and/or guidance in the grade appeal process, students may contact the Office of Student Engagement and Success.

Syllabus Disclaimer: While the provisions of this syllabus are as accurate and complete as possible, the faculty reserves the right to change non-critical aspects of the course to accommodate emergencies, unexpected technical problems, or any unforeseen circumstances. Such changes will be announced as soon as feasible and will be communicated by course email or announcements via Blackboard.