Department of Pharmaceutical Sciences and
Department of Pharmacy Practice

PHA 526
Pharmacotherapeutics X

Pharmacotherapy of Endocrine Disorders and Women’s/Men’s Health Issues

SPRING 2018

INSTRUCTORS:

Dr. Ajay Bommareddy (Co-coordinator) – 408-4220 (Rm 319 SLC)
Dr. Jennifer Malinowski (Co-coordinator) – 408-3294 (Rm 115C, SLC)
Dr. Nicole Pezzino – 408-4260 (Rm 334A SLC)
Dr. Vick Shah- 408 3826
Course Title: Pharmacotherapy of Endocrine Disorders and Women’s/Men’s Health (Module X)

Course Number: PHA 526

Course Credit: 2

Class Time: 3-5 PM Mon, Tue, Thurs, Fri (SLC 101)

Course Description: This course is the 10th in a twelve module sequence that will integrate pharmacology, medicinal chemistry, pathophysiology and therapeutics. This team taught course is designed to provide students with an opportunity to learn, observe and apply concepts of these four content areas in an integrated manner. Concepts in each of these content areas will be emphasized to provide the necessary information for pharmacy management of endocrine disorders. Active learning techniques will be employed throughout the module.

Prerequisites: PHA 310, 327, 331, 332, 365, 421, 423 and P-3 standing

Course Outcomes:

Domain 1 – Foundational Knowledge
1.1. Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.
1.1.1. Demonstrate knowledge in pharmaceutical, social/behavioral/administrative and clinical sciences
1.1.2. Apply foundational science knowledge to design and monitor drug therapy regimens with a patient-centered focus

Domain 2 – Essentials for Practice and Care
2.1. Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).
2.1.1. Acquire and prioritize relevant subjective and objective patient information
2.2.2. Assess therapeutic problems and develop goals for therapy
2.2.3. Design evidenced-based patient care plans on patient specific needs, values and preferences to solve therapeutic problems and monitor for safety and efficacy
2.4. Population-based care (Provider) - Describe how population-based care influences patient-centered care and influences the development of practice guidelines and evidence-based best practices.
2.4.1. Describe the influences of cost, care, access and satisfaction on the care of a patient population

Domain 3 - Approach to Practice and Care
3.1. Problem Solving (Problem Solver) – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution
3.1.1. Discuss a systematic process to solving a problem
3.1.2. Demonstrate that systematic process to solve a problem
3.6. Communication (Communicator) – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.
3.6.1. Communicate effectively with patients and healthcare providers using a structured approach
3.6.2. Document patient care activities clearly, concisely, and accurately using appropriate technology
3.7. Evidence-based Practice (Evaluator) – Demonstrates clinical care that incorporates the principles and application of evidence-based practice and Information Mastery.
3.7.1. Articulate an information need in a health situation
3.7.2. Systematically critique human subject literature
3.7.3. Use the information gathered to formulate evidenced-based answers
Learning Objectives: Refer to individual handouts for learning objectives.

Assessment:
Definition: The student should perform tasks that demonstrate meaningful application of essential knowledge and skills that will be evaluated using known criteria.

Exam 1: Dr Pezzino and Dr Bommareddy’s material (45%)
Exam 2: Drs Malinowski, Shah and Bommareddy (45%)

In-class exercises (10% of final grade)
1) In- and out-of-class activities are designed to help the student in the application of information relevant to the class. It is the responsibility of the student to complete the assignments satisfactorily and on time.
2) In class quizzes will include a few different assessment types:
   a. Team-based learning: at the discretion of the instructor, the activity may include individual and group quizzes (average of individual score and team score is recorded for student).
   b. Collaborative exercises: case-based scenarios that students will attempt to assess and plan in small groups.
   c. Additional activities may be employed at the instructor’s discretion.

Course Grade Scale:

<table>
<thead>
<tr>
<th>Grade Range</th>
<th>GPA</th>
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<tbody>
<tr>
<td>93 – 100</td>
<td>4.0</td>
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<tr>
<td>87 - 92</td>
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<td>80 - 86</td>
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<td>75 - 79</td>
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<td>70 - 74</td>
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<tr>
<td>&lt;70</td>
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**Students failing more than one module in the same semester or more than one module in two or more semesters WILL NOT BE ALLOWED TO PROGRESS in the Pharmacotherapeutics course sequence effective at the end of the currently enrolled semester in which the second module was failed. For specific information regarding progression within the Pharmacotherapeutics course sequence, refer to the appropriate section in the Nesbitt School of Pharmacy Student Handbook.**

Calculators: Students will be required to possess a basic scientific, non-programmable, non-graphing calculator that is capable of solving base-10 and natural log functions.

Remediation Statement: In the event of a course failure, some PT modules allow options for the student to retake all or part of the PT course, and if successful, will allow the student to progress in the curriculum, this is termed “remediation”. The remediation policy below is subject to final approval by the course coordinators of record and may not be offered in certain situations (poor attendance, lack of professional effort, etc). If the faculty approve a course, it is then referred to the Student Affairs Committee. The Student Affairs Committee must approve remediation and this is done on an individual basis.

- Students who fail this module do not have a remediation option.

Required Text:

Recommended Text:
Attendance Policy:
Class attendance is an important professional responsibility. If a student anticipates missing class (es) due to attendance at a professional meeting/event, as a professional courtesy, the student should discuss with the instructor(s) involved. There will be no makeup for missed exams, quizzes or other assignments due to unexcused absences. A grade of zero will be given. In the case of an unusual circumstance in which the absence is excusable, the student must contact Dr. Bommareddy at least one-half hour before class. Make-up exams or assignments for these cases will be given at the discretion of the course instructors. Students are not permitted to record voice/video or take photos of instructors or lecture materials during class without their permission.

Examination/Quiz Policy
Prior to the test, no student may enter the examination room. Upon entry into the examination room there will be no talking. All personal items (ie. book bags, electronic devices, etc.) must be kept at the front. Students should not wear hats with brims or watches. Students are not permitted to bring food or beverages to the exam. To ensure a fair and valid assessment of students’ skills and knowledge, students are not permitted to bring a reference, study materials, calculators or other electronic devices into the exam room unless prior permission was granted from the instructor. Other items that are strictly prohibited at your examination seat include cell phones, computers/tablets, and any smart device including google glass and fitness trackers. Once you are at your assigned seat, you must remain seated. If you have a question, please raise your hand and the instructor will come to you. The examination paper should not be turned over until instructed to do so by the proctors. The student should check that the examination is complete and read all the instructions. After the first test is returned to the proctor, tardy students will not be allowed to enter the room and start the exam. That student will get a zero for the test. Upon exam completion, please do not congregate outside the classroom as this noise can be distracting to students still taking the exam. Students who do not turn in their exam promptly at the end of the exam session at the request of the proctor will receive a zero for that exam. There will be no makeup of exams or quizzes for unexcused absences. A grade of zero will be given. In the case of an unusual circumstance in which the absence is excusable (for example, illness), the student must contact Dr. Bommareddy (course coordinator) at least one-half hour before the exam. Students who are too ill to take an exam must see student health or their private physician for a written excuse. Make-up exams or assignments will be given at the discretion of the instructor(s) involved. Instructor(s) have the right to give a different make-up exam at their sole discretion.

During exam returns, students should remain in an area visible to the instructors. No electronic devices should be out during exam returns. Students are not permitted to make
written notes regarding the exam. All exams must be returned to the course instructors in class on the day on which it is made available for review. Any violation of these policies will result in course failure. Students will have 3 school days to review an exam after grades are made available to identify problem areas, verify grading or contest answers to questions. Exams will not be available for student review after this time period. For adjunct instructors and residents, all exam-related questions should be directed to course coordinators.

The School of Pharmacy has a technical standards document that can be found in your student handbook. The following is an excerpt regarding requesting accommodations. "Reasonable accommodations are services provided to individuals with disabilities that remove or lessen the effect of the disability-related barrier. Individuals without documented disabilities are not eligible for accommodations. Candidates with disabilities, in accordance with Wilkes University policy, and as defined by section 504 of 1973 Vocational Rehabilitation Act and the Americans with Disabilities Act of 1993, who may seek accommodations in order to meet the technical standards are encouraged to contact University College to discuss what reasonable accommodations, if any, the School of Pharmacy could make in order for the candidate to meet the standards. A student with a disability who requests accommodations will be required to submit this request in writing and provide pertinent supporting documentation in accordance with Wilkes University policies."

**Assignment Policy:**
1. Assignments are due in the beginning of class on the dates announced by the instructor unless otherwise indicated. Assignments will not be accepted after the due date.
2. In-class assignments may be hand written, but must be submitted in a legible form. Illegible assignments will be returned.

**Academic Honesty:**
Any student who violates the Intellectual Responsibility and Plagiarism Policy as stated in the most recent University Student Handbook Violators will be subject to disciplinary action which may include failure of the course.

**Professionalism** *(adapted from Purkenson D. University of Washington)*

As consistent with expectations of the practice environment, professional behavior and attitudes are expected for all students enrolled in professional practice courses. Professionalism is demonstrated by a student who:

- uses appropriate use of verbal & non-verbal communication
- is punctual
- is reliable, dependable, accountable for one’s actions
- behaves in an ethical manner produces quality work,
- accepts constructive criticism and modifies behavior if necessary
- is cooperative – i.e. non-argumentative; willing and helpful
- is non-judgmental – student demonstrates an attitude of open-mindedness towards others and situations; does not “stereotype” others or prejudge situations
- communicates assertively – actively and appropriately engages in dialogue or discussion
- is self-directed in undertaking tasks, self-motivated
- is respectful – demonstrates regard for self, standardized patients, peers, faculty, staff and university property
- is empathetic – demonstrates appreciation of others’ positions; attempts to identify with other with others’ perspectives; demonstrates consideration towards others
· handles stress – remains calm, levelheaded, and composed in critical, stress or difficult situations
· is an active learner – seeks knowledge; asks questions, searches for information, takes responsibility for own learning
· is confident – acts & communicates in a self-assured manner, yet with modesty and humility
· follows through with responsibilities – if task is left incomplete or problem is not resolved, student seeks aid
· is diplomatic – is fair and tactful in all dealings with patients, peers, faculty and staff.
· is appropriately attired
· demonstrates a desire to exceed expectations – goes “above and beyond the call of duty”, attempts to exceed minimal standards and requirements for tasks/assignments/responsibilities
· utilizes time efficiently – allocates and utilizes appropriate amounts of time to fulfill responsibilities; utilizes others’ time wisely

Lack of respect for other students, professors or staff as demonstrated by comments, tone of voice, or disruptive behavior will not be tolerated.

Everyone has a right to be heard and should be able to express their constructive comments without ridicule. When expressing opinions etc. “I” phrases should be used. Lack of respect for other students, professors or staff as demonstrated by comments, tone of voice, disruptive behavior or absenteeism will not be tolerated. Additionally, there is to be no disruptive eating in the classroom.

Students who violate the professionalism policy can be dismissed from class. Re-entry into the class (including taking exams or quizzes) can only occur after the student writes an essay on professionalism and civility; the essay must be deemed acceptable by the pharmacotherapeutics teaching team.

The information in this syllabus is subject to change in extenuating circumstances. Changes to the course syllabus will be provided to the student in writing.
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<thead>
<tr>
<th>M</th>
<th>SCHEDULE OF TOPICS</th>
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<tbody>
<tr>
<td>MLK Holiday – No classes</td>
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<td>T</td>
<td>Thyroid disease (General overview) - JM</td>
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<td>Thioureals, iodine, thyroid hormone (Pharmacology &amp; Therapeutics) – B &amp; JM</td>
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<td>R</td>
<td>Thyroid disease continued – JM</td>
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<td></td>
<td>Diabetes (General overview) – Pezzino (P)</td>
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<td>(+ 2 online introductory DM lectures)</td>
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<td>F</td>
<td>Insulin (Pharmacology) –B, Insulin (Therapeutics) - P</td>
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<tr>
<td>M</td>
<td>Biguanides, Sulfonylureas, and TZDs (Pharmacology) - B</td>
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<td>Biguanides, Sulfonylureas, and TZDs (Therapeutics) - P</td>
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<td>GLP-1 agonist, DPP4 Inhibitors, a-glucosidase inhibitors, SGLT2 inhibitors (Pharmacology) - B</td>
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<td>GLP-1 agonist, DPP4 Inhibitors, a-glucosidase inhibitors, SGLT2 inhibitors (Therapeutics) – P</td>
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<td>Diabetic ketoacidosis - P</td>
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<td>R</td>
<td>Diabetes TBL/PPCP - P</td>
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<td>F</td>
<td>Diabetes (TBL – quiz grade) – B &amp; P</td>
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<td>Thyroid &amp; Diabetes (Review Q&amp;A) – B &amp; JM</td>
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<td>Thyroid &amp; Diabetes (TBL – quiz grade) – B &amp; JM</td>
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<td>Contraception (General overview) – B &amp; JM</td>
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<td>R</td>
<td>Exam 1 – B, P &amp; JM</td>
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<td>F</td>
<td>Contraception JM</td>
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<td>M</td>
<td>Menopause - B &amp; JM</td>
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<td>Osteoporosis (General overview &amp; Pharmacology) - B</td>
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<td>Osteoporosis (Therapeutics) – Malinowski</td>
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<td>Teratogenicity &amp; Drugs in Lactation - Malinowski</td>
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<tr>
<td>M</td>
<td>Benign prostatic hypertrophy &amp; Erectile dysfunction – B &amp;JM</td>
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<tr>
<td>R</td>
<td>Exam 2 – B and JM (Contraception to Erectile Dysfunction)</td>
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