Pharmacotherapy of the Gastrointestinal System & Nutrition  
PHM 184 - #57620, Spring 2020, MWF 10:00-11:50 a.m., PHR 2.108

**Course Description:** An integrated approach to the treatment of various gastrointestinal disorders and fundamental understanding of autonomic & cholinergic systems as it pertains to the pharmacology and medicinal chemistry of medications.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>E-mail</th>
<th>Phone</th>
<th>Location</th>
</tr>
</thead>
</table>
| John Richburg  
Course Coordinator  
Pharmacology/Toxicology | john.richburg@austin.utexas.edu | 512-471-4736 | Austin – PHR 4.220 |
| Patrick Davis, PhD  
Chem Biol & Med Chem  
Pharmacotherapy Sequence Coordinator | davispj@austin.utexas.edu | 512-475-9751 | Austin – BME 6.202C |
| Laurajo Ryan, PharmD  
Pharmacotherapy | RyanL@uthscsa.edu | 210-567-8320 | San Antonio |

**Lecture Schedule**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Time</th>
<th>Lec</th>
<th>Faculty</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan 22</td>
<td>10-12</td>
<td>2</td>
<td>Davis</td>
<td>PTher Sequence Coverage; Course Policies</td>
</tr>
<tr>
<td>Jan 22</td>
<td>10-11</td>
<td>1</td>
<td>Richburg</td>
<td>Bowel Acidity</td>
</tr>
<tr>
<td>24</td>
<td>11-12</td>
<td>1</td>
<td>Richburg</td>
<td>Bowel Motility/nausea/vomiting</td>
</tr>
<tr>
<td>27</td>
<td>10-12</td>
<td>2</td>
<td>Richburg</td>
<td>Bowel Acidity</td>
</tr>
<tr>
<td>29</td>
<td>10-12</td>
<td>2</td>
<td>Ryan</td>
<td>In-class quiz (29th)</td>
</tr>
<tr>
<td>31</td>
<td>10-11</td>
<td>1</td>
<td>Ryan</td>
<td>Cirrhosis</td>
</tr>
<tr>
<td>31</td>
<td>11-12</td>
<td>1</td>
<td>Ryan</td>
<td>IBS</td>
</tr>
<tr>
<td>Feb 3</td>
<td>10-12</td>
<td>2</td>
<td>Ryan</td>
<td>Nutrition</td>
</tr>
<tr>
<td>5</td>
<td>10-12</td>
<td></td>
<td>Exam In Class</td>
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</table>
Pharmacotherapy Course Sequence Policies

Recommended Course Texts:


Communication:  Email and Canvas® are the official mechanisms for communication in this course. Be sure to check your email daily and Canvas® announcements daily so that you do not miss important information.

Course Policies and Procedures

1. **Canvas:** The official Canvas® web site for this course can be accessed through canvas.utexas.edu. This access point is UTEID-protected, and provides you links to the courses in which you are currently enrolled. You are strongly encouraged to visit this site for additional resources associated with this course (your grades, electronic quizzes, powerpoint presentation, previous exams, the discussion board, contacting faculty by Email, electronic versions of suggested and required readings and hyperlinks).

   The website will also be used for official, course-related announcements and to exchange class information and questions via the discussion board. Be aware that any messages posted to the discussion board are available to all enrolled students and faculty.

   If you encounter problems with accessing Canvas® please contact the ITS helpdesk at: 512-475-9400 or the Canvas tutorials at canvas.utexas.edu

2. **Lecture video-streaming:** Video-streamed recordings of lectures are intended to facilitate learning for those students who find this type of supplementation useful; they are not a substitute for attending class. Although recordings of these lectures will be available to you for the semester, this is for supplementation only; your instructors expect you to attend all scheduled lectures. If an individual faculty member chooses to not make his/her lectures available by video-streaming, it is that faculty member’s responsibility to so inform you. Viewing video-streamed recordings of lectures can be streamed on campus or can be viewed off-campus using a DSL broadband connections. Your faculty are not in a position to troubleshoot your video-streaming problems, so please do not ask them to do so; rather, you should access the LRC’s help website at https://www.utexas.edu/pharmacy/help/ to address those problems. Any other questions should go to the LRC at http://www.utexas.edu/pharmacy/resources/lrc/

3. **Redistribution of Class Recordings:** If video-recordings of a class are made available by the College of Pharmacy for any course, they are intended solely for the purpose of review by student currently enrolled in the that class. Faculty and students utilizing class video-recordings should be careful to not compromise the privacy of either themselves or other users.
(http://registrar.utexas.edu/students/records/ferpa), or the rights of the presenter. Students are also free to make their own recordings of lectures unless specifically prohibited from doing so by the presenter. Any additional distribution of College- or student-generated recordings (regardless of format) is prohibited without the written and signed permission of the presenter and students identifiable on the recording. Likewise, all course materials developed by the faculty member (handouts, powerpoints, etc) are the intellectual property of that faculty member and cannot be distributed further without the permission of that faculty member.

4. **Prerequisites**: Completion of all coursework associated with the first professional year (i.e., P2 status).

5. **ExamSoft®**: Students are responsible for the maintenance of their approved personal devices and Examplify® software. Students are required to bring approved personal devices for all exams and indicated assignments. Lack of preparation may result in an inability to take the exam or adjustments to course grades at the discretion of course coordinators and/or unprofessional conduct referral.

Any problems with Examplify® or ExamSoft® should be addressed via phone to Student Tech Support at 866.429.8889, email to support@examsoft.com, or live chat at www.examsoft.com. Do not expect your faculty to troubleshoot your technology issues.

Students found improperly using ExamSoft® or Examplify® to gain unfair academic advantage are violating the College of Pharmacy Honor Code. Violations such as "academic dishonesty" and/or "professional misconduct" would include, but are not limited to using a classmate's login/password, tampering with exam files, and falsifying upload or download information, or any attempt to circumvent the security features of the software.

Students should refer to the ExamSoft® Policies Handbook for a complete listing of policies related to exams, quizzes and assignments. Since ExamSoft® supports multiple question types (multiple choice, fill-in-blank, matching, essay….) the format for questions is the prerogative of the faculty member authoring those questions.

6. **Exam Administration**: Students must arrive on time for the examinations. Exams begin promptly at 10:00 and conclude at 11:50. Students arriving late should not expect that their exam time will be extended beyond this stop time. Other exam administration policies are detailed in the College’s ExamSoft® Policies Student Handbook.

If during the exam students perceive a potential problem with the question (e.g. no correct answer; multiple correct answers; topic not covered in class), they should note this in the comment section associated with the question in Examplify®. Faculty will review these student comments along with the statistical analysis of the results in assessing question validity before final results are posted.

7. **Request for an Alternate Exam Time**: No allowances will be made for an exam being missed, other than documented illness or emergency, or by prior approval by the Pharmacotherapy Sequence Coordinator. An unexcused absence from an exam may result in a grade of "zero" for that exam. Any student requesting accommodation for an upcoming exam must submit the request to the course coordinator using the online form posted on Canvas® at least one month prior to the exam. An
alternate exam time will be considered only if the student documents that they can’t be physically present on the date the exam is already scheduled.¹

8. **Exam Review / Release of Exams**: An exam review will be conducted in the immediate week following each exam (Tuesdays; PHR 3.106, 9-10AM). Attendance is optional unless a student scores <70% on any individual exam, in which attendance is mandatory. Use of the exam autopsy is strongly encouraged to assist in identifying weaknesses. Exams will not be released back to students.

9. **Exam Question Reconsideration Requests**: Students will have the opportunity to review their exam results at the secure ExamSoft® review session scheduled after each test. Review sessions are optional unless the student scored <70% (in which case attendance is mandatory). If a student feels there is a justifiable discrepancy between their answer and the keyed answer, they can submit a formal reconsideration request on the form provided at the review session. Students must turn in their reconsideration request form(s) and show the proctor that they have logged out of Examplify® before they leave the review session.

There are no reconsiderations on class quiz question or on the Final Exam.

10. **Final Exams**: All students are required to take the final exam during the official University final exam period. There is no re-examination on the final exam.

11. **Course Assignment Breakdown**:

<table>
<thead>
<tr>
<th>Course Assessment</th>
<th>Course points (Total course points = 188 points) (12 hours)</th>
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<tbody>
<tr>
<td>In Class Quizzes</td>
<td>20 points → 1 x 10 question quiz @ 2 points/question</td>
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<tr>
<td>In Class Exam</td>
<td>96 → 8 points per lecture hour (12 hours)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>72 → 6 points per lecture hour (12 hours)</td>
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12. **Course Grading**:

- **A Range**: A = 100%-93%  A- = 92%-90%
- **B Range**: B+ = 89%-87%  B = 86%-83%  B- = 82%-80%
- **C Range**: C+ = 79%-77%  C = 76%-73%  C- = 72%-70%
- **D Range**: D+ = 69%-67%  D = 66%-65%
- **F** = Below 65%

Percentages are not rounded up. This scale may be curved more leniently in the final analysis of grades at the discretion of the Pharmacotherapy sequence coordinator in consultation with the instructors.

¹ As recommended by the Pharmacy Council Executive Committee, 12/13/2017.
Pharmacotherapy Course Sequence Objectives

I. Be able to describe the **pathophysiology** of disease state(s) in order to identify appropriate drug targets (cellular/molecular targets, biochemical processes, and/or organ system changes) for therapeutic intervention.

Specifically, for each disease state covered:
- Describe the basic pathophysiology of the disease (including the ‘normal’ process, what is altered in the disease state, and how these alterations lead to the signs/symptoms of the disease);
- Identify risk factors and/or diagnostic indicators (including lab values) for the disease;
- Identify and rationalize the classes of drugs used in treatment of the disease state to address the underlying pathophysiology and/or amelioration of symptoms.

II. Utilize knowledge of structure-activity relationships and cellular/molecular mechanisms of action for relevant **drug classes** to indicate/rationalize their use in the treatment of specific diseases. Compare & contrast the therapeutic and adverse effects of those drug classes, as well as individual members within the classes.

Specifically, for each **class** of drug:
- Identify the relevant therapeutic targets and, based on those targets, explain the mechanism(s) of action;
- Identify major pathways for metabolism and the pharmacological/therapeutic consequences of metabolism;
- List common and/or serious drug interactions and adverse effects of each class and the most important precautions and contraindications; where possible, rationalize the underlying toxicity mechanism(s) based on mechanism of action;
- Identify any unique storage, handling, or use requirements that impact safety and/or clinical efficacy;
- Describe the relevant pharmacokinetics and pharmacodynamics of the specific members of the class;
- Given all of the properties above, identify unique properties of **single agents** within the drug class, and where/how this would impact therapeutic selection.

III. Apply established practice guidelines, evidence-based medicine, and **population-based** treatment plans to the relevant disease(s). Utilizing patient-specific parameters (including the complexities of using multiple drug classes and/or the presence of co-morbid conditions or organ dysfunction) develop **patient specific** regimens to treat of the relevant disease(s).

Specifically, for the disease state(s) associated with the module:
- Devise treatment plans based on established guidelines and evidence-based practice, including pharmacological and non-pharmacological therapeutic (e.g. lifestyle) components, and patient specific factors;
- Define general dosing guidelines (e.g., starting dose, maximum doses, timing of doses); for narrow therapeutic index drugs, identify the dose range and limiting toxicities;
- Identify any unique requirements for renal and/or hepatic dosing;
- Identify relevant monitoring parameters for the treatment plan (e.g. definition of treatment success/failure and how to monitor for adverse reactions).
College Policies & Procedures

Professionalism: We expect that all students will demonstrate professionalism in all aspects of this course. Respect for others should be demonstrated in class, with communication between instructors and students, during discussions, and in completed assignments. Any conduct deemed unprofessional will be dealt with in accordance to policies of the College of Pharmacy and The University of Texas. Failure to act professionally (either repeatedly or egregiously) could result in failure of this course.

Oath of Pharmacist: Students are required to adhere to the principles that guide our profession including the oath taken by all pharmacist practitioners.

“At this time, I vow to devote my professional life to the service of all humankind through the profession of pharmacy.

- I will consider the welfare of humanity and relief of human suffering my primary concerns.
- I will apply my knowledge, experience, and skills to the best of my ability to assure optimal drug therapy outcomes for the patients I serve.
- I will keep abreast of developments and maintain professional competency in my profession of pharmacy.
- I will maintain the highest principles of moral, ethical, and legal conduct.
- I will embrace and advocate change in the profession of pharmacy that improves patient care.
- I take these vows voluntarily with the full realization of the responsibility with which I am entrusted by the public.”

Academic Integrity: The “Statement on Scholastic Integrity of the College of Pharmacy” reads as follows: "Pharmacy practitioners enjoy a special trust and authority based upon the profession's commitment to a code of ethical behavior in its management of client affairs. The inculcation of a sense of responsible professional behavior is a critical component of professional education, and high standards of ethical conduct are expected of pharmacy students. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including failure of the course involved and dismissal from the college and/or the University. Since dishonesty harms the individual, fellow students, and the integrity of the University and the College of Pharmacy, policies of scholastic dishonesty will be strictly enforced in this class”.

Students are expected to work independently on all examinations. Any student suspected of dishonesty will be reported to the Dean of the College of Pharmacy and to the Dean of Students, as per University regulations, with the recommendation that an “F” be assigned for the course grade. Students are expected to have read and understood the current issue of the General Information Catalog published by the Registrar's Office for information about procedures and about what constitutes scholastic dishonesty.

University Policies & Miscellaneous Information

Campus Carry: Students should familiarize themselves with the information provided by the University regarding the implementation of “Campus Carry” legislation. You will find an information sheet
specifically for students (as well as sheets for parents, visitors, faculty, and staff) at http://campuscarry.utexas.edu/info-sheets."

**Students with Disabilities:** “Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities at 471-6259 (voice) or 232-2937 (video phone) or [www.utexas.edu/diversity/ddce/ssd](http://www.utexas.edu/diversity/ddce/ssd).” All University rules concerning accommodations must be followed, including the student arranging for special accommodations **prior to each examination.** In the absence of such **prearrangement,** it will be assumed that the student is not requesting special accommodations for that exam, and will be expected to take the exam with the rest of the class at the regularly scheduled exam time.

**Religious Holidays:** If you will miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you must notify me the first week of class so that arrangements for all such students can be made for the full semester.

**Emergency Procedures:** The following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, [http://www.utexas.edu/safety/](http://www.utexas.edu/safety/):

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- If you have concerns about another student’s behavior, particularly if you believe they could potentially harm themselves or others, do not hesitate to contact the Behavior Concerns Advice Line (BCAL): 512-232-5050

**Behavioral Concerns Advice Line (BCAL):** If you are worried about someone who is acting differently, you may use the Behavior Concerns Advice Line to discuss by phone your concerns about another individual’s behavior. This service is provided through a partnership among the Office of the Dean of Students, the Counseling and Mental Health Center (CMHC), the Employee Assistance Program (EAP), and the University of Texas Police Department (UTPD). Call (512) 232-5050 or visit [http://www.utexas.edu/safety/bcal](http://www.utexas.edu/safety/bcal).