PHM 390N: Integrated Basic and Applied Pharmacokinetics

Tuesday and Thursday 9:30 - 11:00 a.m.
Room: PHR 3.106
Spring 2018 – Unique #60060

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Course Teaching Assistants:

Description
This course is designed to introduce students to the primary biological processes (absorption, distribution, metabolism, and excretion) that govern the fate of a drug after its administration, and to explain those processes in mathematical terms. In addition to focusing on what the body does to a drug (pharmacokinetics), this course will provide an introduction on what the drug does to the body (pharmacodynamics). This course will focus on concepts and appropriate use of pharmacokinetic tools (equations, calculations) to develop individualized drug dosage regimens and determine pharmacokinetic parameters. Emphasis also will be placed on understanding and applying principles to predict how factors (e.g., disease, genetics, diet, medications) may influence the biological processes that impact the pharmacokinetics or pharmacodynamics of a drug. Although these tools are used in the clinical setting, the goal of this course is not to develop clinical expertise, but to build a foundation for clinical practice or research. However, clinically relevant applications and examples will be used throughout this course to emphasize applications to the patient care setting.
Please note that this course carries the University’s Quantitative Reasoning flag. These courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will encounter in life. You can expect a substantial portion of your grade to come from your use of quantitative skills to analyze pharmacokinetic problems.

**Required Materials**

1. Foundations in Pharmacokinetics – by Adam Persky. This textbook is available for download from Canvas (https://utexas.instructure.com). You can find support in using Canvas at the ITS Help Desk at 475-9400, Monday-Friday 8AM – 6PM.

2. Lecture and reference materials will be available and posted throughout the duration of the course on Canvas website

3. You must have a personal laptop available during lecture. Quizzes will be taken on Canvas so you must have your own PC in class. Other in-class exercises will also require a laptop

4. Texas Instruments TI 36X-Pro calculator. This is the same calculator that was required for PHR 342C. You must have this specific calculator for admittance to each exam. No other calculator will be allowed.

**Review Sessions**

Throughout the semester there will be review sessions. At these sessions, faculty and/or teaching assistants will review homework problems and answer student questions. If additional review is necessary, TA’s will have posted office hours and they can be contacted for assistance.

**Classroom Conduct/Seating**

As a required course in a professional curriculum, attendance is required. Lecture attendance will be taken at 9:30am (at the bell) of each class, by the course TA’s using a seating chart. If you are not in your seat when they take attendance, you are ABSENT (if you arrive to class 5 minutes late and attendance has already been taken you are tardy and that counts as an absence). Each student is allowed to be absent/tardy 4 times during the semester without penalty (if you are sick one day, take a day off, or are late to class, all will count toward you 4 absences, so be careful how you use your allotted 4 days). Official College Events that you are approved to attend (meetings, etc..), will not count against your 4 days. Each additional absence will result in a reduction in your final grade of 2.5%. Perfect lecture attendance will result in a bonus of 2.5% in the final course score.

A seating chart will be used, so you must sit in the SAME SEAT for each class (so the seat you take the first day of class will be YOUR seat, so choose wisely). By the second day of class, Jan., 18th everyone should have attended class or will be assigned a seat, so the official absence day count will begin the second week of class.
Class Recordings
Video recordings of Dr. Watt’s lectures from last year will be used for the ‘basic’ part of this year’s course. Dr. Matt Herpin will be the class coordinator and will be ‘in class’ during those recording to coordinate the quizzes, lectures and applications, etc., during the 1.5 hr period that is on the recording (found on Mediasite). Dr. Watt’s recorded lectures will also be available for watching any time after the actual class showing, if additional viewing is needed. The clinical faculty will either present their lectures live or over camera from San Antonio. These recordings will also be made available by the University of Texas (http://registrar.utexas.edu/students/records/ferpa).

Please remember that this service is offered to supplement (not replace) lecture attendance. An issue might arise that could prevent material from being made available in a timely fashion or at all. Although every effort will be taken to keep the system running, UT does not guarantee the availability of these recordings. Attending class is the only way to insure your viewing of the professor's presentation.

Assessment: Examinations
There will be two, 3-hour evening examinations and a comprehensive final exam.

Students must arrive on time for examinations. All instructions and corrections will be made at the beginning of the examination period and will not be repeated. Students arriving after a test has been handed in by another student will not be allowed to sit for the examination and may receive a score of zero for the exam.

The only items allowed during examinations are pencils and a Texas Instruments TI 36X calculator. Books, bags, and coats will need to be left in a location designated by the faculty proctor. No student may possess a cell phone, digital music player or any other type of electronic device during the exam. Students caught with any of these devices will be reported to the Dean of Students and may receive a score of zero on the exam.

Absences on test days must be approved by the Course Director prior to the scheduled test. Requests must be in emailed to Prof. Koeller. If permission is granted by telephone at the last minute (e.g. due to illness), it is the student's responsibility to confirm the request by email as soon as possible. It is the student’s responsibility to complete the College form titled “Student Request for Alternate Exam Time” for final consideration and final approval by the course director. In this event, the nature of the make-up will be at the discretion of the course director (oral, written, increased weighting on the final…). An unexcused absence from an exam may result in a grade of zero for that exam.

Students with an average of 90% or above going into the final exam do not have to take the final exam. All other students must take the final examination. A student who must miss the final examination for an approved reason will receive an incomplete for the course and must make up the final exam at the time and place designated by the instructor. A student who misses the final exam without an approved excuse will receive a grade of F for the semester.
The Course Director will retain all examinations. Any student who removes an examination from the testing room may receive a score of 0 for the exam. Students will be provided an opportunity to view their scantron in order to verify answers with the posted key.

Answers to multiple choice questions are based on the scantron sheets and not answers written on the test papers. All tests are taken to the Scanning Office for grading. After the tests have been graded and an item analysis is performed, questions may be discarded at the discretion of the Course Coordinator.

**Homework and Quizzes**
There will be 6 homework problem sets that will be made available. These problem sets are provided to allow students the opportunity to practice working problems that will prepare them for the quizzes and examinations. **Homework Will Not Be Graded**; however, an in-class quiz will be given at the beginning of the next Fundamentals lecture (Dr. Watts) to assess student comprehension of the homework. Quizzes will be very similar to the homework assigned the class period prior and the quizzes will be grades. Homework review sessions will be held on Thurs., mornings at 8:30am and are optional (this is the time slot for the kinetics laboratory pre-lab which will not be used by the lab).

At the end of the semester the lowest quiz grade will be dropped. Missed quizzes will not be rescheduled. Beyond the 1 allowed drop, if an absence is excused prior to the class period of the quiz, the quiz will be omitted from grading and the other quiz scores will be used for the 25% Quiz contribution to the final grade. If absence is unexcused a score of 0 will be given for the quiz.

Unless otherwise specified, the following schedule will be used for homework and quizzes:
1. HW will generally be assigned on Thursday
2. Quiz held at the beginning of the following Fundamentals lecture
3. Quiz solutions will be reviewed during the next Fundamentals lecture
4. Additional optional tutorial session held by the TAs will be announced if necessary.

**Reconsideration Requests**
If a student believes that an error has been made in grading an exam question, the student will be required to provide a written justification explaining a) why the answer they chose was correct and b) why the answer indicated on the key is incorrect to the course director within one week of the exam review date. This will allow the error to be corrected in a timely manner. After the one-week period for corrections NO ADDITIONAL CHANGES will be made to exam grades.

**Final Exam Re-Examination Policy**
The re-examination policy for this course will follow the General Information Catalog (GIC) policy for the University, which reads as follows: "Only a student who has a grade average of at least a C on all class work and lab work submitted before the final exam may request a temporary delay of the final course grade because he or she failed the final examination, which is the examination given during the final exam period as printed in the official examination schedule."

"If the petition is denied by the instructor, the student’s final course grade will remain as originally determined. If the instructor grants the petition, the grade on the reexamination will be substituted for the grade on the original exam in determining the student’s final course grade, provided the student earns at least a C on the reexamination. If the grade on the reexamination is less than a C, a final course grade of F must be recorded."

If a re-examination of the final must be given, the student must meet with the course director and take the exam prior to the start of the following semester.

**Calculation of Final Scores:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Quizzes</td>
<td>25%</td>
</tr>
<tr>
<td>Examination #1</td>
<td>25%</td>
</tr>
<tr>
<td>Examination #2</td>
<td>25%</td>
</tr>
<tr>
<td>Comprehensive Final</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

**Posting Class Scores**

Following each examination, the scores will be posted on the password-protected course Canvas website.

**Grading Policy:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93 -100%</td>
</tr>
<tr>
<td>A-</td>
<td>90 -92%</td>
</tr>
<tr>
<td>B+</td>
<td>87 -89%</td>
</tr>
<tr>
<td>B</td>
<td>83 -86%</td>
</tr>
<tr>
<td>B-</td>
<td>80 -82%</td>
</tr>
<tr>
<td>C+</td>
<td>77 -79%</td>
</tr>
<tr>
<td>C</td>
<td>73 - 76%</td>
</tr>
<tr>
<td>C-</td>
<td>70 - 72%</td>
</tr>
<tr>
<td>D+</td>
<td>67 - 69%</td>
</tr>
<tr>
<td>D</td>
<td>63 - 66%</td>
</tr>
<tr>
<td>D-</td>
<td>60 - 62%</td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
</tr>
</tbody>
</table>

A curve may be used in assigning grades in this class at the discretion of the Course Director. No test scores are "dropped" and no "re-takes" will be offered for poor performance. Once the final grade is determined, there will be **NO ROUNding** of the final numeric grade to obtain a higher letter grade (eg., an 89.78 is a B+, and will not be rounded to 90 for an A-).

**University of Texas Honor Code**

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the university is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

**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), 232-2937 (video phone) or http://www.utexas.edu/diversity/ddce/ssd/

Use of E-Mail for Official Correspondence to Students
I will use e-mail for official course announcements. You are required to check the e-mail account officially listed with the University on a regular basis, but no less than every day during the semester. You are responsible to keep the university informed about changes to your e-mail address.

Religious Holy Days
By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, I will give you an opportunity to complete the missed work within a reasonable time after the absence.

Behavior 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 www.utexas.edu/safety/bcal/

Emergency Evacuation Policy
• Occupants of buildings on the UT Austin campus are required to evacuate and assemble outside when a fire alarm is activated or an announcement is made. Please be aware of the following policies regarding evacuation: Familiarize yourself with all exit doors of the classroom and the building. Remember that the nearest exit door may not be the one you used when you entered the building.

• If you require assistance to evacuate, inform me in writing during the first week of class. In the event of an evacuation, follow my instructions or those of class instructors. Do not re-enter a building unless you’re given instructions by the Austin Fire Department, the UT Police Department, or the Fire Prevention Services office.