PHM 480C: Physiology, Pathophysiology and Drug Targets

Fall 2019

Course Coordinator: Carla Van Den Berg, Pharm.D.
Email: carla.vandenberg@austin.utexas.edu
Phone: 512-495-5149
Office: Health Discovery Building (HDB) 6.322
Office Hours: By appointment

Course Unique Number(s):

Classroom(s): PHR 2.110

Class Days/Times: Tuesday and Thursday 9am-10:50am

Course Faculty:

Dawit Kidane, Ph.D., Division of Pharmacology and Toxicology. Office location and phone: DPI 2.220, 495-4720, dawit.kidane@austin.utexas.edu

Edward Mills, Ph.D., Division of Pharmacology and Toxicology. Office location and phone: BME 3.510D, 471-6699, tedmills@austin.utexas.edu

Andrea Gore, PhD, Division of Pharmacology and Toxicology. Office location and phone: BME 3.510B, 471-3669, andrea.gore@mail.utexas.edu

Somshuvra Mukhopadhyay, Division of Pharmacology and Toxicology. Office location and phone: BME 3.510E, 471-5002, som@austin.utexas.edu

Laura Fonken, PhD, Division of Pharmacology and Toxicology. Office location and phone: BME 3.510C, 232-833, laura.fonken@austin.utexas.edu

John DiGiovanni, PhD, Division of Pharmacology and Toxicology. Office location and phone: DPI 2.228, john.digiovanni@austin.utexas.edu

Teaching Assistants:
Course Information

Course Description:
The student will develop a basic understanding of the mechanisms of homeostasis in the human body. Contributions of each major organ system and how derangements in normal feedback mechanisms contribute to common human diseases will also be discussed.

Course Prerequisites/Co-Requisites:
Required pre-pharmacy coursework and successful completion of PHM 480C.

Course Learning Objectives (CAPE Objectives):

- Describe the fundamental structure and function of cells, tissues, organs, and organ systems in the human body.
- Understand the individual contribution of an organ/tissue and its interrelationship with other organ systems to maintain homeostasis.
- Apply functional physiological concepts to explain the pathophysiology of underlying common diseases encountered in the clinical setting.
- Recognize how pharmacologically targeting cellular, tissue or organ system abnormalities can influence human health or disease.

Course Success:
Chapter readings from the textbook are suggested prior to each class. The class session format is a didactic lecture with interactive Q&A. Attendance and active participation in class discussions will provide students with the opportunity to seek clarification and readily apply the material.

Course Website:
This course uses Canvas, a Web-based course management system in which a password-protected site is created for each course. Canvas will be used to distribute course materials, to communicate, and to post grades. Canvas is available at http://canvas.utexas.edu. Support is provided by the ITS Help Desk at 475-9400 Monday through Friday 8 am to 6 pm.

Course Communications:
Official course communications will take place in class, through e-mail and on the course Canvas website. Students are advised to configure their Canvas settings to forward course announcements to their official e-mail address. Canvas uses only the e-mail address listed on the official University of Texas directory, so please check the University’s online directory to ensure your e-mail address is listed correctly.

Course Video Recordings:
A video capture system will be used in this course. The video streams are offered as a supplement to lecture attendance, not as a substitute. Therefore, if technical problems preclude recording the lecture, the lecture will not be re-recorded, but students are still responsible for the content of the lecture. Lecture recordings will be available to you for the balance of the semester unless otherwise specified. Do not expect to have access after the semester is over.
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](http://registrar.utexas.edu/students/records/ferpa)), or the rights of the presenter. Students are 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.

Viewing video-streamed recordings of lectures can be streamed on campus or can be viewed off-campus using a DSL broadband connection. 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/](https://www.utexas.edu/pharmacy/help/) to address those problems. You will find additional information about the lecture capture system or can report technical issues at [http://sites.utexas.edu/phr-lrc/](http://sites.utexas.edu/phr-lrc/)

### Course Policies

#### Course Grading Policies:

**QUIZZES and EXAMINATIONS**

1. **Quizzes:** A short quiz will be administered after every four hours of lecture at the beginning of the class period, starting on the second week of the semester. You may be required to use your dedicated laptop, tablet or smartphone to log into ExamSoft to answer quiz questions. Quizzes will cover lecture material from the previous four lecture hours. There will be **no make-up quizzes** for students absent or late to class. Students are expected to be present in the classroom to take the quiz. Taking the quiz outside of the designated classroom is a form of academic dishonesty. At the end of the semester the three lowest quiz scores will be dropped. **Quiz questions will not be subject to reconsideration requests.** The average of the remaining scores will account for 16% of the semester course grade.

**Examination Time, Location and NOISE:**

1. Students shall arrive at the exam room with their Student ID and personal Examplify password early enough to be in their assigned seats with the exam downloaded ten (10) minutes prior to the scheduled exam time. (30 minutes is the recommendation). Students who are not in their seats 10 minutes prior to the exam will be considered late and will not be able to sit for the exam until meeting with the Associate Dean for Academic Affairs. Semester exams will begin promptly at the designated hour and will last for 1.5 hours; the final examination will last 3 hours. Semester exams will be given during class time on the day listed in the syllabus. During the exams, students are required to place their bags and other belongings in the front or side of the classroom. Therefore, this environment MAY NOT be conducive to carrying a concealed weapon ([https://campuscarry.utexas.edu/](https://campuscarry.utexas.edu/)). Please be advised that it is the **licensed carrier’s responsibility to be compliant with the University’s policies.** It is not acceptable to discuss any questions in detail in the area outside the classrooms while the exams are still ongoing WHETHER OR NOT YOU HAVE COMPLETED THE EXAM.
2. **Advance requests for absences from examinations:** Under EXCEPTIONAL circumstances, you may request another exam time by contacting Dr. Van Den Berg PRIOR to the exam, and you must complete the College Form titled “Student Request for Alternate Exam Time” for consideration and final approval by Dr. Van Den Berg at least 24 hrs PRIOR to the exam day – preferably as soon in the semester that you know you need to request exam re-scheduling. If permission is granted, the nature of the make-up exam will be at the discretion of the course director (oral, written, increased weighting on the final, etc.).

3. **Sickness and exam absences:** If you suddenly are unable to attend the exam, you should immediately notify Dr. Van Den Berg by email. In such a case, your grade for the cumulative FINAL exam will carry double the weight. If two or more exams are missed then you will not pass this course.

**Course Grade:**

Letter grades will be assigned according to the following scale:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>93 - 100%</td>
<td>A</td>
</tr>
<tr>
<td>90 - 92%</td>
<td>A-</td>
</tr>
<tr>
<td>87 - 89%</td>
<td>B+</td>
</tr>
<tr>
<td>83 - 86%</td>
<td>B</td>
</tr>
<tr>
<td>80 - 82%</td>
<td>B-</td>
</tr>
<tr>
<td>77 - 79%</td>
<td>C+</td>
</tr>
<tr>
<td>73 - 76%</td>
<td>C</td>
</tr>
<tr>
<td>70 - 72%</td>
<td>C-</td>
</tr>
<tr>
<td>67 - 69%</td>
<td>D+</td>
</tr>
<tr>
<td>63 - 66%</td>
<td>D</td>
</tr>
<tr>
<td>60 - 62%</td>
<td>D-</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

Fractional final grades = or >0.5 will be rounded up and those <0.5 will be rounded down.

**Assignments:**

**COURSE GRADING AND EXAM MAT'L Bldg/Rm DATES**

<table>
<thead>
<tr>
<th>Exam</th>
<th>%</th>
<th>Lecture</th>
<th>Bldg/Rm</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19%</td>
<td>Lecture 1-18</td>
<td>PHR2.108/2.110</td>
<td>Tuesday, Feb 18</td>
</tr>
<tr>
<td>2</td>
<td>17%</td>
<td>Lecture 19-32</td>
<td>PHR2.108/2.110</td>
<td>Tuesday, Mar 24</td>
</tr>
<tr>
<td>3</td>
<td>12%</td>
<td>Lecture 35-44</td>
<td>PHR2.108/2.110</td>
<td>Tuesday, Apr 14</td>
</tr>
<tr>
<td>4</td>
<td>16%</td>
<td>Lecture 47-58</td>
<td>PHR2.108/2.110</td>
<td>Thursday, May 7</td>
</tr>
<tr>
<td>Quiz</td>
<td>16%</td>
<td>----</td>
<td>---</td>
<td>--------------</td>
</tr>
<tr>
<td>Final</td>
<td>20%</td>
<td>Comprehensive</td>
<td>TBA</td>
<td></td>
</tr>
</tbody>
</table>

Total 100%

**Attendance:** Daily class attendance is expected. While the lectures are typically available on-line by accessing the course through Canvas, be aware that technical difficulties may occur, and there is no way of guaranteeing that all lectures will be available through this mode.

**Required Materials:**

Required reading assignments will be communicated by the lecturing Professor

**Recommended Materials:**


Classroom Expectations:

1. **Daily class attendance is expected.** While the lectures are typically available on-line by accessing the course through Canvas, be aware that technical difficulties may occur, and there is no way of guaranteeing that all lectures will be available through this mode.

2. **Please arrive early to class** and be prepared to take the weekly quiz. Quizzes will start promptly at the beginning of class and will not be lengthened for those who are tardy. **Taking the quiz from any location other than the assigned classroom is a form of academic dishonesty.**

3. **Please be quiet** during the lecture, but don’t hesitate to ask questions especially if something is unclear (if you don’t get it, many others probably don’t either). The faculty encourage an interactive learning environment.

4. **Please turn off your cell phone!** Sleeping, playing computer games or web-surfing etc. during class is distracting to your classmates and professors and will not be tolerated. You may use your laptop or tablet to follow lectures or answer quiz questions but not for any activities unrelated to class.

5. **Laptop computer use during class is strictly limited to viewing lecture handouts and taking notes.**

6. **Your performance in this course will be improved by keeping up with the material.** The knowledge you gain in this course will be critical, and non-redundant, for your success in subsequent courses, especially the Pharmacotherapy series.

7. **Review sessions and Office hours:** Students have the liberty to request a meeting with faculty on an individual basis. Please contact the professor to arrange a mutually convenient time. A few days prior to an exam, faculty may also offer review sessions. During these sessions, students are welcome to ask questions. In either case, students are expected to have familiarized themselves with the material before attending. If a student experiences difficulty with basic concepts or study habits then tutors are available for free from Greg Caldera in the Student Affairs Office.

8. **Religious Holidays:** By UT Austin policy, you must notify the instructor of your pending absence **at least 14 days prior to the date of observance of religious holy day.** If you must miss a class, an examination, or quiz in order to observe a religious holy day, you will be given an opportunity to complete the missed work with a reasonable time after said absence.

9. **“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](http://campuscarry.utexas.edu/info-sheets).

10. **Emergency Preparedness:** TBD

---

**Exam Policies**

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

**Exam Format:**
Exam questions will cover learning objectives given at the beginning of each topic. Exam questions may include: multiple choice, true/false, fill-in-the-blank, matching and/or short answer.

**Exam Grading:**
Grading of exams, along with statistical analysis and review of exam questions, will be the responsibility of the course coordinator and faculty, who may choose to grant credit for statistically poor questions.

**Exam Return:**
No examinations will be returned. Exam scores will be posted on the course Canvas site.

**Exam Review:**
Exam reviews will be scheduled at a mutually convenient time for the majority of students and Examsoft personnel.

**Exam Reconsideration Requests:**
For those students interested, there will be one designated time to view the exam questions that were marked as incorrect. Only if there is a disagreement over the answer to a specific question, the student may present his/her exam plus a written explanation (with appropriate documentation) to the instructor within 72 hours of the exam question review. Documentation may include statements from textbooks, handouts, packets, or current scientific reprints; lecture notes are not authoritative documentation. In your reconsideration request you MUST restate the question and correct answer. The explanation must be clear, rational, and concise. Each student will receive one opportunity to justify his/her answer. (This policy does not apply to addition or other grading errors). See below for Dr. Davis’s essay on reconsideration requests.

**Final Exam Review of Old Exams:**
Old exams will be not available for review prior to the final. Students should attend the review sessions for the individual exams during the semester.

**Final Exam Re-Examination Policy:**
There is no final exam reconsideration requests or re-examinations allowed for this course.

**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 Course 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.

Note the new policy that 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

**Academic Integrity:**

Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. See College Policies and Information, and University Policies and Information for more details.

**Religious Holy Days**

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 the course coordinator the first week of class so that arrangements for all such students can be made for the full semester.

**Services for 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 https://diversity.utexas.edu/disability/. 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.

Please provide a copy of the letter to the course coordinator and the office of the Associate Dean for Academic Affairs as soon as possible after receipt.

---

**Course Schedule**

See Schedule in FILES tab