PHM 287N, Biopharmaceutics
Fall 2019

Course Coordinator: Zhengrong Cui, Ph.D.
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   Office Hours: By appointment only because DPI is off UT Austin main campus

Course Unique Number(s): 58340

Classroom(s): PHR Room # 2.110

Class Days/Times: W 08:00-09:50 am

Course Faculty: Zhengrong Cui

Teaching Assistants: TBA

Academic Assistants/Advanced Academic Assistants: TBA
Course Information

Course Description:

Biopharmaceutics (PHM 287N) complements the basic pharmaceutics principles covered in PHM 387M. Subjects include core concepts in biopharmaceutics of drugs.

Course Prerequisites/Co-Requisites:

Admission to the professional pharmacy curriculum

Course Learning Objectives:

Biopharmaceutics (PHM 287N) introduces first-year PharmD students at The University of Texas at Austin to key concepts of biopharmaceutics. Topics including introduction to pharmaceutics, drug dosage forms, routes of drug administration, drug absorption and distribution, basic pharmacokinetics and pharmacodynamics, and bioequivalence are discussed with the purpose of improving the evaluation of drug products and the therapeutic management of patients. Additionally, the U.S. Food and Drug Administration new drug approval process and the applications of radioisotopes in biopharmaceutics and pharmacy practice are discussed. Upon the completion of this course, a student will be able to:

1. Demonstrate depth and breadth of knowledge of key concepts in Biopharmaceutics.
2. Integrate knowledge from biopharmaceutics to explain how specific drugs, drug products, and dosage forms work and evaluate their potential value in patients.
3. Articulate how knowledge in biopharmaceutics is integral to clinical reasoning and delivery of contemporary pharmacy services.
4. Apply knowledge in foundational biopharmaceutics, and effectively synthesize and communicate this knowledge to patients and other healthcare providers.
5. Apply knowledge in biopharmaceutics to solve therapeutic problems and advance patient care.

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 512-475-9400, Monday through Friday, 8 am to 6 pm.

Course Success:

Prereading is required prior to each class. The class session format is a review and in-depth discussion of the topics, with interactive Q&A of in-class discussion questions, during which students are expected to be able to apply prereading material to solve problems related to pharmaceutical research and pharmacy practice. Attendance and active participation in class discussions will provide students with the opportunity to seek clarification and apply the material. Here is a brief description of the instruction and learning model:
1. Prereading material will be available on Canvas one week before each lecture, except the first week.

2. Canvas will be used to offer quizzes, and Poll Everywhere will be used to answer in-class discussion questions. Please register for Poll Everywhere using your name as it appears in Canvas.

3. A quiz (based on prereading) to assess readiness for lecture and discussion will be offered at 8:00 am on the day of lecture. Each quiz (10 min) will include 10 or more questions. Quizzes will be graded.

4. A short PowerPoint presentation will be given to explain key concept(s) of the topics that will be discussed during each lecture.

5. Discussion questions will be presented. Students are encouraged to answer the questions based on prereading and PowerPoint presentations. Group discussion (face to face or via social media) is highly encouraged when answering the questions. Discussion questions will be graded. You will receive a half-point for participation, the full point if you answer correctly, but zero point if you do not answer.

6. Students, individually or as a discussion group, will be occasionally called to explain their answers to discussion questions to the class.

7. The instructor and TAs will be available during discussion periods to answer questions.

Course Communications:

Official course communications will take place in class, through email and on the Canvas course website. Students are advised to configure their Canvas settings to forward course announcements to their official email address. Canvas uses only the email address listed on the official University of Texas directory, so please check the University’s online directory to ensure your email 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), 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/ 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/
Course Policies

Course Grading Policies:

Readiness assessment quizzes will count toward 20% of the final grade (2 points each, 10 quizzes will be offered).

Discussion questions will count toward 10% of the final grade (1 point for each lecture, 10 points total).

Two exams will count toward 70% of the final grade, 35% for each exam.

Semester total = Readiness assessment quiz score + Discussion question score + Exam 1 + Exam 2

Course Grade:

Letter grades will be assigned according to the following scale:

<table>
<thead>
<tr>
<th>Score Range</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>60 – 69%</td>
<td>D</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

The number will be rounded to the nearest ones place, before assigning a letter grade. For example, 92.4% will be rounded to 92%, whereas 92.5% will be rounded to 93%.

Bonus points: Bonus points may be given in the exams or quizzes or by other mechanisms to be decided by the instructor.

NOTE: Missed readiness assessment quizzes and discussion questions cannot be made up.

Assignments:

Exam 1: Wednesday, October 9, 2019, PHR2.110, 8-9:50 am

Exam 2: Final exam, location and time to be announced when available

Quizzes based on prereadings to assess readiness for lecture and in-class discussion will be offered at 8:00 am on the days of lecture in PHR2.110.

Attendance:

- Because this course is taught by active learning, attendance and group discussion participation, although not required, are necessary to achieve the best learning experience and outcome. Lecture
attendance is thus highly encouraged, and it is the student’s responsibility to be on time to take readiness assessment quiz during each lecture.

- It is the student’s responsibility to attend class and conduct themselves in a manner respectful to both faculty and fellow classmates in the classroom.
- If you miss a class for any reason, then you will be held responsible for the materials covered and announcements made in your absence.

**Excused Absences:**
The only absences that will be considered excused are for religious holy days or extenuating circumstances due to an emergency. If you plan to miss class due to observance of a religious holiday, please let the course coordinator know at least two weeks in advance, preferably at the beginning of the semester. You will not be penalized for this absence, although you will still be responsible for any work you will miss on that day if applicable. Check with the course coordinator for details or arrangements.

**Attendance at Professional Meetings:**
It is the student’s responsibility to ASK permission IN ADVANCE if they plan to attend a professional meeting that would necessitate missing an exam, assignment, or other required course activity. It is at the discretion of the course coordinator as to whether to grant permission and allow the student to make up any missed work.

**Required Materials:** None

**Recommended Materials:**

Prereading and lecture handouts will be available on Canvas prior to each class. There is not a required textbook. However, as a suggested textbook, the *Applied Biopharmaceutics & Pharmacokinetics (7e)* by Leon Shargel & Andrew B.C. Yu is available as an eBook in The University of Texas at Austin library. [https://accesspharmacy.mhmedical.com/book.aspx?bookid=1592](https://accesspharmacy.mhmedical.com/book.aspx?bookid=1592)

**Classroom Expectations:**

You will need a calculator to occasionally answer questions that involve calculations. In addition, you will need an electronic device (e.g. laptop, smartphone, iPad, etc.) that allows you to access Canvas and Poll Everywhere during class/lecture time.

As a courtesy, please ensure that all cell phones are turned off or muted prior to attending class.

The readiness assessment quizzes will be offered via Canvas, and using your electric device(s) for anything other than taking the quiz is prohibited. For example, you may not use your electronic device(s) to open prereading material, notes, social media, or any website other than Canvas during the quiz.
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 exams 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 in prereading as well as at the beginning of each lecture. 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:
For exam 1 on Wednesday, October 9, 2019, we will have a group review section on October 16, 2019 during class time. For exam 2, which is also the final exam, a group review section MAY be offered during the second half of the exam.

Exam 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 to Dr. Cui by 5:00 pm CST on the day the group review section is offered. This will allow the error to be corrected in a timely manner.

For the Readiness Assessment Quizzes and in-class discussion questions, if you feel strongly about the correctness of an answer that was counted as wrong, you may submit a written appeal to Dr. Cui by
email. This appeal process must occur on the day the quiz key is released (i.e. by 5:00 pm CST).

*Any errors in score calculation will always be corrected.*

**Final Exam Review of Old Exams:**
Old exams will be not available for review prior to the final exam.

**Final Exam Re-Examination Policy:**
No final exam reconsideration requests or re-examinations are 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/](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

Course schedule will be worked out by students and the faculty during the first lecture.