

COURSE TITLE: PHRD 4081, CRN#61356, Infectious Diseases Pharmacotherapy

I. Course Coordinators:

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Course Instructors:

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II. Course Prerequisites/Corequisites

Pre-requisites – PHRD 4025, 4027, 4035, 4056
Co-requisites - 4083, 4099

III. Course Description

(6Cr.) Principles of pathophysiology, pharmacology, medicinal chemistry, clinical pharmacokinetics and pharmacotherapy (including both prescription and non-prescription medications) as they apply to infectious diseases therapy management.

IV. Curricular Objectives and Outcomes

Provide Comprehensive Patient Specific Pharmaceutical Care.

1. Evaluate the appropriateness of a given prescription or medication order based on patient and disease-specific factors.
2. Evaluate each patient for self-treatment or referral.
3. Develop and implement an evidence-based care plan. (pharmacology, medicinal chemistry, physiology, pathology, etc.)
4. Compound and/or dispense the most optimal formulation for drug delivery consistent with the patient needs and in harmony with the law.
5. Document all activities involved with the provision of comprehensive patient specific pharmaceutical care.

Communicate Effectively.

6. Counsel and educate patients regarding medication use, disease-state management, and health maintenance
8. Collaborate with other healthcare professionals using appropriate effective communication in both written and oral forms.
9. Read, write, speak, listen, and use data, media, and computers to send and respond effectively to communications for varied audiences and purposes.

Appropriately Manage and Use Resources of the Health Care System.

11. Apply patient and population specific data, quality assurance strategies, and research processes.
12. Ensure efficient, cost-effective utilization of human, physical, medical, informational, and technological resources in patient care.

Identify, Interpret, and Evaluate Literature Needed for the Provision of Drug Information and Pharmaceutical Care.

18. Explain methods for systematically evaluating literature.
19. Evaluate the appropriateness of research methodologies and statistical methods.
20. Draw appropriate conclusions from research results.

Think Critically.

24. Identify, retrieve, understand, analyze, synthesize, and evaluate information needed to make informed, rational, and ethical decisions.
25. Solve complex problems that require an integration of one's ideas and values within a context of scientific, social, cultural, legal, clinical, and ethical issues.
26. Display habits, attitudes, and values associated with mature critical thinking

Demonstrate Appropriate Interpersonal, Professional, and Ethical Behaviors.

27. Maintain professional competence
29. Identify, analyze, and resolve ethical problems involved in pharmacy practice.
31. Collaborate proactively with other health care professionals
33. Accept the responsibilities embodied in the principles of pharmaceutical care.
34. Demonstrate appropriate interpersonal, intergroup, and cross-cultural behaviors that promote respect and trust from peers, patients, and community members.

VII. Course Topics

This course will address the basic medicinal chemistry and pharmacology of antimicrobial agents and the pathophysiology, clinical presentation, epidemiology and therapeutic management of common infectious disorders. This will provide the core knowledge and skills required to formulate rational antimicrobial regimens for the treatment of common human infectious disorders.

VIII. Instructional Methods and Activities

Instructional methods may include: traditional lectures, internet-based lectures with in-class discussion, distance learning, web based learning, in-class discussion of patient cases, small group discussion, problem-based learning, case-based learning, and individual projects. Quizzes or other graded in-class exercises may also be administered.

IX. Evaluation and Grade Assignment

- There will be three examinations and a final examination given using ExamSoft®
- Quizzes/assignments will be given as deemed necessary by each faculty member. The points available from these quizzes and assignments, not to exceed 50 points, will be added into the denominator for the total number of points available from the course, and course grade determined accordingly.
- Examination dates are scheduled in the course syllabus and will only be changed in the event of University closure.
- Examinations may be multiple choice, fill in the blank, short-answer, case or scenario based discussion, essay, or any other format deemed necessary by the lecturers and course coordinator.
- Information acquired from previous lectures in the course and from other courses in the professional pharmacy curriculum may be needed in preparing for these examinations.
- Examinations will cover material (readings, outside assignments) not covered in class.
- Examinations will NOT be returned to the student. A time when students can review their examinations will be scheduled within one week of grades being posted during a time when there are no other classes scheduled. A review of the final examination will take place at a time TBD.
- Use of programmable calculators or cellular phones will not be allowed during quizzes or examinations.
- Students wishing to review their examinations with the course coordinators or with a specific lecturer must do so *within 2 weeks* of when the test scores are posted, or *within 1 week* of the time that the score for the final examination is posted.
- In the event that a question is eliminated from an examination after it has been printed, the examinations will be graded based on the remaining number of questions and adjusted to represent correct number of points.
- Problems or issues with question(s) should be first directed, via e-mail, to the instructor teaching that material and cc'd to the course coordinators. The student is encouraged to include references to support their challenge of the question in this email. The challenge will be reviewed by the instructor and course coordinators as necessary. Discussion of a dispute will occur only after a written query is submitted, with reasoning for the challenge. Challenges of test questions will only be considered within 2 weeks of when the test scores

are posted or within 1 week of the time that the score for the final examination is posted.

- Individual test grades for the course will be strictly based upon these percentages. There will be no curving or adjustments of grades except in the case of an incorrect question. In the event that there is an issue with a particular test question, adjustments to scores will be made based on discussions between the test question writer and the course coordinator.
- Undergraduate mid-term grades will be posted on-line for students to view via Banner. Mid-term grades indicate a student's status at mid-semester only and do not indicate the final performance outcome of a student.

<u>Assessment method</u>	<u>Points</u>
Examinations:	
Exam #1	90
Exam #2	100
Exam # 3	90
Final Exam	100
Assignments/quizzes	TBD (not to exceed 50)

Grading Scale (based upon total number of points for semester):

89.5 – 100%	A
79.5 – 89.49%	B
69.5 – 79.49%	C
59.5 – 69.49%	D
≤59.49%	F

- Students scoring <70% on any exam and an overall exam average <70% (excludes quizzes, assignments, bonus, etc.) will be required to submit to the coordinator written, narrative responses to select lecture objectives that will be provided within 24 hours of the posting of their exam grade to Moodle. These objectives will be in the form of a Moodle assignment and represent unit- or lecture-level objectives to be tested upon in the next scheduled course exam.
- Written responses must be submitted no later than one calendar week before the next scheduled exam. Responses must be written in complete sentences and may not be copied or pasted from any source, including class notes, treatment guidelines, textbooks, or any internet site. Submissions found to contain responses that have not been written in a student's own words will be considered a failure to submit.
- In addition, students will be **required** to review each failed exam's ExamSoft-generated missed item report with the instructor responsible for each section of material. The discussion should include the student's reasoning for the incorrect answer as well as the reason for the correct answer.
- Failure to submit this required assignment will result in ineligibility to remediate.

X. Class Policies and Procedures

At a minimum, all policies stated in the current *ULM Student Policy Manual & Organizational Handbook* should be followed (see

<http://www.ulm.edu/studentpolicy/>). Additional class policies include:

A. Textbook(s) and Materials:

i. Required

- a. Chisholm-Burns MG, Wells BG, Schwinghammer TL. *Pharmacotherapy Principles and Practice*. 3rd edition, New York, McGraw-Hill, Inc., 2013. ISBN9780071780469 b.

- b. Brunton L, Lazo J, Parker K. Goodman and Gilman's, The Pharmacological Basis of Therapeutics, Twelfth Edition, McGraw-Hill, 2011.
- ii. Recommended:
 - a. Lemke TL, Williams DA. Foye's Principles of Medicinal Chemistry. 7th edition, Baltimore, Walters Kluwer/Lippincott Williams & Wilkins, 2012.
 - b. Mandell GL, Bennett JE, Dolin R. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 7th edition, Churchill Livingstone. 2010. ISBN:9780443068393
 - c. DiPiro JT, Talbert RL, Yee GC. Pharmacotherapy a pathophysiologic approach. 9th edition, New York, McGraw-Hill, Inc., 2014. ISBN:9780071780469
- iii. Additional reading materials may be posted by course faculty.
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B. Attendance Policy:

Class attendance is required. Class attendance is regarded as an obligation as well as a privilege, and students are expected to know attendance regulations and to attend regularly and punctually at classes in which they are enrolled. Failure to do so: (1) may prevent access to the classroom during regularly scheduled times; (2) may jeopardize a student's scholastic standing; and (3) may lead to suspension from the college or University. Students shall submit excuses for all class absences to professor within three class days after returning to classes. Professors shall accept an official University excuse. With the following exceptions professors are to determine whether absences are excused or unexcused: 1) Absences arising from authorized trips away from the University or from special duties at the University shall be excused. 2) Absences arising from a student's confinement in a hospital or other in-patient facility or doctor's excused absences shall be excused. Students are responsible for verifying this information to the faculty. 3) Absences arising from a death in the immediate family shall be excused. The immediate family is defined as spouse, child, step-child, mother, father, sister, brother, grandmother, grandfather, step-mother, step-father, step-brother, step-sister, aunt, uncle, mother-in-law or father-in-law.

C. Make-up Policy:

If a student cannot attend an exam due to valid University excuse, he/she must speak directly with the course coordinator, as soon as possible. The course coordinator **must** be notified **prior** to an examination if a student misses an exam. The ULM COP Excused Absence Policy must be followed. Please refer to the official document for details. In case of emergency, the course coordinator must be notified within 48 hours of the emergency. Failure to do so will result in a zero (0) grade for that exam. Make-up exams will be prepared at the same or higher level than the original exam. The format of the make-up exam may be written or oral. Failure to attend a scheduled make-up exam will result in a zero (0) grade for that exam. *Students missing an exam due to a University approved excuse will take the make-up exam during the week of finals, or as determined by the course coordinator.*

D. Academic Integrity:

Faculty and students must observe the ULM published policy on Academic Dishonesty (see Page 4 in *ULM Student Policy Manual* -<http://www.ulm.edu/studentpolicy/>).

All professional students will adhere to the standards set forth in the College of Pharmacy's Code of Conduct
<http://www.ulm.edu/pharmacy/documents/ospa/codeofconductv82011.pdf>

Cheating, plagiarism, or other inappropriate conduct will not be tolerated. Academic cheating includes but is not limited to the accomplishment or attempted accomplishment of the following:

1. Copying or obtaining information from another student's test paper.*
2. Using, during a test, materials not authorized by the person giving the test.**
3. Collaborating, conspiring, or cooperating during an in-class or take-home test with any other person by giving or receiving information without authority.
4. Stealing, buying, or otherwise obtaining all or part of an unadministered test.
5. Selling or giving away all or part of an unadministered test or any information concerning specific questions and items on an unadministered test.
6. Requesting, bribing, blackmailing, or in any other way causing any other person to obtain an unadministered test or information about an unadministered test or a test in the process of being administered.
7. Substituting for another student, or permitting any other person to substitute for oneself to take a test.
8. Submitting as one's own, in fulfillment of academic requirements, any work prepared totally or in part by another person.
9. Any selling, giving, or otherwise supplying to another student for use in fulfilling academic requirement any work.
10. Submitting artificially produced data or information in the place of descriptive, experimental, or survey results.
11. Any other devious means of securing an unearned grade in a non-credit course or in a course offered for credit.
12. Using, during a test, any electronic storage device, wireless and/or internet-based technology, or any other means that provides information not authorized for use during the testing period.

*A student looking on another student's paper is considered cheating.

**The presence on one's person (or in close proximity thereto) of a condensation of test information which could be regarded as a "cheat sheet" will be considered adequate evidence to establish cheating.

Plagiarism is the use of any other person's work (such work need not be copyrighted) and the unacknowledged incorporation of that work in one's own work offered for credit.

Censures (Penalties)

Academic dishonesty will result in a referral to Committee on Ethical and Professional Standards with a recommendation for a grade of "F" for the course and expulsion from the College. Academic dishonesty includes but is not limited to the use of information taken from others work or ideas, the provision of help to others on non-collaborative evaluations (tests, quizzes, etc.), collaboration on take home exams, or the use of unapproved information or electronic devices to assist in obtaining an answer to the question.

E. Course Evaluation Policy: Students are expected to complete the on-line course evaluation. It is requested that they also complete the College of Pharmacy course and instructor evaluations, including providing comments. In addition, individual feedback is encouraged throughout the course.

F. Student Services: Information concerning student services in the College of Pharmacy can be found in the College of Pharmacy Student Handbook. In particular, students should pay special attention to the Colleges technical standards and policies concerning students with special needs (<http://ulm.edu/counselingcenter/special.htm>). ULM student services, such as Student Success Center (<http://ulm.edu/cass/>), Counseling Center (<http://ulm.edu/counselingcenter/>), and Student Health Services, is available at the following Student Services web site <http://ulm.edu/studentaffairs/>

If you are having problems with emotional, social, and/or behavioral issues please call any of the mental health clinics on the ULM campus to make an appointment. All services are free to ULM students, staff, and faculty, and are strictly confidential.

COP Office of Student and Professional Affairs: 342-3800

ULM Counseling Center: 342-5220

Marriage and Family Therapy Clinic: 342-5678

Community Counseling Center: 342-1263

ULM HELPS (Helping Educators and Learners Prevent Suicide) Project Office: 342-1335

The University of Louisiana at Monroe strives to serve students with special needs through compliance with Sections 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. These laws mandate that postsecondary institutions provide equal access to programs and services for students with disabilities without creating changes to the essential elements of the curriculum. While students with special needs are expected to meet our institution's academic standards, they are given the opportunity to fulfill learner outcomes in alternative ways. Examples of accommodations may include, but are not limited to, testing accommodations (oral testing, extended time for exams), interpreters, relocation of inaccessible classrooms, permission to audiotape lectures, note-taking assistance, and course substitutions.

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds, including federal loans and grants. Furthermore, Title IX prohibits sex discrimination to include sexual misconduct, sexual violence, sexual harassment and retaliation. If you encounter unlawful sexual harassment or gender-based discrimination, please contact Student Services at 318-342-5230 or to file a complaint, visit www.ulm.edu/titleix.

G. Emergency Procedures:

Please review the emergency escape plan in the classrooms and hallways of the Bienville building. Move quickly and orderly to the appropriate stairwell and exit the building. The meeting place for this class will be the far end of the north parking lot between Bienville and Broadmoor Blvd. Under no circumstances is the elevator to be used for emergency evacuation. Any student needing assistance should notify the professor immediately. For emergencies, to contact University Police, call 1-911 from landlines and **342-5350** from cell phones.

H. Discipline/Course Specific Policies:

Students are responsible for all course information on Moodle and/or instructor websites. They are expected to check these sources regularly to access class materials, required readings, assignments, and other information necessary to excel in this course.

XI. Tentative ID Course Schedule January 19- May 5, 2016

#	Date	Topic (110 minute lecture period)	Instructor	Points on Exam / Due Date
1	1/19	Common organisms, normal flora, pathogenesis & bacterial identification Antimicrobial testing and laboratory analysis	A. Pate	10 pts/Feb 10
2	1/20	Medicinal Chemistry -Antibacterial cell wall active agents	El Sayed	10 pts/Feb 10
3	1/21	Medicinal Chemistry- Antibacterial cell wall active agents	El Sayed	10 pts/Feb 10
4	1/26	Pharmacology -Antibacterial cell wall active agents	Shah	10 pts/Feb 10
5	1/27	Pharmacology - Antibacterial cell wall active agents	Shah	10 pts/Feb 10
6	1/28	Medicinal Chemistry-Antibacterial protein synthesis inhibitors Quiz 1	El Sayed	10 pts/Feb 10
7	2/2	Pharmacology – Antibacterial protein synthesis inhibitors	Shah	10 pts/Feb 10
8	2/3	Medicinal Chemistry- Antibacterial protein synthesis inhibitors	El Sayed	10 pts/Feb 10
9	2/4	Pharmacology – Antibacterial protein synthesis inhibitors	Shah	10 pts/Feb 10
Mardi Gras Break (2/8-2/10)				
10	2/11	Medicinal Chemistry – Antibacterial misc. agents & UTIs	El Sayed	10 pts/Mar 4
11	2/16	Pharmacology - Antibacterial misc. agents	Shah	10 pts/Mar 4
12	2/17	Surgical Prophylaxis	A. Pate	10 pts/Mar 4
	2/18	Exam 1 (lectures 1-9) 9 lectures		10 pts/Mar 4
13	2/23	General therapeutic concepts Pharmacokinetic and Pharmacodynamic principles	M. Lewis	10 pts/Mar 4
14	2/24	Pharmacokinetics and Therapeutic Drug Monitoring: vancomycin/aminoglycosides	M. Lewis	10 pts/Mar 4
15	2/25	Pharmacokinetic application Quiz 2	M. Lewis	10 pts/Mar 4
16	3/1	Urinary Tract Infections	J. Smith	10 pts/Mar 4
17	3/2	SIRS / Sepsis / Septic Shock	Posey	10 pts/Mar 4
18	3/3	Otitis Media, sinusitis, pharyngitis	Tice	10 pts/Mar 4
19	3/8	Skin/Soft Tissue Infections, Bite Wounds	S. Hill	10 pts/Mar 4
20	3/9	Osteomyelitis/Septic Arthritis	S. Hill	10 pts./Apr 4
21	3/10	Catheter-related infections / Infective Endocarditis	Lafitte	10 pts./Apr 4
	3/15	Exam 2 (lectures 10-19) 10 lectures		
22	3/16	Lower respiratory tract infections (CAP)	A. Pate	10 pts./Apr 4
23	3/17	Lower respiratory tract infections (HAP, HCAP, etc.)	A. Pate	10 pts./Apr 4
24	3/22	Central nervous system infections	Lafitte	10 pts./Apr 4
25	3/23	Medicinal Chemistry: Antifungals	El Sayed	10 pts./Apr 4
26	3/24	Pharmacology: Antifungals	Shah	10 pts./Apr 4
3/25-4/1 Spring break/Easter Break				
27	4/5	Fungal Infections	Lafitte	10 pts./Apr 4
28	4/6	Intra-abdominal Infections	J. Smith	10 pts./Apr 4
29	4/7	STDs	Caldwell	10 pts/Apr 28
30	4/12	Pharmacology: HIV agents	Shah	10 pts/Apr 28
31	4/13	Medicinal Chemistry: HIV agents	Jois	10 pts/Apr 28
	4/14	Exam 3 (lectures 20-28) 9 lectures		
32	4/19	Medicinal Chemistry: HIV agents	Jois	10 pts/Apr 28
33	4/20	Medicinal Chemistry: Antiparasitics and viral agents (non-HIV) Quiz 3	Jois	10 pts/Apr 28
34	4/21	HIV	Caldwell	10 pts/Apr 28
35	4/26	HIV	Caldwell	10 pts/Apr 28
36	4/27	OI	Horace	10 pts/Apr 28
	4/28	PCOA Exam Day		
37	5/3	Pharmacology: Antiparasitics and viral agents	Shah	10 pts/Apr 28
38	5/4	Parasitic infections	Lafitte	10 pts/Apr 28
39	5/5	Viral Infections (including Herpes Zoster)	Lafitte	10 pts/Apr 28
		Exam 4 (lectures 29-39) 10 lectures		

Class will meet: **Tuesday & Thursday 9:00-10:50 AM and Wednesday 1:00-2:50 PM, (B202)**