

Aging and Drug Use in the Elderly
PHRD 5051
CRN# 42337



* = preferred contact method

I. Contact Information

Course Coordinator

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II. Course Prerequisites/Corequisites

PHRD 4027, PHRD 4029, PHRD 4035

III. Course Description

2 cr. An examination of normative and pathological aging and their effects on drug use and response in the aged population.

IV. Curricular Objectives and Outcomes

Domain 1 – Knowledge

1.1 Scientific thinking (Learner) – Seek, analyze, integrate, and apply foundational knowledge of medications and pharmacy practice (biomedical; pharmaceutical; social, behavioral, administrative; clinical sciences; drug classes; and digital health).

Domain 2 – Skills

2.1 Problem-solving process (Problem solver) – Use problem solving and critical thinking skills, along with an innovative mindset, to address challenges and to promote positive change.

2.2 Communication (Communicator) – Actively engage, listen, and communicate verbally, nonverbally, and in writing when interacting with or educating an individual, group, or organization.

2.3 Cultural and structural humility (Ally) – Mitigate health disparities by considering, recognizing, and navigating cultural and structural factors (eg, social determinants of health, diversity, equity, inclusion, and accessibility) to improve access and health outcomes.

2.4 Person-centered care (Provider) – Provide whole person care to individuals as the medication specialist using the Pharmacists' Patient Care Process.

2.5 Advocacy (Advocate) – Promote the best interests of patients and/or the pharmacy profession within healthcare settings and at the community, state, or national level.

2.6 Medication-use process stewardship (Steward) – Optimize patient healthcare outcomes using human, financial, technological, and physical resources to improve the safety, efficacy, and environmental impact of medication-use systems.

2.8 Population Health and Wellness (Promoter) – Assess factors that influence the health and wellness of a population and develop strategies to address those factors.

Domain 3 – Attitudes

- 3.1. Self-awareness (Self-aware) – Examine, reflect on, and address personal and professional attributes (eg, knowledge, metacognition, skills, abilities, beliefs, biases, motivation, help-seeking strategies, and emotional intelligence that could enhance or limit growth, development, & professional identity formation).
- 3.2 Professionalism (Professional) – Exhibit attitudes and behaviors that embody a commitment to building and maintaining trust with patients, colleagues, other health care professionals, and society.

V. ACPE Appendix 1 Required Elements

Biomedical Sciences

- Human Physiology – Homeostatic function and normal response reactions across the lifespan of non-diseased human cells, organs, and systems.
- Pathology/Pathophysiology – Basic principles, mechanisms, functional changes and metabolic sequelae of human disease impacting cells, organs, and systems.

Social/Administrative/Behavioral Sciences

- Cultural Awareness – Exploration of the potential impact of cultural values, beliefs, and practices on patient care outcomes.
- Pharmacoeconomics – Application of economic principles and theories to the provision of cost-effective pharmacy products and services that optimize patient-care outcomes, particularly in situations where healthcare resources are limited.
- Pharmacoepidemiology – Cause-and-effect patterns of health and disease in large populations that advance safe and effective drug use and positive care outcomes within those populations.
- Professional Communication – Analysis and practice of verbal, non-verbal, and written communication strategies that promote effective interpersonal dialog and understanding to advance specific patient care, education, advocacy, and/or interprofessional collaboration goals.
- Professional Development/Social and Behavioral Aspects of Practice – Development of professional self-awareness, capabilities, responsibilities, and leadership.

Clinical Sciences

- Clinical Pharmacokinetics – Application of basic pharmacokinetic principles and mathematical models to calculate safe and effective doses of drugs for individual patients, and adjust therapy as appropriate through the monitoring of drug concentration.
- Patient Assessment – Evaluation of patient function and dysfunction through the performance of tests and assessments leading to objective (e.g., physical assessment, health screening, and lab data interpretation) and subjective (patient interview) data important to the provision of care.
- Patient Safety – Analysis of the systems- and human-associated causes of medication errors, exploration of strategies designed to reduce/eliminate them, and evaluation of available and evolving error-reporting mechanisms.
- Pharmacotherapy – Evidence-based clinical decision making, therapeutic treatment planning, and medication therapy management strategy development for patients with specific diseases and conditions that complicate care and/or put patients at high risk for adverse events. Emphasis on patient safety, clinical efficacy, pharmacogenomic and pharmacoeconomic considerations, and treatment of patients across the lifespan.
- Self-Care Pharmacotherapy – Therapeutic needs assessment, including the need for triage to other health professionals, drug product recommendation/selection, diagnosis, prescribing, and counseling of patients on non-prescription drug products, non-pharmacologic treatments and health/wellness strategies including nutraceuticals.

VI. Course Specific Objectives and Outcomes

At the conclusion of this course, the student will be able to:

- Define the principles of senior care pharmacy.
- Discuss advocacy information for older adults and their caregivers related to interventions and behaviors that promote physical and mental health, nutrition, function, safety, social interactions, independence, and quality of life.
- Identify the principles and practices of safe, appropriate, and effective medication use in older adults.
- Describe biological, physical, cognitive, psychological, and social changes commonly associated with aging.
- Describe communication strategies to overcome potential sensory, language, and cognitive limitations in older adults.

VII. Course Topics

This course will focus primarily on iatrogenic and age-related causes of morbidity and mortality in the elderly, which may include but are not limited to, pathophysiological aging, medication nonadherence, falls, inappropriate medication use, mental health issues, cognitive impairment, and other age-related diseases with special considerations, geriatric assessment, and communicating with the elderly.

VIII. Instructional Methods and Activities

Course topics will be covered through multiple methods which may include, but are not limited to, synchronous and asynchronous lectures, assigned readings, individual and group assignments, case studies, videos, discussions, games, reflective writing, and community service activities.

IX. Evaluation and Grade Assignment

- Grades are assigned base on faculty assessment of participation in activities and quality of work on assignments. Total points for the course will come from the point value of all assignments.
- Quizzes or other graded exercises may be given, announced or unannounced, as deemed necessary by the faculty member, and will be added to the total points available for the course.
- Appropriate participation in class discussions and activities is integral to the development of professionalism in your pharmacy education. Students are expected to be present and actively participate during synchronous class meetings and other activities and assignments. **Unexcused class absences or failure to participate in class activities will result in a zero (0) for professionalism/participation points for that class period.**
- If a student anticipates missing an assignment deadline or scheduled graded activity in class, they **MUST** contact the course coordinator **PRIOR** to the graded exercise.
- **Students arriving more than 5 minutes after an in-class graded group activity has started will not be allowed to participate with the rest of the group. The student may start the activity independently but will be required to stop when the last group completes the activity. Ten percentage points will be deducted from the points earned up to that time.**
- Asynchronous assignments are considered late when they are not turned in by the deadline posted for the assignment in Canvas. **Late assignments without a prior approved excuse will NOT be accepted and will result in a zero (0) for the assignment.**
- **Flex Policy:**
Due dates for assignments are posted in Canvas. However, I recognize that sometimes “life happens.” In these instances, you may use two allotted “flex days.” These days allow you to submit an assignment up to two days late without penalty. You can use these days for any weekly assignments and for any reason. You do not need to provide me with the reason; simply email me and tell me

how many of your flex days you would like to use before the assignment deadline. **You MUST email me by Wednesday at 8:00 am on the assignment due date if you want to use the flex day policy.** For example, if an assignment is due on Wednesday at 11:59 pm, using one flex day would extend the deadline to Thursday at 11:59 pm and using two flex days would extend it to Friday at 11:59 pm. Once you've exhausted your flex days, late assignments will not be accepted and you will receive a zero for the assignment (0). **This flex policy does not cover mid-term and final case exercises, the Bingo Game, and the Walk in My Shoes Project.**

- *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.*

Semester Grade Determination:

Bingo Game	100 points
Walk in My Shoes Project	100 points
Mid-Term Case Exercise	50 points
Final Case Exercise	50 points
Weekly Assignments	20 points each (TBD)
Professionalism/Participation	10 points per class period
Other Quizzes & Assignments	TBD

GRADING SCALE:

89.5% - 100% = A
79.5% - 89.4% = B
69.5% - 79.4% = C
59.5% - 69.4% = D
≤ 59.5% = F

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:

- There is no required textbook for the course.
- Students must use a variety of literature sources, including appropriate text books, journals, and credible online information sources (including primary literature). Students must have adequate computer hardware/software for information retrieval and electronic communication.

B. Attendance Policy:

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 may: (1) prevent access to the classroom during regularly scheduled times; (2) jeopardize a student's scholastic standing; and (3) lead to suspension from the College or University. Students must submit excuses for class absences to course coordinators 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 providing documentation to the faculty, which will be verified. 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:

Each student is expected to attend each exam/graded exercise at the date and time specified. If a student cannot attend an exam/graded exercise 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/graded exercise. 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/graded exercise. The course coordinator reserves the right to handle makeups for students missing an exam/graded exercise due to a University approved excuse on an individual basis. However, failure to attend a scheduled make-up exam/graded exercise will result in a zero (0) grade for that exam/graded exercises. <http://www.ulm.edu/pharmacy/currents.html>

D. Academic Integrity:

Faculty and students must observe the ULM published policy on Academic Dishonesty (see the 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/currents.html>

- Plagiarism of published work or the work of other students will not be tolerated. This includes "re-working" of documents previously published or submitted by another student. Plagiarized work will not be accepted for credit and will result in a zero (0) grade for that assignment.

Artificial Intelligence Policy (Conditional Use)

Students will be permitted to use Artificial Intelligence (AI) in this course only for specified assignments/tasks designated by the instructor and/or explicitly stated in the directions.

Additionally, the instructor is at liberty to indicate the specific AI tool that students can use. The goal of allowing the use of AI for specific assignments is to make space for critical engagement and practice with these tools. Please note that while we may use AI for some in-class activities, students may not use AI tools for any other assignment submissions unless explicitly stated by the instructor and/or directions.

In this course you are permitted to use Generative AI only for planning, organizing, outlining, brainstorming, and copy-editing your work for any assignment, with one exception (see below). However, you are NOT permitted to use GenAI for composition, writing, or content generation. In other words, the final product that you turn in should be at least 75% your work.

One exception is the Walk in My Shoes project journal. You may use GenAI to plan, organize, outline, brainstorm, compose, write, generate, and copy-edit the journal using the information gained during your interview.

Citation: Students should also include in-text citations of any AI-informed information using guidelines approved by course instructors. For assignments where AI has been permitted, students must include the citation in the following format at the end of the document with references or works cited.

- Tool name and version, date (YYYY, MM, DD). Prompt with explanation. Company name and URL.
- Ex: (Claude 3.0. (2024, Mar 14). Please help me write research survey questions on water usage in San José with the target population of people living in working class neighborhoods. This iterative process, working with Sage's Blue Book on Interview Questions, helped me craft survey 10 questions based on the area. Anthropic, URL)

In this course, misuse of AI consists of failing to cite information provided by AI tools, failing to check for accuracy, or falsely presenting ideas or products as their own. Inaccuracies, made-up citations, or any other false information found in an assignment is the responsibility of the student and may be classified as academic misconduct - even if the original errors are the fault of generative AI outputs.

Censures (Penalties)

Academic dishonesty will result in a referral to the Academic Standards and Ethics Committee. If the student is found guilty of Ethical and Professional misconduct by the committee, they will receive a zero for the assigned points (graded assignment or test) and up to an "F" in the course from the course coordinator in addition to any disciplinary action recommended by the Academic Standards and Ethics Committee. 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 answers.

E. Course Evaluation Policy:

At a minimum, students are expected to complete the on-line course evaluation.

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 College's technical standards and policies concerning students with special needs. (<http://www.ulm.edu/studentpolicy/studentpolicy.pdf>). 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/>. Students with special needs requiring accommodations MUST follow the process described at <http://rxweb.ulm.edu/pharmacy/student/specialneeds.pdf>.

Mental Wellness on the ULM Campus

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. **The course coordinator reserves the right to adjust the syllabus or schedule, in accordance with University and College policies and procedures.**

H. Other:

Federal Regulations require determination and verification of every students' physical location while enrolled in classes (where they are physically located while taking classes), regardless of the delivery method (on campus, online). At the beginning of every semester and whenever physical location changes, students must update or verify their current location through banner https://ssb-prod.ec.ulm.edu/PROD/bwggkogad.P_SelectAtypUpdate. Students should do this by the end of the first week of classes.

I. Discipline/Course Specific Policies:

This course is a major requirement for the Doctor of Pharmacy degree. Completion of degree requirements leads to eligibility for professional licensure and/or certification in Louisiana upon graduation. Federal Regulations require universities to provide information to students about the alignment between Louisiana's requirements and those of other states. ULM has created a web page with discipline-specific information containing hyperlinks to Licensure Boards in the United States <https://www.ulm.edu/professional-licensure-disclosures/index.html>. Program Directors and/or faculty will discuss this information with you during advising or other program meetings but is also available to answer questions and address any concerns you might have. It is also important to note that licensure or certification requirements are subject to change. Although ULM Program Directors annually review and update licensure information for every state, the faculty recommends that before enrolling in a program and throughout enrollment, students communicate with the applicable state board to confirm understanding and whether upon completion of ULM's program, they will meet requirements.

Students are responsible for all course information on Canvas and/or other instructor websites. You 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 Course Schedule (*subject to change at the discretion of the Course Coordinator)

Contact Information:

Michelle Zagar, Pharm.D., M.Ed.

Clinical Professor

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Office Hours: TBD

Office Phone: 342-3173

*Email: zagar@ulm.edu

Schedule:

Class Meeting Time: Wednesdays 3:00 – 4:50

Class Meeting Place: Bienville 110

Class	Topic
1	Course Orientation / Senior Care Pharmacy
2	Aging Simulation
3	Principles of Aging
4	Geriatric Assessment
5	Communicating with Older Adults
6	Enhancing Medication Adherence
7	Mid-Term Case Exercise
8	Aging & Mental Health
9	Medication-Related Problems / Inappropriate Medication Use in Older Adults
10	Fall Prevention
11	Final Case Exercise (Cumulative)
12	Current Topics in Older Adult Health
13	Final Project Presentations