

PHM 590: Case Studies in Clinical Pharmacology

Fall 2024, 9/11/24 – 12/11/24

Faculty & Staff Information

Course Director Biosketch

Contributing Faculty

Curriculum Assistants (CAs)

Who to Contact with Questions

Course Information

Course Description & Overview

Textbooks and Resources

Grading Schema

Grading Requirements

Missed Session

Policies & Resources

Academic Support Resources at MSUCOM

College or University Policies with Which Enrolled Students Must Be Familiar


Student Feedback

Course Schedule and Changes to Schedule or Requirements

Addendum: Course Schedule

Faculty & Staff Information

Course Director Biosketch

| Contact Information | Biosketch |
|---|--|
|  <p>Carolina Restini, PharmD, Ph.d restinic@msu.edu</p> <p>586-263-6757 (MUC) 313-578-9646 (DMC)</p> <p>Primary Site: MUC and DMC</p> <p>Office Hours: on demand. Please email me to set up meetings/private office hours.</p> | <p>Areas of knowledge: Cardiovascular Pharmacology, Hypertension, Pharmacoepidemiology, and Healthcare / Medical Education and curriculum development.</p> <p>She earned a PharmD and a PhD in Pharmacology from the School of Medicine at the University of São Paulo, Brazil, with part of her training at King's College of London. Until 2016, she taught and mentored students from health-related programs in Brazil. She joined MSUCOM in 2017, where she serves as a pharmacology thread director for the DO program and a pharmacology course director for the PA program.</p> <p>Her research is focused on the practical application of pharmacology to bridge bench research and patient care, particularly in the areas of cardiovascular and renal pharmacology. She is also committed to integrating pharmacology core concepts into community service, street medicine, medical training, and interprofessional education. To foster student engagement, she employs active didactic methods (e.g., PBL, CBL, service learning, etc.) and actively solicits student feedback. As an educator, she aims to enable students, as future providers, to collaborate with diverse healthcare professionals and promote equity and inclusion to address health disparities.</p> |

Contributing Faculty

| Name | Email | Phone | Location |
|-------------------------------|--|------------------------------|------------|
| Carolina Restini, PharmD, PhD | restinic@msu.edu | 586-263-6757 313-578-9646 | MUC DMC |
| Reza Nassiri, PhD | nassiri@msu.edu | 814-566-3484 | EL |
| Jamie Alan, PharmD, PhD | alanjami@msu.edu | 517-353-3805 | EL |

Curriculum Assistants (CAs)

| Name | Email | Phone | Location |
|-----------|--|--------------|----------|
| Smita Deb | debsmita@msu.edu | 313-578-9628 | DMC |

Who to Contact with Questions

| Question, Need, or Topic | Contact Person |
|------------------------------|--|
| Course - Logistics & Details | Contact CA or CD for rooms, groups, materials, links, schedules, etc. |
| Course - Overall | Contact Course Directors (in bold above). |
| Course - Specific Content | Contact Contributing Faculty for the content (see schedule). |
| Absences | Contact Course Directors (in bold above). |
| Behavior | Submit exemplary or concerning behavior to the CGPI . |
| Enrollment | Inquire with MSUCOM Registrar . |
| Personal/Wellness Needs | Inquire with Wellness & Counseling . |
| Study Skills or Progression | Inquire with Academic & Career Advising . |
| Technical Support | Inquire with MSU IT Service Desk . Indicate COM affiliation. |

Course Information

Course Description & Overview

PHM 590- Case Studies in Clinical Pharmacology- is a 2-credit hour course that allows students who have completed a basic pharmacology course/discipline to learn, refresh, and apply basic knowledge of pharmacology to clinical therapeutic problems. The Course will be presented through Zoom meetings with chat and polling participation. There will be nongraded questions in multiple-choice, clinical vignette-style for students for rich discussions during the sessions. A great opportunity to review core concepts in Pharmacology and integrate them into clinical settings.

The American Osteopathic Association has identified core competencies essential for future practice as an osteopathic physician. These are embedded throughout our program and course objectives. By the end of this course, learners are expected to accomplish the following:

| Competency | Related Course Objective(s) |
|------------------------|---|
| Medical Knowledge | <ol style="list-style-type: none"> 1. Apply existing knowledge to clinical therapeutic problems. 2. Find, interpret, and apply new drug information to clinical therapeutic problems. 3. Apply knowledge of pharmacogenomics to personalized therapeutics. 4. Recognize and apply therapeutic concepts to a diverse population, identifying the importance of precision medicine in geriatrics, women/menopause, and pediatrics. 5. Explain the foundation for integrating Autonomic Pharmacology into diseases affecting the cardiovascular, respiratory, endocrine, and central nervous system. 6. Discuss clinical cases and questions to practice for the board exams founded on the following topics: <ol style="list-style-type: none"> a. Drugs affecting metabolism and endocrine-related diseases b. Psychoactive Drugs c. Adverse Drug Reactions/Drug Interactions d. Anti-inflammatory Drugs e. Pharmacology of irritable bowel disease f. Antibiotic Resistance g. Travel-Associated Infectious Diseases h. Cardiovascular Drugs i. HIV/AIDS j. COVID-19 |
| Systems-Based Practice | <ol style="list-style-type: none"> 7. Discuss clinical cases and questions to practice for the board exams. |

Textbooks and Resources

Most MSUCOM courses make use of [D2L](#) as a course website to share materials, [Google Calendar](#) to share course schedules, [Zoom](#) to host online meetings, and [iClicker](#) to facilitate audience polling. Visit <https://bit.ly/msucomtech> for reminders on how to access and use these resources. Other course-specific resources include:

| Status | Resource |
|--------|----------|
| | |

| | |
|-----------------|---|
| <p>Required</p> | <ul style="list-style-type: none"> • Cases and resources posted at D2L related to each session. The cases will be posted one week ahead of the respective session. <p style="text-align: center;">Note: didactic material used by the instructor to resolve the cases during the lecture will be posted <u>after the respective lecture</u>.</p> <ul style="list-style-type: none"> • Utilize relevant current medical literature. |
| <p>Optional</p> | <ul style="list-style-type: none"> • Goodman and Gilman’s The Pharmacological Basis of Therapeutics, 14th ed. 2023. https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/book.aspx?bookid=3191 • Katzung’s Basic and Clinical Pharmacology. 15th ed. 2021. https://accessmedicine-mhmedical-com.proxy2.cl.msu.edu/book.aspx?bookid=2988 |

Grading Schema

Course scores will be determined using the following formula:

$$\frac{(\text{Combined Individual Activity or Assessment Points} + \text{Exam})}{(\text{Total Points Possible})} * 100\% = \text{Final Percent Score}$$

Course grades will then be assigned based on those course scores as follows:

- **P or Pass** - Satisfactory performance has been achieved, and credit will be granted if a student’s final percent score is 70% or higher.
- **N or No Grade** - Satisfactory performance has not been achieved and credit will not be granted if a student’s final percent score is below 70%.
 - More than 4 unexcused absences, without reasoning prior or within 24 hours after the session, the student will receive an ‘N’ grade.
 - Students must e-mail the course coordinator to justify the absence prior to or within 24 hours after the missed session; an assignment related to the missed session will be given to be turned in within one week only to the students who have their absence excused.
- **Remediation**—Since elective courses in the MSUCOM pre-clerkship curriculum are optional, students are not required to remediate the elective if they receive an “N” grade.

Grading Requirements

The MSUCOM D.O. degree program incorporates horizontal and vertical curriculum integration, meaning course activities and assessments require ongoing development and integration of knowledge and skills acquired in previous courses. Required components include:

| Required Component | Projected Points | Material to be Covered |
|--|------------------|--|
| Participation points | 10 | Students will demonstrate participation in answering questions during clinical case discussions. Students who miss 4 or more lectures without excuses will not receive participation points. See details below |
| End of Course open-book take-home exam | 90 | Pharmacologic principles covered in the Course will be in the form of clinical cases. |

Note about the exam: Exam questions will be available through D2L. Students will have access to the exam questions from Dec 6th, 2024, 7:30 pm to Dec 12th, 2024, 11:59 pm. During this time, the students will have free access to the questions at their demand.

The students will take an open-book, take-home exam. The students will receive the take-home exam questions through D2L. There is no need for proctoring arrangements.

Missed Session

All sessions are mandatory. Students who miss a session must request an excused absence by contacting Dr. Restini at restinic@msu.edu before or within 24 hours after the missed session.

If the absence is excused, the course coordinator may offer a makeup opportunity for the missed session, and no participation points will be deducted.

No makeup session will be available if the absence is not excused, and 2.5 participation points will be deducted for each missed session.

Students with more than 4 unexcused absences will receive an N grade for the course.

Policies & Resources

Academic Support Resources at MSUCOM

Students are encouraged to connect with [Academic and Career Advising](#) (ACA) to access academic, board, and career advising across the 4-year D.O. curriculum. As a way to acclimate

to the MSUCOM curriculum, you may access ACA's [On Target](#) website for semester roadmaps, tools needed to be successful in the curriculum, and targeted resources for different learning situations. Each semester's roadmap contains course expectations, tips, potential challenges, notes on longitudinal content and skills integration, and study guides.

College or University Policies with Which Enrolled Students Must Be Familiar

| Policy | Location |
|--|--|
| Common Ground Professionalism Initiative | MSUCOM CGPI Site |
| Computer-Based Testing | MSUCOM D.O. Student Handbook pp. 39-43 |
| Disability & Reasonable Accommodation | MSUCOM D.O. Student Handbook p. 13 |
| iClicker | MSUCOM D.O. Student Handbook p. 36 |
| Mandatory Class Sessions & Examinations | MSUCOM D.O. Student Handbook p. 43 |
| Medical Students Rights and Responsibilities | Office of Spartan Experiences Site |
| MSUCOM Academic Code of Professional Ethics | MSUCOM D.O. Student Handbook pp. 66-67 |
| Osteopathic Clinical Training & Student Safety | MSUCOM D.O. Student Handbook pp. 68-72 |
| Preclerkship Attendance & Absence | MSUCOM D.O. Student Handbook pp. 43-45 |
| Relationship Violence & Sexual Misconduct & Title IX | Office for Civil Rights & Title IX Education & Compliance Site |
| Religious Observance Policy | Office of the Registrar Site |
| Remediation | MSUCOM D.O. Student Handbook p. 39 |

Student Feedback

MSUCOM values student feedback, using this to model practice-based learning and improvement and to promote continuous quality improvement of learning experiences.

| Route | Description |
|----------|---|
| Informal | We invite you to respectfully provide constructive suggestions to Course Directors, Contributing Faculty, or Curriculum Assistants at any time. |

| | |
|--------|--|
| Formal | MSU sends a Student Perceptions of Learning Survey (SPLS) to enrolled students at the conclusion of each course to gain feedback on the course and Course Directors. |
|--------|--|

Course Schedule and Changes to Schedule or Requirements

Due to external circumstances (e.g., weather/maintenance closures, clinical obligations, student cohort needs, etc.), course requirements published in the course syllabus and/or course schedule may be subject to change. Timely communication regarding changes will be provided to enrolled students via the course [D2L](#) site, [Google Calendar](#), and/or [MSU email](#). Contact curriculum assistants with questions. Any changes made will be considerate of the [MSU Code of Teaching Responsibility](#) and the [Medical Students Rights and Responsibilities](#).

Addendum: Course Schedule

Updated 5.31.2024

| Date | Time | Topic/Title | Faculty | Event Type & Origin | Notes |
|-----------|-----------------|--|-----------------|--|-----------|
| Sept 11 | 5:00pm - 6:50pm | Autonomic Pharmacology | Restini | Zoom | Mandatory |
| Sept 18 | 5:00pm - 6:50pm | Endocrine Pharmacology | Restini | Zoom | Mandatory |
| Sept 25 | 5:00pm - 6:50pm | Adverse Drug Reactions/Drug Interactions | Restini | Zoom | Mandatory |
| Oct 2 | 5:00pm - 6:50pm | Cardiovascular Pharmacology | Restini | Zoom | Mandatory |
| Oct 9 | 5:00pm - 6:50pm | Travel-Associated Infectious Diseases | Nassiri/Restini | Zoom | Mandatory |
| Oct 16 | 5:00pm - 6:50pm | Anti-inflammatory Pharmacology | Restini | Zoom | Mandatory |
| Oct 23 | 5:00pm - 6:50pm | Pharmacology of irritable bowel disease | Nassiri/Restini | Zoom | Mandatory |
| Oct 30 | 5:00pm - 6:50pm | - Geriatric Pharmacology - Pharmacology of Psychoactive Drugs | Restini | Zoom | Mandatory |
| Nov 6 | 5:00pm - 6:50pm | Antibiotic Resistance | Nassiri/Restini | Zoom | Mandatory |
| Nov 13 | 5:00pm - 6:50pm | HIV/AIDS | Nassiri/Restini | Zoom | Mandatory |
| Nov 20 | 5:00pm - 6:50pm | COVID-19 | Nassiri/Restini | Zoom | Mandatory |
| Nov 27 | 5:00pm - 6:50pm | Assignment – due by Dec 3 rd by 4pm | Restini | On D2L / Asynchronous | Mandatory |
| Dec 4 | 5:00pm - 6:50pm | - Pharmacogenomics - Precision Medicine | Restini | Zoom | Mandatory |
| Dec 6 -11 | | OPEN BOOK EXAM | | On D2L / Asynchronous From 7:30 pm on Dec 6 th to 11:59 pm on Dec 11 th | |

| Date | Time | Topic/Title | Faculty | Event Type & Origin | Notes |
|--------|-----------------|--|----------------|---------------------|-----------|
| Dec 11 | 5:00pm - 6:50pm | Pharmacology pain and substance use disorder | Restini / Alan | Zoom | Mandatory |