

OST 599: Biomedical Research

Fall 2024, 9/10/24-12/13/24

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Course Schedule

Faculty & Staff Information

Course Director Biosketch

Contact Information	Biosketch
 <p>Furqan B. Irfan, MBBS (MD), PhD irfanfur@msu.edu (517) 353-7785 Primary Site: EL& DMC Office Hours: Request meeting via email contact.</p>	<p>Dr Furqan B. Irfan has MBBS (MD), PhD, MBA-background, and is an Associate Professor, Department of Neurology, and Director of Research Development, College of Osteopathic Medicine, Michigan State University (MSU COM). He has broad ranging experience in teaching, research, global health and innovation.</p> <p>At MSU COM, he is the course director and teaches Epidemiology, Biostatistics, and the Evidence-based Medicine course. His research overlaps epidemiology, public and global health, health technology, and data science (machine learning/artificial intelligence). He has over 30 peer-reviewed publications and over two million dollars in active grant funding.</p> <p>Dr Irfan has served as an Advisory Board member at Health Practice, Silicon Valley Innovation Center, Infineon Technologies AG. Infineon Technologies AG, is one of the largest semi-conductors (microelectronics and sensors) manufacturers worldwide with an annual revenue of \$10 (€8.6) billion in 2020. He also consults for Manhattan Strategy Group, Washington DC.</p>

Contributing Faculty

Name	Email	Phone	Location
Furqan B. Irfan, MBBS (MD), PhD	irfanfur@msu.edu	(517) 353-7785	EL, DMC
Carolina Restini, PhD	restinic@msu.edu	(517) 353-7145	DMC, MUC

Curriculum Assistants (CAs)

Name	Email	Phone	Location
Patty Roberts	robe1204@msu.edu	517-204-4803	EL

Staff or Student Coordinator

Name	Email	Phone	Location
Rusti Sidel	smithru2@msu.edu	517-353-4926	EL

Who to Contact with Questions

Question, Need, or Topic	Contact Person
Course - Logistics & Details	Contact CA or CD for rooms, groups, materials, links, schedule, 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

Biomedical Research is a 2-3 credit hour course that provides students with biomedical research experience. Directed research enables medical students to test and compare different theories and approaches. It will allow medical students to explore different methods in order to determine better modalities for patient care and therapy. Students are enrolled in 3 credits (8-10 hours research per week for a semester) or 2 credits (6-4 hours research per week for a semester).

Course Objectives

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

1. Provide biomedical research experience
2. Basic Science, translational, clinical, bioinformatics, epidemiology or public health research may be pursued
3. Medical research topic is arranged with a basic scientist or clinician researcher, Research Mentor

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
Required	No Required Text
Optional	No Optional Text

Grading Schema

- **P-Pass**—means that credit is granted and that the student achieved a level of performance judged to be satisfactory by the instructor. To obtain a “P” grade for this course, a student must have completed the elective and submitted a satisfactory student research report and student evaluation by the Research Mentor.
- **N-No Grade**—means that no credit is granted and that the student did not achieve a level of performance judged to be satisfactory by the instructor. A student who does not complete the elective and/or fails to submit a satisfactory student research report and student evaluation by the Research Mentor will receive an “N” grade.
- **Remediation** - Since all of the Electives in the MSUCOM curriculum are optional, Students are not required to remediate the elective if an “N” grade is received.

Grading Requirements

The MSUCOM D.O. degree program incorporates both 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:

The activities required for successful completion of this elective are listed below:

Required (if applicable)	Points	Material to be Covered
Student must provide a report on the research project at the end of the		Provide a narrative report of 2-3 paragraphs indicating what you did in qualitative and quantitative terms, e.g., “I examined 250 charts of previous patients that had condition XX and recorded

Required (if applicable)	Points	Material to be Covered
semester by email to: COM.research@msu.edu		how many of them had a high score on Y, but exhibited a low score on Z, etc.” Indicate the results and relevance of these findings to the hypothesis that the Investigator is addressing.
Research Mentor must provide a Student Evaluation at the end of the semester by email to: COM.research@msu.edu		Did the student actively participate in the research project you assigned him/her? Did they carry out the research in as you expected? Did they put in the hours they had agreed to? Were you satisfied with the student? Based on this experience, are you willing to have other medical students participate in short-term projects with you?

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](#).

