

UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE SYLLABUS
NEUROSCIENCE

GMS 6029 AI Journal Club (1 credit)
Fall 2024
Friday 10:40am – 12:00pm at MBI L1-101

Instructor

Dr. Benjamin Shickel
Assistant Professor, Department of Medicine, Quantitative Health
shickelb@ufl.edu
352-273-9958

Office Hours

Available virtually or in-person by appointment.

Prerequisites

This course is restricted to 1st year doctoral students in the ERS-AI program.

Course Website

<https://elearning.ufl.edu>

Preferred Course Communications

E-mail is the preferred method of communication in this course.

Purpose and Outcome

This course will provide first-year ERS-AI PhD students with a broad understanding of the current biomedical artificial intelligence (AI) research landscape through in-depth analysis of recently published literature. Students will gain a high-level appreciation of current AI methods, applications, limitations, and future directions.

Relation to Program Outcomes

This course is intended to be taken by incoming ERS-AI PhD students during their first semester.

Course Overview

This journal club will provide students with an opportunity to enhance their scientific communication skills while gaining a broad understanding of current biomedical AI topics.

Course Objectives

Upon successful completion of this course, students will be able to read, analyze, and communicate scientific findings from diverse biomedical AI research domains through presentation and discussion. Students will be able to explain how AI can be used to address current challenges in biomedical sciences, describe the strengths and limitations of current AI methods and approaches, and identify future opportunities and unanswered research questions towards novel biomedical applications of AI.

Instructional Methods

Each week will center around a particular topic or theme in biomedical AI research. Most classes will consist of a student presentation of a recent research article, a Q&A session about the selected article, and a broader group discussion (led by a second student) about the implications of the article and relevance of the topic to students' own research interests. Each

week's assigned student presenter may select an article from an approved list or receive advance approval by the instructor.

All students are expected to independently serve as both article presenter and discussion leader at least once each during the semester. All students are expected to attend class and actively participate in each week's discussions. Virtual attendance options may be available in cases of illness or other unforeseen circumstances.

Schedule

The following is a tentative schedule of topics:

Date	Topic
8/23/24	Introduction
8/30/24	Open Tools, Software, and Computing Resources
9/6/24	Clinical Decision Support
9/13/24	Medical Imaging and Computer Vision
9/20/24	Natural Language Processing
9/27/24	Time Series and Signal Processing
10/4/24	Population Health and Epidemiology
10/11/24	Multi-Omics and Immunology
10/18/24	UF Holiday – Homecoming (No Class)
10/25/24	Pharmacology and Drug Discovery
11/1/24	Digital Twins, Telemedicine, and Wearables
11/8/24	Multimodal AI and Foundation Models
11/15/24	Generative AI Tools for Scientific Research
11/22/24	Ethical, Legal, and Social Implications
11/29/24	UF Holiday – Thanksgiving (No Class)

Grading

Satisfactory/Unsatisfactory. Grades will be determined based on class attendance, paper presentations, discussions led, and active participation.

More information on about the UF grading policy can be found at <https://gradcatalog.ufl.edu/graduate/regulations/>.

COURSE POLICIES

Attendance

Attendance is required and lectures will not be recorded. Requirements for class attendance are consistent with university policies: <https://gradcatalog.ufl.edu/graduate/regulations/>.

Make-Up Policy

Course policies for make-up assignments are consistent with university policies that can be found at <https://gradcatalog.ufl.edu/graduate/regulations/>.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.a.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their

Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

UNIVERSITY POLICIES

University Policy on Accommodating Students with Disabilities

“Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.”

University Policy on Academic Conduct

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Class Demeanor and Etiquette

All members of the class are expected to follow rules of common courtesy in all email messages, in-person interactions, and online threaded discussions and chats.

CAMPUS RESOURCES

Health and Wellness

- **U Matter, We Care:** If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit [U Matter, We Care](#) to refer or report a concern and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit the [Counseling and Wellness Center](#) website or call 352-392-1575 for information on crisis services as well as non-crisis services.
- **Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need or visit the [Student Health Care Center](#) website.
- **University Police Department:** Visit the [UF Police Department](#) website or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Emergency Room and Trauma Center](#) website.
- **GatorWell Health Promotion Services:** For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell](#) website or call 352-273-4450.

Academic Resources

- **E-learning technical support:** Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu.
- **Career Connections Center:** Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.
- **Library Support:** Various ways to receive assistance with respect to using the libraries or finding resources.

- **Teaching Center**: Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.
- **Writing Studio**: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- **Student Complaints On-Campus**: Visit the [Student Honor Code and Student Conduct Code](#) webpage for more information.
- **On-Line Students Complaints**: View the [Distance Learning Student Complaint Process](#)