



Spring 2025

Department of Engineering Education, University of Florida

Instructor: Sarah Jayasekaran, PhD (Dr. J)

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Email srajkumari@ufl.edu

Office: NSc 202B

Class Times (Room):

Fri | Period 5 | 11:45 AM - 12:35 PM (NSC 0520)

Office

Hours

Options:

- In-person: Visit my office on Thursdays between 12 pm to 1 pm or ask me during class.
- Virtually: For short questions send me a message via Microsoft Teams chat everyday between 1 pm to 5 pm.
- For longer questions, set up an appointment via email or text via Microsoft Teams.

COURSE DESCRIPTION

This graduate seminar is designed to immerse students in the dynamic field of engineering education by providing a space for critical thinking, in-depth discussions about current research, and the development of essential scholarly skills. Through weekly presentations, student-led critiques, and facilitated discussions with peers and faculty, participants will analyze complex topics, explore diverse perspectives, and practice effective scholarly communication. Speakers may include graduate students in the program, faculty from campus, and speakers from other institutions. The seminar emphasizes both exposure to cutting-edge research and the refinement of skills necessary for professional growth in academia and beyond. **(1 credit)**

Course Pre-Requisites / Co-Requisites: None

COURSE OBJECTIVES

After participating in the seminar class, students will be able to:

- 1 Explain current issues and research in engineering education.
- 2 Compile and summarize a presentation into a concise scientific abstract.

Instructional Approach: To meet these objectives, the seminar employs a hybrid instructional model that alternates between invited guest speakers and Communities of Practice (CoP) sessions, using a journal club format. Invited speakers, including graduate students, faculty, and experts from other institutions, present on diverse topics in engineering education, providing students with exposure to cutting-edge research and professional perspectives. The CoP sessions are grounded in Wenger's (1998) social theory of learning, which emphasizes learning as a participatory process that occurs through shared practices and mutual engagement within a community. By using a journal club format, students critically engage with scholarly literature, fostering peer learning, interdisciplinary exploration, and the development of essential skills such as facilitating discussions and presenting critiques. Journal clubs, as an application of CoP theory, have been shown to support collaborative learning and help participants internalize disciplinary norms (Wenger et al., 2002). This instructional strategy bridges theoretical knowledge and practical application, aligning with contemporary shifts in graduate education that emphasize preparation for ill-structured, collaborative professional environments (National Academy of Engineering, 2004; Wenger, 1998). Through the combined use of expert-led sessions and CoPs, the seminar equips students to navigate and contribute to the dynamic landscape of engineering education while developing critical skills in scholarly communication, mentorship, and interdisciplinary collaboration (Newswander, 2009).

REQUIRED TEXTBOOK, MATERIALS & SUPPLY FEES

Materials and Supply Fees: None

Required Textbooks and Software: None

Recommended Materials:

- Cox, T., Columbus, C., Ahmed, K., & Higginbotham, J. (2024). How to present and summarize a scientific journal article. *Baylor University Medical Center Proceedings*, 37(5), 884–887. Free access: https://pmc.ncbi.nlm.nih.gov/articles/PMC11332616/pdf/UBMC_37_2371766.pdf
- National Academy of Engineering . 2004 . *The engineer of 2020* , Washington, DC : National Academies Press.
- Newswander, L. K., & Borrego, M. (2009). Using journal clubs to cultivate a community of practice at the graduate level. *European Journal of Engineering Education*, 34(6), 561–571. <https://doi.org/10.1080/03043790903202959>
- Wenger , E. 1998 . *Communities of practice* , New York , NY : Oxford University .
- Wenger , E. 1998 . Communities of practice: learning as a social system . *The Systems Thinker* , 9 (5) : 1 – 12 .
- Wenger , E. , McDermott , R. and Snyder , W. 2002 . *Cultivating communities of practice* , Cambridge , MA : Harvard Business School Press .



All materials offered in this course are freely available as open-source resources. If you prefer a printed version of the materials, I can provide you with the necessary details through Canvas for your convenience.

LIST OF TOPICS/ASSIGNMENTS BY UNIT AND WEEK

- Seminars and CoP discussions will be presented weekly. Attendance and critiques will be assessed weekly.
- Please be aware that the schedule posted on Canvas is subject to change. For details and updates, refer to Canvas.
- Access to the seminar is open to others. Please share the following information with others for updates.
 - Website: <https://sites.google.com/view/egs6930/home>
 - Social media: <https://www.linkedin.com/company/uf-engineering-education-seminar/>

ASSIGNMENTS OVERVIEW

The following is a description of each assignment this semester. More details can be found on Canvas.

1. **Presentation Summary (2 points each, 10 total).** For seminars led by EED-organized and external speakers, students will submit a critique for each session.
 - a. Contribution to Course Objectives: This assignment helps students critically engage with current issues and research in engineering education while developing skills in summarizing and analyzing complex topics.
 - b. Critiques must include:
 - i. A 2-sentence summary capturing the seminar's main point.
 - ii. A 150-300 word analysis discussing the strengths and weaknesses of the research.
 - c. Scoring:
 - i. 1 point: The summary fails to capture the seminar's main point, and/or the analysis is superficial.
 - ii. 2 points: The summary effectively captures the seminar's main point, and the analysis demonstrates reflection and critical thinking.
2. **CoP Journal Club (via Perusall, 2, 10 pts total).** The goals of the Journal Club are to enhance critique skills, stay updated on current literature, apply knowledge to practice and future research, and foster consistent academic reading habits. Students will engage in assigned readings using **Perusall**, a collaborative reading platform available in Canvas that fosters discussion and critical analysis in small learning communities.
 - a. Contribution to Course Objectives: This assignment supports students in explaining diverse perspectives, fostering critical engagement with engineering education literature, and developing collaborative scholarly communication skills typical of a graduate seminar.

b. Expectations per role:

- i. Facilitator Role: Select a topic and a research article you wish to explore in-depth from any **Engineering Education Journal** listed at <https://guides.uflib.ufl.edu/enged/publicationvenues>. The article must meet the criteria of being a **peer-reviewed & research article**. Articles from other journals are also welcome but must meet these criteria and be approved by the instructor in advance. On the day of your presentation, deliver a **5-minute oral abstract** summarizing the main points and significance of the assigned article. Additionally, tag relevant discussion questions on **Perusall** to drive engagement and facilitate meaningful group discussions. Presentation schedules will be finalized and communicated during the first week of the semester.
- ii. Participant Role: Before the in-person session, annotate the article by adding comments and questions on **Perusall**. Engage with your peers' annotations to deepen the discussion and contribute meaningful insights. Suggest additional questions or connections to broaden the scope of the conversation during the day of the journal club presentation.

c. Scoring per role:

Facilitator Role (2 points total)	Participant Role (2 points total)
2 points: The oral abstract is clear, concise, and effectively introduces the article's main points and significance. At least two thoughtful and relevant discussion questions are tagged on Perusall, encouraging critical thinking and meaningful engagement. 1 point: The oral abstract is somewhat clear but lacks depth or misses key points of the article. Fewer than two discussion questions are tagged, or the questions are generic and fail to promote meaningful engagement.	2 points: Annotations demonstrate thoughtful and critical engagement with the article, including meaningful comments or questions. Actively engages with peers by responding to comments or building on discussion points. 1 point: Annotations are present but lack depth, with comments that are brief, generic, or superficial. Limited interaction with peers, with minimal effort to contribute to the discussion.

COURSE POLICIES

Class Attendance, Missed Work, and Extra Credit

Students are expected to be present for all classes since much of the material will be covered only once in class. Attendance is not monitored, but each student is responsible for the content of all classes, including issues raised in the spontaneous class discussions. If you must miss a class, please request notes from your classmates. It is expected that no students will miss any due dates for the course requirements. Unavoidable missed due dates may be excused by the instructor, provided **advanced notice and official documentation** that aligns with UF policies for excused absences. No planned opportunities for extra credit exist in this course.

Excused absences must be consistent with university policies in the Graduate Catalog (<https://catalog.ufl.edu/graduate/regulations>) and require appropriate documentation. Additional information can be found here: <https://gradcatalog.ufl.edu/graduate/regulations/>

Office Hours and Email Response Policy

Please adhere to the following guidelines when contacting me for effective communication and assistance. Before emailing, consider initiating a conversation through Microsoft Teams. When emailing, ensure the subject line reads "EGS 6930: Email Subject" for streamlined communication. Expect my response within 24 hours on weekdays and up to 48 hours on weekends. In-person office hours are available at my office on Tuesdays from 3 pm to 4 pm. Any changes to these hours will be promptly communicated through Canvas. For brief queries, you can connect with me virtually via Microsoft Teams chat between 1 pm to 5 pm daily. Longer inquiries can be addressed through appointments set up via email or Microsoft Teams chat.

Don't hesitate to ask questions before or after class and leverage Microsoft Teams for additional support. Your questions and inquiries are important to me, and I am committed to providing you with the support you need to excel in this course. By following these guidelines, we can ensure effective communication and a productive learning experience.

Class Expectations

I understand that at this point in your graduate studies, you are likely at different stages of developing your dissertation projects. In this class, I would like to meet you where you are. I encourage you to reach out to me to discuss your methodological interest and potential research topics, preferably earlier in the semester, so that I can have your research interest and intellectual needs in mind when I prepare the class.

I hope you will not feel deflated or intimidated by the complexity of some of the readings and seminars. One important goal of this class is for you to learn the appropriate way to approach and evaluate theoretical and methodological materials and make the best use of them for your graduate study. I don't expect you to completely understand everything assigned for the class. In fact, I will not grade you negatively for misunderstanding the content of the readings, and you can surely do a good job without mastering everything in the readings. Nevertheless, you will need to demonstrate your engagement with the class by reading the course materials thoroughly, attending the class with good preparation, and completing your writing assignments thoughtfully.

In this course, we will cover subjects that may be sensitive and/or challenging. As in all our courses, we do this not to indoctrinate but to instruct, to prepare you to be the most effective and successful educator or scholar that you can be. We encourage you to understand all concepts presented in class, but we cannot determine your personal beliefs. What you personally choose to believe is your business.

INCLUSION STATEMENT

It is my intention that students from all backgrounds and perspectives will be well served by this course, and that the diversity that students bring to this class will be viewed as an asset. I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, socioeconomic background, family education level, ability – and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. Your suggestions are encouraged and appreciated.

LIVED NAME/PRONOUN STATEMENT

We will gladly honor your request to address you by an alternate name or gender pronoun. Please advise us of this preference early in the semester so that we may make appropriate changes to my records.

Evaluation of Grades and Make-Up Policy

This course is graded on a Satisfactory/Unsatisfactory (S/U) basis. To achieve a grade of Satisfactory (S), students must score 70% or higher. Attendance is recorded at EED-organized seminars, and no points for critiques can be earned if absent (unless the absence is excused; in such cases, contact the instructor promptly).

INSTITUTIONAL POLICIES

Students Requiring Accommodations. Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

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.aa.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.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

In-Class Recording. Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil

proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy. 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 honor 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 (<https://sccr.dso.ufl.edu/process/student-conduct-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.

Commitment to a Safe and Inclusive Learning Environment. The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University’s core values, including the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information, and veteran status.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- HWCoe Human Resources, 352-392-0904, student-support-hr@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use. All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy. There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

Campus Resources: [Health and Wellness](#)

U Matter, We Care: Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please

contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

Campus Resources: *Academic Resources*

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

On-Line Students Complaints: <https://distance.ufl.edu/getting-help/>; <https://distance.ufl.edu/state-authorization-status/#student-complaint>.