

The University of Florida, Department of Materials Science and Engineering  
Nuclear Engineering Program

**ENU 6935: Nuclear Engineering Seminar**

**Class Periods:** Th 1355-1455

**Location:** 125 Rhines Hall or Zoom

**Academic Term:** Fall 2021

**Catalog Description:** Discussion of research, current trends in the nuclear related industry, government, and research establishments.

**Credit:** 1 hour

**Instructor:** Prof. Kyle C. Hartig, [kyle.hartig@ufl.edu](mailto:kyle.hartig@ufl.edu)  
180 Rhines Hall; 352-392-4907  
*Office hours:* TBD

Note: Office hours will be offered as a combination of in-person in my office/conference room or virtually through Zoom following all current UF best practices and guidelines. Office hours may change due to conflicts (e.g., upcoming travel schedule). Office hours will be scheduled the first week of class.

Note: For all course-related questions a preferred mode of interaction is to visit with the professor during office hours (in-person or virtual) or contact the staff assistant April Miller in Rhines 100.

**Teaching Assistant/Supervised Teaching Student:** None

**Required Textbooks and Software:** None

**Recommended:** None

**Pre-requisites and Co-requisites:** None

**Course Objectives:**

(i) By the end of this course, students will be able to think critically about presented topics and provide insights about their applications, future research directions, etc.

**Material and Supply Fees:** None.

**Web Tools:** <https://ufl.instructure.com/courses/435585>

The course Canvas site will be used to distribute the syllabus, grades, and seminar schedule/links.

**Course Schedule** (subject to adjustments throughout semester)

Note: Adjustments to this regular schedule could be made periodically and announced in advance in class and/or through the class website/email.

**Week 1:** Erik Nygaard, BWXT Advanced Technologies

**Week 2:** Cancelled

**Week 3:** Cancelled

**Week 4:** Dr. Jim Baciak, University of Florida Nuclear Engineering Program

**Week 5:** Eric Williams, TerraPower

**Week 6:** Dr. Yongfeng Zhang, University of Wisconsin

**Week 7:** Dr. Samuel Briggs, Oregon State University

**Week 8:** Dr. Paula Knepper, Los Alamos National Laboratory

**Week 9:** Dr. Yousry Azmy, North Carolina State University

**Week 10:** Dr. Chris Cahill, George Washington University

**Week 11:** Dr. Brian Quiter, Lawrence Berkeley National Laboratory

**Week 12:** Andrew Sheaffer, Westinghouse

**Week 13:** Thanksgiving

**Week 14:** Frank Garner, Radiation Effects Consulting

**Week 15:** Reading Days

### **Grading:**

This class offers 10 seminars during class hours in Fall 2021, and students must attend **7** for satisfactory completion. Satisfactory completion of this course will earn the grade of “A” and unsatisfactory will earn the grade of “E”. Up to **3** make-up seminars from MSE are allowed, to replace missed seminars, but they must be materials (science and engineering) related. Students **must** obtain approval for the make-up seminar topic from Dr. Hartig **prior** to the make-up seminar.

The following activities are allowable to replace missed seminars:

- Other departmental seminars: A listing of seminars across the UF Engineering Departments can be found at: <https://www.eng.ufl.edu/news-events/events-calendar/>
- Professional conferences: Up to two (2) conference presentations of individuals other than yourself, your advisor or someone in your research group can be used as a make-up seminar.

Furthermore, students **must** fill out the make-up form on Canvas. The form must include the following information:

- Title of the seminar/presentation
- Name of the speaker
- Hosting department (if applicable)
- Time and place of the seminar
- One paragraph summary **and** one paragraph analysis/critique of the presentation

These should be turned in to Dr. Hartig. Students who know that they cannot attend 14 official seminars/make-up seminars/conferences/workshops in the semester due to other obligations (e.g., TA schedule conflicts or any off-campus internships) must drop the course before drop/add date in the semester.

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

**Students Requiring Accommodations:** Students with disabilities who experience learning barriers requesting accommodations should first register with the Disability Resource Center (352-392-8565), <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to me when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester. Please note that UF policy, clarified to faculty during the Fall 2016 term, states that no retroactive accommodations are available.

**Software Use:** All faculty, staff and student 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.

### **Electronic Communication and Course Website**

The primary means of communication with the class outside of class time will be e-mail listserv. These listservs will send to your @ufl.edu address only. Any inquiries regarding grading will be directed towards your @ufl.edu address only, per FERPA.

The primary use of the Canvas website is for file storage, as assignments, lecture notes, etc. may be provided there. I take no responsibility for downtime of this service, nor for actions of University of Florida staff that affect the website (including Canvas upgrades). The gradebook on Canvas is used to enable you to look up grades quickly. Note that this gradebook is not official. I reserve the right to correct errors, including transcription errors, from the official (spreadsheet) gradebook, to which I alone have access, until finalization of grades with the registrar.

### **Attendance**

Students **shall attend each seminar** unless prior approval is received. Students should refer to the grading section of this syllabus for details on minimum number of seminars that must be attended to satisfactorily complete this course as well as available avenues for making up missed seminars.

**Do not arrive late or leave early.** Students who leave early will be reported to the student honor court for cheating. You will receive an unsatisfactory (U) for this course. Furthermore, the honors court will assign additional educational sanctions, including completion of courses from the following: Avoiding Plagiarism Workshop, Ethical Decision-Making Seminar, and Reflection Paper (see the Faculty Student Resolution Form online for more information). Also, see the section called the “University Honesty Policy” below.

There is no tolerance for mobile phones or other electronic disruptions. Such disruptions will lead to the student being told to leave the room for the duration of the class period. The same principle applies to office hours or appointments – if you stop by my office and your phone rings, you will be told to leave the room for the duration of that day’s office hours (or your appointment will be considered over).

Students are expected to behave professionally during the seminar. No talking, reading, laptop/tablet/notebook/smart-phone activity, etc. is allowed. Students should pay attention to the speaker, actively engage, facilitate and enhance the learning atmosphere, and be courteous at all times. Students who do not behave appropriately will be asked to leave and will not receive attendance credit that day.

### **Approved absences:**

Approved absences can be grouped into the categories of professional, medical, and personal; however, students are still expected to makeup missed seminars through the available avenues outlined above in the grading section.

*Professional:* Reasonable extensions for job/internship interviews, technical conferences, or other professional/career development reasons should be requested. Requests are typically granted, at my

discretion, unless they would grant a student or group of students an unfair advantage over their peers, cause significant disruption to the course or grading schedule, or violate some UF policy.

*Medical:* Extensions will also be granted for (your own) medical reasons – please do not come to class if you are ill. Per UF policy, in the case of medical absences that are frequent or suspiciously- timed (e.g.; you are repeatedly, suddenly ill at deadlines), I may request a signed note from a physician or similar professional practitioner.

*Personal:* In addition, UF policies require accommodation for several non-academic, non- medical reasons. Extensions for these personal issues are strictly limited to those mandated by the letter of UF policies. If you have a question regarding your personal issue and if it qualifies under one of the excused absence/late-work policies, contact me in advance.

The 12-day rule will be enforced strictly. Note that the count of days is based on a per-student, not per-approved-activity basis. All requests for excused absence or extension must be submitted in writing, preferably via e-mail.

Pursuant to HWCOE policy, the following statement is required: Excused absences are consistent with university policies in the undergraduate catalog

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> and require appropriate documentation.

### **Course Evaluations**

UF expects students to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu/evals>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at

<https://evaluations.ufl.edu/results/>.

### **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://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 TA in this class.

### **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:

<http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

### **Changes to Syllabus**

Changes to this syllabus will be provided via the Canvas platform. Such changes may include those required by policy changes, my travel, changes in the speed of course coverage, university closure, errors in previous syllabus versions, and other reasons.

### **COVID-19**

You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.

If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email [covid@shcc.ufl.edu](mailto:covid@shcc.ufl.edu)) to be evaluated for testing and to receive further instructions about returning to campus.

If you are withheld from campus by the Department of Health through Screen, Test & Protect, you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.

UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the UF Health Screen, Test & Protect website for more information.

Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.

### **Commitment to a Safe and Inclusive Learning Environment:**

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

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 (Justin Watson, [justin.watson@ufl.edu](mailto:justin.watson@ufl.edu))
- Jennifer Nappo, Director of Human Resources, 352-392-0903, [jpennacc@ufl.edu](mailto:jpennacc@ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto:nishida@eng.ufl.edu)

### **Additional University Policies**

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate during these recorded sessions are agreeing to, at a minimum, having their audio recorded.

#### ***Online Course Recording***

If we utilize online meetings for a part of our course (e.g., guest lecture or for when a student or faculty member is withheld from campus), these sessions may be audio visually recorded for students in the class to refer to and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared.

**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.

***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](mailto: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:** <http://www.counseling.ufl.edu/cwc>, 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](mailto: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/>.

*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 Resource Center**, Reitz Union, 392-1601. Career assistance and counseling.  
<https://www.crc.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://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

**On-Line Students Complaints:** <http://www.distance.ufl.edu/student-complaint-process>.