1. **Catalog Description**

   Introduction to the nuclear engineering field and careers in the nuclear industry. Topics include engineering ethics, nuclear history, elementary nuclear and reactor physics, reactor types, nuclear safety, nuclear fuel cycle and radiation protection.

2. **Pre-requisites and Co-requisites**

   None.

3. **Course Objectives**

   Provide students with the opportunity to learn introductory topics associated with the nuclear engineering program. Students will see lectures across the majority of technical expertise associated with the program. In addition, students will learn about scholarship opportunities and will have the potential to learn about the nuclear power industry through occasional guest lectures.

4. **Contribution of Course to Meeting the Professional Component (ABET only)**

   1. Graduates will have successful careers in Nuclear Engineering and related disciplines.
   2. Graduates will pursue continuing education or advanced degrees.

5. **Instructor**

   Dr. James E. Baciak  
   Interim Chair  
   100 Rhines Hall  
   273-2131  
   jebaciak@mse.ufl.edu

   Office Hours:  
   Monday, Period 2 (8:30 - 9:20 AM)  
   Wednesday, Period 4  
   Thursday, Period 9
6. Teaching Assistant

N/A

7. Meeting Times

Period 8 (3:00 - 3:50 PM)

8. Class Schedule

One (1) 50-minute lecture each week (Mondays)

9. Meeting Location

Lecture: 273 Weil Hall

10. Material and Supply Fees

None.

11. Textbooks Required

None. I may post materials from time to time for you to download off the course page.

12. Recommended Reading

None.
13. Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Course Topic</th>
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</thead>
<tbody>
<tr>
<td>August 22</td>
<td>Introduction, Course Goals and Objectives</td>
</tr>
<tr>
<td>August 29</td>
<td>Lt. William Boyd: Introduction to the Nuclear Navy and the NUPOC Program</td>
</tr>
<tr>
<td>September 5</td>
<td><strong>No Class – Labor Day Holiday</strong></td>
</tr>
<tr>
<td>September 12</td>
<td>What is Nuclear Engineering</td>
</tr>
<tr>
<td>September 19</td>
<td>Introduction to Radiation</td>
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<tr>
<td>September 26</td>
<td>Guest Speaker</td>
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<tr>
<td>September 3</td>
<td>The Radioactive Decay Law</td>
</tr>
<tr>
<td>October 10</td>
<td>Andreas Enqvist – Introduction to Radiation Detection</td>
</tr>
<tr>
<td>October 17</td>
<td>Scholarship Opportunities</td>
</tr>
<tr>
<td>October 24</td>
<td>Guest Speaker</td>
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<tr>
<td>November 31</td>
<td>Introduction to Nuclear Fission</td>
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<tr>
<td>November 7</td>
<td>Tour of the UFTR</td>
</tr>
<tr>
<td>November 14</td>
<td>Introduction to Nuclear Reactors</td>
</tr>
<tr>
<td>November 21</td>
<td>Introduction to Fusion</td>
</tr>
<tr>
<td>November 28</td>
<td>Guest Speaker</td>
</tr>
<tr>
<td>December 5</td>
<td>Research Opportunities for First Year Students - RENE</td>
</tr>
</tbody>
</table>

° - Make-up classes may be scheduled, depending on if the class has fallen behind schedule. I also reserve the right to hold make-up classes due to forced cancellations (e.g., hurricanes). When possible, I will announce cancellations in advance along with the makeup dates.

14. Attendance and Expectations

Students are expected to attend each class period. Periods which may be missed should be brought to the attention of the Instructor as far in advance of the class period as possible. In the event of an unexcused absence, it is the student’s responsibility to obtain and review the material that was covered during that class period.
15. Grading

Lecture Grading
Attendance 60%
Homework Sets 25%
Paper 15%

Attendance

Students are required to attend every lecture, and attendance will be recorded. Unannounced and unexcused absences are only allowed through prior requests or DOCUMENTED medical reasons.

Homework

You will have approximately 3-4 homework assignments during the course. Each assignment will consist of 1-2 problems based on items discussed in the class. Unless noted otherwise, you will be given one week to complete each assignment.

Paper

Students will be required to write an individual paper during the semester. We will discuss possible topics on October 10, but feel free to discuss your topic interests with the instructor at any time prior to the October 10 date. The paper will be due at 5 PM on Monday, December 5. Substantial penalties will result from plagiarism and data falsification including automatic course failure and possible expulsion. Grades for the final manuscripts will be based upon technical content and writing style.

16. Grading Scale

The grading scale is generally as follows:

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>94-100</td>
<td>A</td>
</tr>
<tr>
<td>90-93</td>
<td>A-</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
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<tr>
<td>77-79</td>
<td>C+</td>
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<tr>
<td>73-76</td>
<td>C</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
</tr>
<tr>
<td>67-69</td>
<td>D+</td>
</tr>
<tr>
<td>63-66</td>
<td>D</td>
</tr>
<tr>
<td>60-62</td>
<td>D-</td>
</tr>
<tr>
<td>0-59</td>
<td>E</td>
</tr>
</tbody>
</table>
Since I do not curve the grading scale, all students can receive an A (or an E)!

17. **Students Requiring Accommodations**
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [https://www.dso.ufl.edu/drc](https://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.

18. **Course Evaluation**
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at [https://evaluations.ufl.edu/evals](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/](https://evaluations.ufl.edu/results/).

19. **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/](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 TAs in this class.

20. **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.

21. **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](http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html)
22. Campus Resources:

Health and Wellness

U Matter, We Care:
If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.

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 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.


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/.


Student Complaints Campus: