1. **Catalog Description**

Presentations and discussions on topics of current and continuing interest in nuclear engineering sciences.

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, including lectures pertaining to the wide-variety of research within the Nuclear Engineering 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  
Associate Professor  
100 Rhines Hall  
273-2131  
jebaciak@mse.ufl.edu

Office Hours:  
Monday, Period 2 (8:30 - 9:20 AM)  
Wednesday, Period 4 (10:40-11:30 AM)  
Thursday, Period 9 (4:05-4:55 PM)
6. **Teaching Assistant**

   N/A

7. **Meeting Times**

   Period 6 (12:50 - 1:40 PM)

8. **Class Schedule**

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

9. **Meeting Location**

   Lecture: 227 NSC (Nuclear Science Building)

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>
</tr>
</thead>
<tbody>
<tr>
<td>August 24</td>
<td>Introduction, Course Goals and Objectives</td>
</tr>
<tr>
<td>August 31</td>
<td>What is Nuclear Engineering?</td>
</tr>
<tr>
<td>September 7</td>
<td><strong>No Class – Labor Day Holiday</strong></td>
</tr>
<tr>
<td>September 14</td>
<td>Reactors and the Six-Factor Formula</td>
</tr>
<tr>
<td>September 21</td>
<td>Dr. Leigh Winfrey – Plasma Physics and Fusion Research at UF</td>
</tr>
<tr>
<td>September 28</td>
<td>LT Christopher Minick - NUPOC</td>
</tr>
<tr>
<td>September 5</td>
<td>Dr. Andreas Enqvist – Introduction to Radiation Detection</td>
</tr>
<tr>
<td>October 12</td>
<td>Scholarship Opportunities</td>
</tr>
<tr>
<td>October 19</td>
<td>Tour of the University of Florida Training Reactor</td>
</tr>
<tr>
<td>October 26</td>
<td>Dr. Yong Yang: What is Nuclear Materials?</td>
</tr>
<tr>
<td>November 2</td>
<td>Dr. Tony Ferrar - TBD</td>
</tr>
<tr>
<td>November 9</td>
<td>Dr. Wesley Bolch: Introduction to Medical Physics</td>
</tr>
<tr>
<td>November 16</td>
<td>Dr. Kelly Jordan: So a Neutron Walks Into a Bar …</td>
</tr>
<tr>
<td>November 23</td>
<td>Dr. Sedat Goluoglu – TBD</td>
</tr>
<tr>
<td>November 30</td>
<td>Dr. DuWayne Schubring – Introduction to Thermal Hydraulics</td>
</tr>
<tr>
<td>December 7</td>
<td>Introduction to Nuclear Security</td>
</tr>
</tbody>
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* - 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: 40%
- Homework Sets: 35%
- Paper: 25%

**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 2-3 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. This paper can be on a number of topics in nuclear engineering. We will discuss possible topics on October 12, but feel free to discuss your topic interests with the instructor at any time prior to the October 12 date. The paper will be due at 5 PM on **Monday, December 7**. 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:

- 93-100 A
- 90-92 A-
- 87-89 B+
- 83-86 B
- 80-82 B-
- 77-79 C+
- 73-76 C
- 70-72 C-
- 67-69 D+
- 63-66 D
- 60-62 D-
- 0-59 E

Since I do not curve the grading scale, all students can receive an A (or an E)! Note: this scale may be adjusted from semester-to-semester by a couple of points depending on topics covered and difficulty of exams.

17. **Make-up Exam Policy**

Even though this class does not have any exams, you should still be aware of the general policy for make-up exams in the Nuclear Engineering Program. Make-up Exams are only allowed through prior requests or DOCUMENTED medical reasons. In cases where students will be out of town, a reasonable attempt to take the exam before the scheduled exam date will be performed.

18. **Honesty Policy**

All students admitted to the University of Florida have signed a statement of academic honesty, committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

19. **Accommodation for Students with Disabilities**

Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.
20.  **UF Counseling Services**

Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

21.  **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.