1. **Catalog Description** (3 credits): Development of power system equivalents by phase network analysis, load flow, symmetrical components, sequence networks, and fault analysis.

2. **Pre-requisites:** EEL 3211

3. **Course Objectives:** The main course goal is to provide students with a complete overview of interconnected power system operation. At the completion of the course students should be able to develop appropriate models for an interconnected power system, and know how to perform power flow and short circuit analysis. Students should also be able to write a basic power flow computer program.

4. **Instructor:** Prof. Henry Zmuda  
   a. Office location: 235 Larsen Hall  
   b. Telephone: 352-392-0990  
   c. E-mail address: zmuda@ece.ufl.edu  
   d. Web site: E-Learning (Sakai)  
   e. Office hours: Tues. & Thurs. 6th (always by chance or appointment)

5. **Teaching Assistant:** None

6. **Meeting Times:** Tuesday 4th, Thursday 4th, 5th

7. **Meeting Location:** LAR 330


9. **Tentative Course Outline:**

   1. (Text Chapter 2) Introduction, review of three-phase power  
   2. (Text Chapter 4) Transmission-line parameter computation & modeling  
      (Exam 1)  
   3. (Text Chapter 5) Transmission Line Steady-State Operation  
      (Exam 2)  
   4. (Text Chapter 7 & 8) Symmetrical Faults & Symmetrical Components  
   5. (Text Chapter 9) Unsymmetrical Faults  
      (Exam 2)  
   6. (Text Chapter 6) Power Flows  
   7. (Text Chapter 11) Transient Stability  
      (Exam 4)
Exams: 3 exams (4 exams, single lowest grade dropped)
Evaluation:
• In-class exams 80%
• Homework 20% Some simple programming skill may be required.
• +/- grading will be used for the final course grade

a. **Attendance and Expectations**: Attendance is expected but not required. Cell phones and other electronic devices are to be silenced. No text messaging during class or exams.

b. **Grading**:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Exams</td>
<td>80%</td>
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<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
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c. **Grading Scale**:

- A > 95, 90 ≤ A < 95
- 87 ≤ B+ < 90, 83 ≤ B < 87, 80 ≤ B ≤ 83
- 77 ≤ C+ < 80, 73 ≤ C < 77, 70 ≤ C ≤ 73
- 67 ≤ D+ < 70, 63 ≤ D < 67, 60 ≤ D ≤ 63
- 0 ≤ E ≤ 60

d. **Make-up Exam Policy**: If you have a University-approved excuse and arrange for it in advance, or in case of documented emergency, a make-up exam will be allowed and arrangements can be made for making up missed work. University attendance policies can be found at: [https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx) Otherwise, make-up exams will be considered only in extraordinary cases.

e. **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.

“…failure to comply with this commitment will result in disciplinary action compliant with the UF Student Honor Code Procedures ([http://www.dso.ufl.edu/sccr/procedures/honorcode.php](http://www.dso.ufl.edu/sccr/procedures/honorcode.php))

f. **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.
g. **UF Counseling Services** – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.

h. **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.