Washington State University  
School of EECS  
Electrical Engineering Course Assessment Report

Course Number   EE 361  
Course Title    Electrical Power Systems  
Semester Offered Spring 2006  
Instructor      Hudson  
10th Day Enrollment 3  Number Completing Successfully (C grade or better) 3

I. Assessment Outcomes from the Course Syllabus

☑ (A) Ability to apply knowledge of mathematics, science and engineering.  
☐ (B) Ability to design and conduct experiments as well as analyze and interpret data.  
☐ (C) Ability to design a system, component, or process to meet desired needs.  
☐ (D) Ability to function on multidisciplinary teams.  
☐ (E) Ability to identify, formulate, and solve engineering problems.  
☐ (F) An understanding of professional and ethical responsibility.  
☐ (G) Ability to communicate effectively in written and oral formats.  
☐ (H) A broad education necessary to understand the impact of engineering solutions in global, economic, and societal context.  
☐ (I) Recognize the need for, and have the ability to engage in life long learning.  
☐ (J) Have a broad education and knowledge of contemporary issues.  
☐ (K) Ability to use techniques, skills and modern engineering tools necessary for engineering practices.

II. List of Course Topics from the Course Syllabus

1. Review of sinusoidal steady state, complex power and three-phase circuits.  
2. Transmission line parameters.  
3. Transmission line modeling and capacity.  
4. Magnetic circuits and transformers.  
5. Generalized rotating machines.  
6. Induction machines.  
7. Synchronous generators.  
8. Power flow.
III. Course Assessment Summary Table: one row of the table should be devoted to each of the checked outcomes in part I.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Topics</th>
<th>Specific Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Ability to apply knowledge of mathematics, science and engineering.</td>
<td>1 - 8</td>
<td>Exams</td>
</tr>
</tbody>
</table>

IV. Using the table as a guide, for each outcome summarize your evaluation of the students’ achievement of that outcome; cite student performance on the identified measures as evidence to support your conclusions.

(A) Ability to apply knowledge of mathematics, science and engineering.

I consider in-class exams to be the most rigorous measure of Outcome (A) for a theory course. There were two “midterm” exams and a final exam. I selected the final exam scores as a specific measure for this outcome. The three scores were 85%, 91% and 94%. This indicates that the three students achieved this outcome.

V. Qualitative Assessment of Student Performance: using the arguments above and other data support the claim that students who completed this course with a grade of C or better have achieved each of the intended outcomes of this course.

All three students performed adequately on the exams and achieved C or better in the course. This demonstrates that they were all able to apply the theory from this course at an acceptable level of competence.

VI. Concerns: state any concerns you may hold about this class – were the students adequately prepared coming into it? Are there topics or outcomes where (some) students were weak after completing the course? Other concerns? Were there any comments on students’ course evaluations that should be addressed in future instances of the course? This section is very important for improving our program: it provides critical input to the curriculum committee for identifying areas requiring attention.

More integration of computer assignments in the 361 would be useful. For example, simulations of the magnetic field of rotating machines.

Signature: Scott Hudson
Date: 2007-05-11

Please email a copy of the completed form to Patricia Arnold, patricia@eecs.wsu.edu and deliver a signed hardcopy to her mailbox.