I. Assessment Outcomes from the Course Syllabus – place an ‘X’ next to applicable statements

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

(B) Ability to design and conduct experiments as well as analyze and interpret data.  

(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.  

(C) Ability to design a system, component, or process to meet desired needs.  

(I) Recognize the need for, and have the ability to engage in life long learning.  

(D) Ability to function on multidisciplinary teams.  

(J) Have a broad education and knowledge of contemporary issues.  

(E) Ability to identify, formulate, and solve engineering problems.  

(K) Ability to use techniques, skills and modern engineering tools necessary for engineering practices.  

(F) An understanding of professional and ethical responsibility.  

II. List of Course Topics from the Course Syllabus

Syllabus (about one week each):

1.  Review of prerequisites (Ch. 1 & 2)  
2.  Transformers (Ch. 3)  
3.  Rotating machine fundamentals (Ch. 4)  
4.  Induction machines (Ch. 7)  
5.  Synchronous machines (Ch. 5)  
6.  DC motors (Ch. 8)  
7.  Transmission lines (Ch. 9)  
8.  Power system models (Ch. 10)  
9.  Power flow studies (Ch. 11)  
10. Power system operation

Working of practical, real-life problems in the classroom (over 40 examples)
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 thru 10</td>
<td>a) Eight homework assignments, b) Two in-class midterm exams, one final exam</td>
</tr>
<tr>
<td>(B) Ability to design and conduct experiments as well as analyze and interpret data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) Ability to design a system, component, or process to meet desired needs.</td>
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<tr>
<td>(D) Ability to function on multidisciplinary teams.</td>
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<tr>
<td>(E) Ability to identify, formulate, and solve engineering problems</td>
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<tr>
<td>(F) An understanding of professional and ethical responsibility.</td>
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<tr>
<td>(G) Ability to communicate effectively in written and oral formats.</td>
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<tr>
<td>(H) A broad education necessary to understand the impact of engineering solutions in global, economic, and societal context.</td>
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</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.

**ABET Criterion A**

The results of the measures (homework and tests) demonstrate that the students performed adequately. As an average, the grades are in the B-C range. There were four students with an A grade.

**ABET Criterion B**

**ABET Criterion C**

**ABET Criterion D**

**ABET Criterion E**
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.

Most of the students showed interest in the topic and attended classes. A significant number of students closely followed the lectures and the in-class real-life problems and examples (over 40 examples). A few of them did not have interest in the topic because they were planning to take other specialty (communications and electronics, for example). Some students showed a very motivating enthusiasm for the topic, which led them to obtain a more complete learning experience and get better grades. Another relatively small group of students needed extra guidance, mostly because their basic background (reading, writing, studying techniques, complex numbers algebra, etc.) was not appropriate for the level of this class. Five students reached the level of excellence (four “A” and one “A-“); not all of those students with an “A” plan to take power systems as specialty.

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.

As indicated in V, a few students do not have the basic skills to take a course of this level. There were some weaknesses in reading, writing, study techniques and organization of ideas. In the technical part, some students showed a clear deficiency in their skills to solve relatively simple AC circuits in steady-state using phasors, which is a pre-requisite of this class.

Signature __________________________________________ Date: ____Nov 1, 2008_______

Please email a signed copy of the completed form to Barbara Lesnik, lesnik@vancouver.wsu.edu, AND deliver a signed hardcopy to her mailbox.