



ELEC 488 – Electrical Power Systems

Term – Spring 2017 (201701)

Instructor

Dr. Ali Moshref
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Office Hours

Days: Saturday
Time: 11:00 AM – 1:50PM
Location: ECS 104

Course Objectives

The objective of this course is to provide a basic understanding in the planning, design, analysis and operation of electrical power systems

Learning Outcomes

By the end of the course, each student should be able to identify the elements of a power system, model power system components such as transmission lines, synchronous generators, loads, etc. Understand the need for power flow studies, understand the effect of faults in a power system, and appreciate the significance of power system protection and transient stability

Syllabus

Principles of electric power systems, three-phase salient and round rotor synchronous machines, three-phase transformer, transmission line parameters, admittance model, impedance model, network calculations, power-flow solution, symmetrical components and sequence networks, symmetrical faults, unsymmetrical faults, harmonics calculations. Basics of power systems stability and protection, load frequency control, HVDC transmission.-

A-Section(s): A01 / **CRN 21175**

Days: Saturday
Time: 11:00 AM – 1:50 PM
Location: ECS 104

B01/ 21176 TA: Babak Manouchehrinia

Required Text

Title:
Author:
Publisher:
Year:

Optional Text

Title: Power System analysis and design
Author: J.D. Glover, M.S. Sarma, T. Overbye
Publisher: CENGAGE Learning, 2012
Year: 2012

Assessment:

Assignments:	10%	Due Dates:	
Minimum attendance:	10%	60% of all lectures	
Mid-term	30%	Date: March 4 th 2017	
Final Exam	50%		

Note:

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

Assignment of E grade and supplemental examination for this course will be at the discretion of the Course Instructor. The rules for supplemental examinations can be found in the current Undergraduate Calendar.

<http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/grading.html>

Note to students: Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance: <http://web.uvic.ca/calendar2017-01/general/policies.html>

Policy on Inclusivity and Diversity: <http://web.uvic.ca/calendar2017-01/general/policies.html>

Standards of Professional Behaviour: You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.

<https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf>

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.

<http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/academic-integrity.html>

Equality: This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging for appropriate accommodation. Alternatively, you may want to contact the Resource Centre for Students with a Disability located in the Campus Services Building.

The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.

Course Lecture Notes: Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.