

MTU**Power Systems: Electrical Power Distribution**

Course Number: EET3390
Course Name: Power Systems
Credits: 3 semester credits
Semester: Fall 2011
Section: R01

Instructors: Alex Sergeyev
Office: 413 EERC Building
Telephone: 906-487-2258
Email: avsergue@mtu.edu
Office Hours: MWF 3-4
Web : <http://www.tech.mtu.edu/~avsergue>

Day / Time: Recitation: MWF 2:05 to 2:55

Rooms: Recitation: Room EERC 313

Textbook: Electrical Power Distribution and Transmission by Faulkenburg and Coffey, Prentice-Hill, 1996

Additional Materials/References: Skvarenina, Tim and DeWitt, William, Electrical Power and Controls, second edition, Prentice-Hill, 2004

Course Description: A study of the distribution of electrical power from substations to loads, system components and system performance. Cover basic power systems and their analysis, the per-unit concept, faults on power circuit interrupting devices, system instrumentation, automatic protection system and safety and grounding.

Course Objectives:

Upon successful completion of this course students should have the knowledge to:

- Understand the fundamentals of power generation and distribution
- Analyze single phase and three phase circuits.
- Understand the per-unit concept.
- Test and model single phase and three-phase transformers.
- Be able to calculate fault currents in the power system
- Understand power system distribution equipment.
- Understand distribution line construction

Class Sessions: Class time will be devoted to presenting new topics and working through example problems. Several lectures will be delivered on-line to cover the class material that cannot be delivered due to my travel to the conferences .

Course Evaluation:	Homework (will be assigned but not graded)	0%
	Quizzes	25%
	Presentation/Report	20%
	Mid-term Exam 1	15%
	Mid-term Exam 2	15%
	Final Exam	25%

Grading Scale:	90% or greater	A
	85 – 89	AB
	80 – 84	B
	75-79	BC
	70 – 74	C
	65 – 69	CD
	60 – 64	D
	< 60%	F

Homework:	Assigned weekly and solutions sent out via e-mail. Homework assignment will not be graded but should be worked thoroughly to prepare for the following quiz.
Quizzes:	Short, announced quizzes will be given upon receiving the homework assignment on the related material. Homework problems or similar will appear on weekly quizzes.
Presentation:	Each student will give 25(20+5) minute presentation on the related to the class topics material with the goal to develop and enhance student's presentation skills. Upon presenting the material student will write a concise report on this topic. Possible sources, due dates, and the format of the report will be announced in the class.
Examination:	A final exam will be given at the completion of this class. If you must miss the scheduled exam date, you must make arrangements with the instructor before the exam. If no arrangements are made and your absence is unexcused, your grade will be a zero.
Expectations of Students:	<ul style="list-style-type: none"> - You will attend class every session, and come to each session prepared, having read the assigned sections of the textbook. - You will attempt all homework: problems in order to prepare for the quiz. - You will be respectful to your classmates. - You will ask for help if needed and contact the instructor to receive assignments you may have missed. - You are responsible for the material covered in required reading whether that material is covered in lectures or not - Proper professional and ethical behavior is expected of all students in this class. If cheating is suspected, the Dean of Students will be notified and standard MTU policies will be followed.
University Policies:	<p>Academic regulations and procedures are governed by University policy. Academic dishonesty cases will be handled in accordance the University's policies.</p> <p>If you have a disability that could affect your performance in this class or that requires an accommodation under the Americans with Disabilities Act, please see me as soon as possible so that we can make appropriate arrangements. The Affirmative Action Office has asked that you be made aware of the following:</p> <p><i>Michigan Tech complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. If you have a disability and need a reasonable accommodation for equal access to education or services at Michigan Tech, please call the Dean of Students Office, at 487-2212. For other concerns about discrimination, you may contact your advisor, department head or the Affirmative Action Office, at 487-3310.</i></p>
Academic Integrity:	http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html
Affirmative Action:	http://www.admin.mtu.edu/aao/
Disability Services:	http://www.admin.mtu.edu/urel/studenthandbook/student_services.html#disability
Equal Opportunity Statement:	http://www.admin.mtu.edu/admin/boc/policy/ch3/ch3p7.htm

Tentative Schedule:

Week	Aug 29- Sept 4	<i>NO CLASS on Sept. 2 (Workshop)</i>
	Sept 5	<i>NO CLASSES (Labor Day)</i>
	Sept 5- Sept 11	<i>NO CLASS on Sept. 9 (K-Day)</i>
	Sept 12- Sept 18	
	Sept 19- Sept 25	
	Sept 26 - Oct 2	
	Oct 3- Oct 9	<i>Field Trip (tentatively)</i>
	Oct 10- Oct 16	
	Oct 17- Oct 23	<i>Midterm</i>
	Oct 24- Oct 30	<i>NO CLASSES on Oct 26,28 (NSF PI Conference)</i>
	Oct 31- Nov 6	
	Nov 7- Nov 13	
	Nov 14- Nov 20	
	Nov 21- Nov 27	<i>Thanksgiving Recess</i>
	Nov 28- Dec 4	
	Dec 5- Dec 11	
	Dec 12- Dec 18	<i>FINAL WEEK</i>