Fall 2016

OFFICE HOURS: Monday, Wednesday 1:00 pm to 2:00 pm

CSTM356/ET 356: Introduction to Power Systems

PREREQUISITES/ COREQUISITE: Physics 114, 115, or equivalent

COURSE DESCRIPTION: A study of electrical, hydraulic and pneumatic power systems. Emphasis upon structural and behavioral characteristics of components used in the generation, transmission and control of power systems used in contemporary industry.

DEPARTMENT OUTCOMES & ASSESSMENT

By graduation, Engineering Technology students should be able to:

1. Think critically and creatively,
2. Understand the theoretical principles of the profession,
3. Understand and apply relevant technology in the solution of technical problems,
4. Organize, manage and maintain projects,
5. Develop an appreciation for ethical and professional practices,
6. Develop and refine oral, written and visual communication skills, and
7. Demonstrate an overall competency in the program objectives.

COURSE OBJECTIVES

This is a technical course that will meet Outcomes 2, 3 & 4. Upon completion of this course, the student will be able to:

1. safely work with electrical, electronic, and fluid circuits, hand tools and test equipment,
2. use mathematics to analyze and troubleshoot basic electrical and fluid circuits,
3. read and draw electrical and fluid schematics, charts, tables and diagrams,
4. correctly identify proper electrical and fluid schematic symbols,
5. explain dc and ac power generation and identify the generator components,
6. explain power distribution theories and principles,
7. discuss coal, solar, wind and biofuels power generation, benefits and costs.

This course is a lecture/lab/internet experience. Each student is expected to attend every lecture and lab session. In addition, each student should check the MET 356 Course site on WESTERN ON-LINE for important class...
information and updates. Materials and homework will often be placed on the course website and it is each student's responsibility to retrieve these materials and complete the requirements listed.

**TEXTBOOK**

**REQUIRED MATERIALS**
Calculator capable of trigonometry and inverse functions (TI-30 recommended)
Safety glasses
Wire strippers (14-28 gauge)

**SPECIAL COSTS**
Students of this course are required to pay a special course charge of $25 for each lab-related course in the Engineering Technology Department. This money is used to support the consumable items used during the course.

Payment of the course cost is a required portion of the class and must be paid after the second week of the semester but prior to your final exam. If you fail to pay your course cost, you will receive a grade of “I” for the course until the lab fee is paid or the University automatically changes the grade from “I” to “F” according to the University policy. If the grade is changed to an “F”, the grade will remain an “F” on your permanent transcript, regardless of payment.

Payments can be made to the Engineering Technology Department Office (Knoblauch Hall 135) any time after the beginning of the third week of class. Also, for the convenience of the students, the instructor will announce one date that a staff member will visit the classroom to collect course charges en masse.

It is recommended that students pay by check made out to “WIU”. Likewise, the student should expect a receipt to serve as proof of payment.

If you have questions or concerns, please direct them to the staff in Knoblauch Hall 135 or call (309) 298-1091

**LAST DROP DATE**
10th week of class (Consult the WIU online calendar for the specific date.)

**ATTENDANCE**
Students are expected to attend every lecture and lab session. If you will be absent from a class period, notify the instructor (via email, phone or in-person) as soon as possible, preferably prior to the absence.

Only documented absences will be excused. Students must contact the instructor to determine if an absence will be excused. Students with unexcused absences will lose 3% from their grade for each session missed and no work may be submitted for the missed class periods.

Students who arrive late disrupt the class. Walking through the middle of a lecture interrupts the instructor and the other students. Please be courteous by arriving to class on-time. Continued tardiness will result in warnings and possible grade loss.

Occasionally faculty can be called to meetings causing the instructor to be late coming to class. If the instructor is late, please remain quietly in the hallway until a department representative explains the situation or for 15 minutes, at which time you may leave.
This course is graded by points. To calculate your grade, divide the total number of points you have earned by the total number of points possible. This percentage corresponds to the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Minimum Score</th>
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<tbody>
<tr>
<td>A+</td>
<td>not allowed</td>
</tr>
<tr>
<td>A</td>
<td>94 and above</td>
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<tr>
<td>A-</td>
<td>90 – 93</td>
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<tr>
<td>B+</td>
<td>87 - 89</td>
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<tr>
<td>B</td>
<td>84 - 86</td>
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<tr>
<td>B-</td>
<td>80 – 83</td>
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<tr>
<td>C+</td>
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<tr>
<td>C</td>
<td>74 – 76</td>
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<tr>
<td>C-</td>
<td>70 – 73</td>
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<tr>
<td>D+</td>
<td>67 - 69</td>
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<tr>
<td>D</td>
<td>64 - 66</td>
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<tr>
<td>D-</td>
<td>60 – 63</td>
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THE FINAL EXAM WILL BE 3:00 PM, MONDAY, DECEMBER 12, 2016

INCOMPLETE GRADES

A temporary symbol of “I” (incomplete for a course may be given only when a student, due to circumstances beyond his or her control, has been unable to complete the course requirements within the official limits of the term. The circumstances must be documented to the instructor's satisfaction.

TURNING IN WORK

All assignments except tests, quizzes and exams, are due at Midnight of the following Wednesday in which the work is assigned unless previously announced. Due dates will seldom be extended but, if exceptions are made, all students will be notified in class. It is expected that every student does his/her own homework – see academic integrity policy below.

Assignments are to be turned in at the beginning of each class. It is the student's responsibility to turn in the homework at the instructor's station when entering the classroom.

If the homework is not ready at the beginning of class, the student may turn the homework in prior to midnight that Wednesday using one of the following methods. NOTE: There will be a two point penalty for using the methods listed below.

1. Email the assignment as a PDF file or Word document (.doc or .docx extension to WR-Cupples@wiu.edu. (Please limit all email attachments to 2.0 Mbyte in size.
2. Submit the assignment to the Department Office. Give the assignment to the secretary and ask that it be time and date stamped and placed in my mailbox. Do not enter the mailroom un-attended

Exams

All exams will be completed in-class and are limited by time. Exam format may be written, practical or a combination of written and practical. When the instructor announces that time is complete, students must stop all work. Any student continuing work on an exam will lose 10 points from the exam score.

ACADEMIC INTEGRITY

Preamble

Western Illinois University, like all communities, functions best when its members treat one another with honesty, fairness, respect, and trust. Students have rights and responsibilities and students should realize that deception for individual gain is an offense against the members of the entire community, and it is the student's responsibility to be informed and to abide by all University regulations and policies on Academic Integrity (http://www.wiu.edu/provost/students/)

Plagiarism, cheating, and other forms of academic dishonesty constitute a serious violation of University conduct regulations. Students who engage in dishonesty in any form shall be charged with academic dishonesty.
It is a duty of faculty members to take measures to preserve and transmit the values of the academic community in the learning environment that they create for their students and in their own academic pursuits. To this end, they are expected to instill in their students a respect for integrity and a desire to behave honestly. They are also expected to take measures to discourage student academic dishonesty, to adjust grades appropriately if academic dishonesty is encountered, and, when warranted, to recommend that additional administrative sanctions be considered. Grading policies are the exclusive prerogative of the faculty; administrative sanctions are under the authority of the Director of Student Judicial Programs. This document provides policies and procedures to be followed when academic dishonesty is encountered.

Definitions of Academic Dishonesty

The following definitions and examples are not meant to be exhaustive. The University reserves the right to determine, in a given instance, what action constitutes a violation of academic integrity. See www.wiu.edu/policies/integrity.php for complete descriptions of the following topics:

Plagiarism, Fabrication and Falsification, Cheating, Complicity in Academic Dishonesty, Abuse of Academic Materials, Multiple Submissions

Reporting Academic Dishonesty

All members of the University community share the responsibility and authority to challenge and make known acts of apparent academic dishonesty. Any student, faculty member, or staff person who has witnessed an apparent act of student academic dishonesty, or has information that reasonably leads to the conclusion that such an act has occurred or has been attempted, has an ethical responsibility for reporting said act(s). Confronting and reporting academic dishonesty can be done in a variety of ways, and people should choose the manner most appropriate for the circumstances. Acts of apparent academic dishonesty that occur in the classroom should be reported directly to the course instructor, and/or the course instructor's Department Chair, and/or the instructor's College Dean. The Council on Admission, Graduation, and Academic Standards (CAGAS) or the Graduate Council will not accept or act upon anonymous reports, but will hold in strict confidence the identity of any person reporting a suspected instance of academic dishonesty, unless that person consents to having his/her identity revealed.

ACCESS, DISABILITIES & DISCRIMINATION

In accordance with University policy and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. For the instructor to provide the proper accommodation(s), you must obtain documentation of the need for an accommodation through Disability Support Services and provide it to the instructor. It is imperative that you take the initiative to bring such needs to the instructor's attention, as he/she is not legally permitted to inquire about such particular needs of students. Students who may require special assistance in emergency evacuations (i.e. fire, tornado, etc.) should contact the instructor as to the most appropriate procedures to follow in such an emergency. Contact Disability Support Services at 298-2512 disability@wiu.edu or in 143 Memorial Hall, or additional services. If you have emergency medical information to share with me, if you need special arrangements in case the building must be evacuated, or if you need accommodations in this course because of a disability, please make an appointment with me as soon as possible. My office location and hours are at the top of this syllabus. If you plan to request disability accommodations, you are expected to register with the Disability Support Services (DSS) at 298-2512.

University values, Title IX, and other federal and state laws prohibit sex discrimination, including sexual assault/misconduct, dating/domestic violence, and stalking. If you, or someone you know, has been the victim of any of these offenses, we encourage you to report this to the Title IX Coordinator at 309-298-1977 or anonymously online at: http://www.wiu.edu/equal_opportunity_and_access/request_form/index.php. If you disclose an incident to a faculty member, the faculty member must notify the Title IX Coordinator. The complete Title IX policy is available at: http://www.wiu.edu/vpas/policies/titleIX.php.

RESOLUTION OF PROBLEMS

Should a problem occur, students should speak to their instructor first. If the problem is not resolved, meet with the chair of the department. If the problem continues to be unresolved, go to the College of Business and Technology’s Dean.

Students should observe the following sequence for the resolution of problems:
Student --- Instructor --- Chairperson --- Dean

Web address for student rights and responsibilities: http://www.wiu.edu/provost/students.php
Web address for Academic Integrity Policy: http://www.wiu.edu/policies/acintegrity.php