

Fundamentals of Electric Circuits & Machines - Lab EET K-145

COURSE SYLLABUS

This syllabus is subject to change; notice of any changes will ONLY be provided in class

Instructor: Professor G. Kent Harding

Class Room: B-109

Class Time: T or R: 8:00am – 9:40am

Office Hours: MWF 9:00 – 9:30am; R 3:45 – 5:15pm

Office: Room C-148

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Course Prerequisites

- MAT K-186 or equivalent;

Course Co-Requisites

- EET K-144

Course Description

Please see the TRCC course catalog for official description; the instructor's description follows. This course uses a combination of computer simulation of various electric circuits and machines and corresponding physical (hardwired) systems to verify, illuminate and confirm the analytical and conceptual characteristics of these systems as presented in the companion lecture course (EET K-144). Both computer simulated and physical instruments are used to measure and record various electrical values – resistance, voltage, current and power – and to display the time varying behavior of those circuits and machines.

Learning Outcomes

This course is designed to develop specific knowledge, skills and abilities. Upon successfully completing the course, you should be able to use the computer to simulate and measure:

- Basic Electric circuit characteristics – resistance, impedance, voltage, current and power;
- The electrical characteristics of resistors, capacitors and inductors;
- The electrical and operational characteristics of transformers; and
- The electrical and operational characteristics of basic motors and generators.
- The operational characteristics of three-phase power systems.

Required Texts and other Materials/Supplies

- *Laboratory exercises are provided by the instructor;*
- TI 85, 89, 91 or equivalent calculator; and
- A digital multi-meter is optional but very useful.

Performance (Grade) evaluation

Students will be evaluated using the following with related points applied to computing the final grade:

Exams ----- 50 points

Completed lab exercises (lowest grade dropped)----- 50 points

Attendance

Attendance is mandatory! Schedule, room and instructor availability and the number of lab exercises permit **no allowance for the make-up of missed labs**. An attendance sheet containing the names of all currently registered students will be distributed for the student's signature within approximately 15 minutes of the start of each class and will be available during class. **IF YOU DO NOT SIGN IT AFTER YOUR NAME ON THE DATE OF THE CLASS YOU DID NOT ATTEND THE CLASS!** This sheet will be the only evidence of attendance in this course and will be used to document your attendance for financial aid or other externally required purposes. It may also be used to substantiate the reason for a poor or failing grade performance.

Grading

THERE ARE NO MAKE-UP OR EXTRA-CREDIT OPTIONS

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One lab exercise (the lowest grade) will be dropped to accommodate an unanticipated absence

All lab exercises are due within two weeks of the assigned completion date. The lab exam will be an individual, hands on completion of an assigned lab exercise in which the student must demonstrate the ability to prepare the physical circuit, take necessary measurements using the computer simulated instruments and evaluate the results; grading is mostly real-time.

All graded assignments will be graded on a 100 point scale. The final grade will be determined by totaling the points the student earned in each category (exams & quizzes) and dividing that total by the total possible points for the respective category to produce a percentage value. That percentage will be multiplied by the weighted value for its category (60 or 40 points), the results for all categories then totaled and the resulting numeric value converted into a letter grade according to the following:

LETTER	BASE	-	+
A	93 -100	90 - 92	NONE
B	83 - 86	80 - 82	87 - 89
C	73 - 76	70 - 72	77 - 79
D	63 - 66	60 - 62	67 - 69
F	BELOW 60 POINTS		

Due Dates

Due dates are as shown in the attached assignment sheet(s) and are subject to change. Changes will only be announced in class. The student is responsible for maintaining currency on all assignment due dates. If a class is cancelled for some reason, expect to do the work and turn in any assignments associated with the cancelled class in the following session. Only students having previously submitted a disability release will be granted any accommodation (generally extended time or relocation) for in-class assignments. No accommodation will be given for take home assignments.

Academic Honesty

All students are expected to adhere to the institutional policies pertaining to student conduct as describe in college catalog. Each graded assignment will include the following statement: "I have neither given nor received any assistance from or to any source or person not authorized by my instructor." Signed (and your signature). Violation of this agreement will result in the immediate removal from this course and a grade of F.

The DONUT CLAUSE

CLASS POLICY: ALL PERSONAL ELECTRONIC COMMUNICATION DEVICES, INCLUDING BUT NOT LIMITED TO CELL PHONES AND PAGERS, ARE TO BE SWITCHED OFF OR SWITCHED TO THE SILENT OR VIBRATE MODE.

BY REMAINING IN THIS CLASS AFTER THE DROP/ADD DATE YOU AGREE TO BUY A DONUT FOR EACH STUDENT IN THE CLASS IF ANY ELECTRONIC DEVICE "RINGS" DURING CLASS HOURS FOR EACH AND EVERY OCCASION SUCH DEVICE "RINGS". (CHRIS CLAUSE: THREE MUNCHKINS OR THEIR EQUIVALENT EQUAL ONE DONUT!) . THIS PENALTY WILL NOT APPLY TO INDIVIDUAL CASES IN WHICH THE INSTRUCTOR IS INFORMED IN ADVANCE OF THE START OF CLASS OR UPON THE STUDENT'S ARRIVAL OF POSSIBLE CALLS BECAUSE OF AN EMERGENCY SITUATION. THE INSTRUCTOR WILL

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INFORM THE CLASS OF EACH SITUATION. ABSENT EXTREME CIRCUMSTANCES, AS DETERMINED BY THE INSTRUCTOR, STUDENTS ARE LIMITED TO TWO EMERGENCY SITUATIONS PER SEMESTER.

College Policies

THIS SYLLABUS IS A SUPPLEMENT OF AND IS SUBORDINATE TO THREE RIVERS COMMUNITY COLLEGE'S (TRCC) POLICY AND PROCEDURES DOCUMENTS – THE STUDENT HANDBOOK, THE COLLEGE CATALOG AND ALL OTHERS – EITHER PRINTED OR AVAILABLE ON THE COLLEGE'S WEB SITE. TRCC POLICIES AND PROCEDURES SHALL BE THE FINAL BASIS FOR RESOLVING ALL ISSUES PERTAINING TO THE STUDENT'S PARTICIPATION IN THIS COURSE AND SHALL OVERRIDE ANY CONFLICTING COMPONENTS OF THIS SYLLABUS, INCLUDING ANY ATTACHED DOCUMENTS.

Accommodations

Accommodations for disabilities, religious practices or other reasons will be granted in accordance with TRCC policies and procedures. The student is responsible for following those procedures and providing the instructor with the appropriate documentation necessary to provide the requested accommodation.

ATTACHMENTS:

- **Course assignment sheet**