

Rochester Institute of Technology

EEET 241-Electrical Machines & Transformers

Lecture Syllabus

Instructor Information:

Instructor:	Richard Garrett, P.E.
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Office Location:	Varies – Adjunct Office - 82-2135
Office Phone:	(No voice mail – use E-Mail)
Office Hours:	TBD – by appointment only

Course Description:

Course Name:	Electrical Machines & Transformers (Lecture)
Course Prerequisite:	EEET 121 and EEET 122 (AC Circuits Lecture and Lab). <i>By remaining registered in this course, you are stating that you have met this requirement.</i>
Course Co-requisite:	EEET 242-Electrical Machines and Transformers (Lab)
Required Text:	Electrical Machines, Drives, and Power Systems (Sixth Edition) by Theodore Wildi, ISBN: 0-13-177691-6

Course Overview:

This course provides the students with fundamental concepts and principles of operation of various types of electric machines including Transformers, and DC, and AC machines.

Course Learning Objectives:

At the end of this course the student should develop a knowledge of:

1. AC single and three phase circuits (wye and delta configurations)
2. Ideal and practical transformers including function, characteristics and uses
3. Induction and synchronous motors and generators
4. Efficiency of motors and generators
5. Single phase motors
6. DC machines: motors and generators

Intended Learning Outcomes:

Students will be able to utilize transformers, DC and AC motors in basic electrical circuits for analysis. Analyze motor and transformer circuits, using complex arithmetic, phasors, and electrical circuit laws.

Grading & Evaluation:

Evaluation of student's performance (final grade) will be based on exams and in-class assignments as well as students' active and relevant participation in ALL the course exercises and discussions. Poor participation will ALSO be taken into account when calculating final grade. Students are encouraged to talk with the professor during the semester about your performance in any and all assignments and actively seek ways for improvement.

1. **Exams 1 and 2:** Two exams will be given during the semester (see the schedule for tentative date). The tests will be closed book however, a sheet of notes/formulas will be allowed for reference. Each exam counts for 30% of your grade. Dates are tentative and will be announced in class.
2. **Assignments:** During the semester, various assignments will be given out in class (and/or placed on the MyCourses site). If assigned, these assignments will be graded for completeness and effort. They will not be graded for exactness or correctness. You are encouraged to do the assignments. At times, you may be asked to present your work to the class and will be graded on your presentation. These assignments will count for 10% of your grade.
3. **Final Exam:** The Final Exam is cumulative of all work covered for the semester. It will not cover new material that was not previously tested. If you have an exam grade of 90% or greater at the time of the final, you may be exempted from the final exam (at your request). You must request this exemption prior to the last class and receive verification. If you have not received this verification, you are expected to take the final exam. If you are exempted from the final, you will receive the grade based on your work completed prior to finals week. If you take the final exam, it will count for 30% of your grade.

Letter Grade	Overall Grade Average	Description
A	> 93	Excellent
A-	90-92.9	
B+	87-89.9	
B	83-86.9	Above Average
B-	80-82.9	
C+	77-79.9	
C	73-76.9	Satisfactory
C-	70-72.9	
D	60-69.9	Minimum Passing Grade
F	0-59.9	

Accommodations for Students with Disabilities:

RIT is committed to providing reasonable accommodations to students with disabilities. If you would like to request accommodations such as special seating or testing modifications due to a disability, please contact the Disability Services Office. It is located in the Student Alumni Union, Room 1150; the web site is www.rit.edu/dso. Appropriate documentation will be required at the beginning of the semester. This will allow us to work out whatever arrangement is necessary.

Academic Integrity:

Your integrity is one of the few things in life that you control and is worth infinitely more than a grade in a class. Treat it accordingly. As an institution of higher learning, RIT expects students to behave honestly and ethically at all times, especially when submitting work for evaluation in conjunction with any course or degree requirement. The College of Applied Science and Technology encourages all students to become familiar with the RIT Honor Code and with RIT's Academic Honesty Policy located at:

<https://www.rit.edu/academicaffairs/policiesmanual/d080>.

I hold students to RIT's standards of academic integrity. You are welcome and encouraged to work with fellow students on any and all assignments (with the exception of quizzes and individual exams). The work you submit should be your own and reflect your own understanding of the subject. Any form of academic dishonesty, may result in F for the assignment or tests, a grade of F for the course, or even expulsion from the university. Not understanding what counts as academic dishonesty is not an excuse.

Additional Course Policies:

Attendance Policy: In order to do well in this course, students are strongly encouraged to attend all classes and complete all assignments. Absence for any reason (*without informing the instructor ahead of time if you are physically able to do so*) will not be considered as an excuse for failure to complete assigned work. Acceptable excuses will be rare and will be granted only for verifiable and significant reasons.

Syllabus Changes: On occasion, it may be necessary to make changes to the syllabus throughout the semester. If deemed necessary, any changes made will be posted to the class website (in MyCourses) and communicated to the class in advance.

Late Policy: As in the commercial world, students are encouraged to submit their work on time. Any assignment not completed on time will receive a grade of 0%. Only serious extenuating circumstances will be considered provided the instructor is informed in advance of the deadline.

Incomplete ("I") and Withdraw ("W") grades: Incompletes will only be given per University policy for appropriate hardship situations (unexpected business trip, illness/death in the family, etc.). An incomplete grade **WILL NOT** be assigned to students failing and/or falling behind in their work.

Dissemination of Information: If I need to contact you personally or the entire class, I will use the MyCourses system. Therefore, I strongly recommend that you enable the auto notification feature on MyCourses which will alert you when new information is available on MyCourses.

Classroom Etiquette:

When in the classroom, you are expected to be in “learning mode”. This means a couple of things:

Please place any phone or device on vibrate or silent and place in a location that will not interrupt you during the class.

You are not expected to use any computing device except for classroom activities such as note taking, etc.

While I understand the (perceived) need for coffee or other beverages during the class, it is not time to consume your caloric intake for the morning. Please refrain from eating in the class.

At times, you may be asked to present the work on your assignments or other material in class. Please be cognitive of this throughout the class and be prepared.