

# COURSE SYLLABUS

INSTRUCTOR: LEAH M. AKINS  
COURSE: ELECTRONICS I – ENT 102

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## THE NUMBERS

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Classroom: T101  
Contacting the Instructor:

OFFICE LOCATION	TACONIC 108 (NEAR 1 <sup>ST</sup> FLOOR EXIT)
WEB SITE	<a href="http://www.sunydutchess.edu/tlc/akins">www.sunydutchess.edu/tlc/akins</a>
VOICE MAIL	845-431-8421
OFFICE HOURS	as posted at office and web site
E-MAIL	<a href="mailto:AKINS@SUNYDUTCHESS.EDU">AKINS@SUNYDUTCHESS.EDU</a>
EMERGENCIES – ONLY BEFORE 9pm	845-795-2016

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## COURSE DESCRIPTION

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This course is a study of active devices and their applications. Students will learn the physical principles underlying current carriers in semiconductor materials; static and dynamic characteristics of diodes and transistors; biasing methods and concepts of amplifications; analysis of basic BJT and FET circuits; frequency response of one and two stage amplifiers; troubleshooting; analysis by computer simulation.

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## REQUIRED TEXTS

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Electronic Devices, Floyd, Prentice Hall, latest edition.

Computer Simulated Experiments for Electronic Devices Using Electronics Workbench, Berube, Prentice Hall, latest edition.

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## STUDENT ASSESSMENT

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The following percentages will be used to calculate the final grade:

FINAL EXAM	15%
TESTS/QUIZZES	40%
LAB ACTIVITIES	35%
LAB REPORT	10%

There are many activities that require class and group participation, especially lab activities, therefore attendance is expected. Students who have missed class assignments which require active

class participation will need to make arrangements to make up for that assignment or the student will receive a zero grade for it.

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### **SOME MORE IMPORTANT INFORMATION**

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Please read the following carefully. It contains important information on the instructor's expectations of you in order to succeed in the course.

**TESTS/QUIZZES:** There will be six tests/quizzes given during the semester. Your lowest quiz grade will be dropped (a missed quiz is automatically a grade of zero, there are no makeup quizzes). Your five highest scores are averaged for 40% of your overall grade. Quizzes will generally be every other week and you will be informed as to what will be on the quiz and if any materials can be used. All quizzes are individual efforts. Each quiz will test your competency and understanding of the most recent material. This will likely include problems similar to those given as homework, therefore it is VERY important to have worked the problems and come to class prepared with questions. Quizzes may also include questions based on the most recent reading assignments and topics covered in lecture or lab.

**LAB ACTIVITIES:** Lab work will involve a wide variety of activities. You will be asked to perform virtual labs on Multisim and to be prepared to respond to questions. You will be assessing each other on your preparedness and participation which will count as 5% of your overall grade. You will be wiring and testing circuits and reporting on results. For most of these activities, **LAB GROUPS ARE PICKED AT RANDOM AND GROUP SIZES WILL VARY DEPENDING ON THE TASK.**

**LAB REPORT:** Each individual will submit one (1) formal lab report during the semester. You will be assigned a particular lab to write the report on. A group activity to prepare for writing the lab will count as 2.5% of your overall grade. A draft copy of the report is to be submitted no later than two weeks after the lab was completed. The draft report grade is either 100 if submitted or 0 if not and is worth 2.5% of your overall grade. The draft will be returned with comments to you within one week of submittal. The final report is due within one week of returning the draft. It is expected that instructor comments are addressed in the final version and the report will be critically assessed. It is worth 5% of your overall grade.

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### **SUPPORT MATERIAL**

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Lab report writing guidelines are supplied and discussed. Also, information on how to answer technical questions is provided.

All lectures are supplied electronically as powerpoint lectures.

There are various support texts in the lab room (T101) and in the library. There are also catalogs and data books in the lab room. You may work in the lab room at any time as long as I am around to let you in.