

METROPOLITAN STATE UNIVERSITY OF DENVER
Office of Academic and Student Affairs

REGULAR COURSE SYLLABUS

School of: Professional Studies

Department: Engineering Technology

Prefix & Course Number: EET 2165 Crosslisted With*:

Course Title: Electronics Laboratory

Banner course title (30 characters): Electronics Laboratory

Check All That Apply: Required for Major: X Required for Minor: X Specified Elective:
Required for Concentration: Elective: Service Course:

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:

(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward to the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 1 (0+2)

Face-to-Face or Equivalent Hours per course:

Lecture Lab 30 Internship Practicum Other (please specify type and hours):

Additional Student Work Hours per course: 30

Schedule Type: A Grade Mode: L

Variable topics umbrella course: No X Yes If Yes, number of credit hours allowed

Specified repeatable course: No X Yes

APPROVED:

Juzza Balogh for Dr. He
Department Chair OR Program Director

01/29/2014

Date
1-30-14

Dean OR Associate Dean

[Signature]
[Signature]

Date
03/13/14

Associate VP, Academic and Student Affairs

Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

Prefix and Course Number: EET 2165

Prerequisite(s): EET 1150, or EET 2000, and CHE 1100 or CHE 1800 (with a grade of "C" or better for all prerequisites)

Corequisite(s): EET 2145

Banner Enforced:

Prerequisite(s): EET 1150, or EET 2000, and CHE 1100 or CHE 1800 (with a grade of "C" or better for all prerequisites)

Corequisite(s): EET 2145

Prerequisite(s) or Corequisite(s): _____

Registration restrictions: Level _____ Class _____ Program/Major _____ Student attribute _____

Catalog Course Description:

The student will develop the laboratory skills necessary for integration of electronic devices in applications such as filtering, amplification, and oscillation. The student will integrate the lecture content of EET2145 in the practical, hands-on laboratory exercises developed in this course.

Specific Variable Topics Course Description (if applicable, umbrella course description included above):

Required Reading and Other Materials will be equivalent to:

Floyd (2012). *Electronic Devices*, 9th Edition or latest edition. Upper Saddle Hill, NJ: Prentice Hall

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. Analyze circuits by calculation.
2. Model circuits using circuit simulation software.
3. Construct, analyze and measure circuits with respect to design and models.
4. Document laboratory results in formal reports.

Detailed Outline of Course Content:

- I. Introduction and Review of Laboratory Equipment, Safety, Etc...
- II. Diodes
 - A. Properties and Behavior
 - B. Special Diodes
- III. Transistors
 - C. Transistor Properties and Behavior
 - D. Simple Transistor Circuits
- IV. Amplifiers
 - E. Single Stage Transistor Amplifiers
 - F. Multistage Amplifiers
 - G. JFET Amplifiers
 - H. Summing Amplifier (Op-amps)
 - I. Amplifier Frequency Response
- V. Voltage Regulators

Evaluation of Student Performance:

1. Laboratory Reports