



COURSE SYLLABUS

Course:	Optoelectronics PHO K140	Lab, Optoelectronics PHO K140
Location:	Room B229	Room B229
Time:	MW 1:00-2:15	T 12:00-1:40
Prerequisites:	EET K105/106, MAT K137	N/A
Instructor:	John Forella forella@earthlink.net	Dan Courtney dcourtney@trcc.commnet.edu 860-885-2338
Office Hours:	By appointment	As posted – office C134
Text:	The Science of Electronics – Analog Devices David M, Buchla & Thomas Floyd	N/A

Course Description: This course introduces semiconductor technology and devices, with an emphasis on optoelectronic devices, including LED's, laser diodes, and photodiodes. Analysis and design of circuits containing these devices will be covered, as will current applications.

Laboratory experiments will be included throughout the course to allow the students to apply the concepts learned in the classroom and develop their skills in building electronic and optoelectronic circuits.

Course Format: This course will be a combination of lecture and lab exercises. All classes are held in the lab for easy transition from lecture topics to hands-on demonstration of theoretical principles.

Course Topics:

Semiconductor PN Junctions
Diode Types
BJT/FET Transistors
Basic Amplifiers
LED/ Laser Diodes
Photodiodes

Lab Topics:

Lab Safety & Standard Practices
Equipment Familiarization
Semiconductor Diode Characteristics
Diode Rectifiers
Transistor Amplifier
LED/Laser Driver Circuits

Grading: Homework, Lab Exercises and Reports. Tests, Oral Presentations, Class Participation, Attendance, Promptness, Professional Attitude.

Attendance/Timeliness: Attendance is mandatory at all class and lab sessions. Tardiness of attendance and/or assignments can have a significant negative impact on grading.



K140 Course Outcomes: The Course Outcomes are defined and assessed to determine the effectiveness of the course at meeting the course objectives.

1. Mastery of electronic and optoelectronic technology concepts as defined in this syllabus.
2. Knowledge of electrical quantities, units and relationships.
3. Demonstrate an ability to build and test electronic and optoelectronic circuits and systems.
4. Demonstrate an ability to analyze and solve problems relating to electronic systems.
5. Demonstrate oral and written communications skills.
6. Demonstrate an appreciation for lifelong learning.
7. Demonstrate proper professional and ethical behavior.
8. Demonstrate a commitment to quality, timeliness and continuous improvement

College Withdrawal Policy

Students may withdraw, in writing or verbally at the Registrar's Office for any reason until the end of the 10th week of classes. From the 11th week through the end of the 13th week, a student may withdraw with the instructor's written approval.

Disabilities Statement

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the Disabilities Counseling Services at 383-5240. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. Please note that I cannot provide accommodations based upon disability until I have received an accommodation letter from the Disabilities Counselor.