



Course Syllabus

Course	Optoelectronics 11384 - PHO* K140 - T1	LAB, Optoelectronics 10704 - PHO* K140 - T1A
Credits	4	0
Prerequisites	EET K134/135 or PHO K140 and PHO K105 or TCN K105	
Attributes	Open Elective, Technical Elective, Tech Lab	Open Elective, Technical Elective, Tech Lab
Type	Class	Lab
Time	MW 1-2:15 PM	T 12-1:40 PM
Classroom	TRCC B209	TRCC B213
Dates	1/21/09 - 5/19/09	1/21/09 - 5/19/09
Instructor	Dan Courtney dan.courtney@jdsu.com dcourtney@trcc.comnet.edu 860-243-6723	Dan Courtney dan.courtney@jdsu.com dcourtney@trcc.comnet.edu 860-243-6723
Text	Science of Electronics 1st ed, Thomas L. Floyd, Peason Publishers	N/A
Course Description	This course introduces semiconductor technology and devices, with an emphasis on optoelectronic devices, including LEDs, laser diodes, and photodiodes. Analysis and design of circuits containing these devices will be covered, as will current applications. The course includes a lab component.	
Course Topics	<ul style="list-style-type: none"> Analog Concepts Optoelectronics Overview Semiconductor Materials PN Junctions - the diode Diode Applications - Electronic Diode Applications - Optical Bipolar Junction Transistors and Circuits Field Effect Transistors and Circuits Multi-stage, RF and Differential Amplifiers Operational Amplifiers & Circuits Integrated Optoelectronics Electronic Circuits and Applications Special Topics in Optoelectronics 	<ul style="list-style-type: none"> Lab Familiarization - 5S Lab Instrumentation Diode Characterization Rectifiers, Filters, Ripple Zener Diode Rectifiers Light Emitting Diodes Transistor Biasing Common Emitter Amplifier Transistor Switch JFET Transfer Characteristics Special Topics Projects