



Course Syllabus

Course	Fiber Optic System and Devices 11312 - PHO* K251 - T1	Lab, Fiber Optic System and Devices 11313 - PHO* K252 - T1A
Credits	3	1
Prerequisites	EET* K105/106, MAT* K186, and PHO* K101	EET* K105/106, MAT* K186, and PHO* K101
Co-requisites	PHO K253	PHO K251
Attributes	Open Elective, Tech Lab	Open Elective, Tech Lab
Type	Lecture	Lab
Time	MW 10:46-11:59 AM	M 1:00-2:40 PM
Classroom	Three Rivers CC B209	1:00
Dates	1/21/09 - 5/19/09	1/21/09 - 5/19/09
Instructor	Dan Courtney dan.courtney@jdsu.com dcourtney@trcc.commnet.edu 860-243-6723	Judy Donnelly
Text	K251 Technician's Guide to Fiber Optics 4th ed., Donald J. Sterling and Leo Chartrand, Cengage Publishers	N/A
Course Description	Co-requisite: PHO* K252 is required for LFOT majors This course will introduce parameters describing optical fibers, fiber optic system components, waveguide transmission as well as non-telecommunications uses of fiber. Fiber coupling, splicing, and testing will also be covered. Concepts from optics and electronics will be used extensively to explain the operation of fiber systems and devices.	This laboratory course accompanies PHO* K251 and provides practical experience applying and testing fiber optic connectors and splices, fusion splicing, and using instrumentation such as optical loss test sets and the optical time domain reflectometer (OTDR). Students will measure fiber optic parameters and work active and passive devices commonly found in fiber optic systems.
Course Topics	Background and Applications Fiber Types and Characteristics Connectors and Splicing Fiber Optic Cables Sources and Detectors Transmitters and Receivers Fiber Optic Components Fiber Optic Sensors and Other Applications Integrated Optics Optical Communications Systems Test Equipment Special Topics	Plastic Fiber Numerical Aperture Attenuation Connectorization 1 Connectorization 2 Single Mode Connectors OTDR Fiber Optic Sensor Homemade Coupler