

Three Rivers Community College
Lecture Syllabus
Fiber and Integrated Optics
PHO 250
Spring 2008

Instructor: George Lyman, *Esq., P.E.*

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Class meets: M/W 1:00p – 2:15p

Corresponding Lab meets:

Office Hours: Before and After Class

Course Objectives: This course is designed to introduce you to the basic principles of fiber optics and to give you a working knowledge of state of the art fiber optic systems. Course lectures will be supplemented with hand outs as needed. The lab section is designed to complement the lecture as well as to give you hands on experience with fiber optic termination and test procedures.

Text: Mynbaev and Scheiner, *Fiber Optic Communications Technology*, Prentice Hall, 2001; ISBN: 0-13-962069-9

Grading:

Exams: There will be three exams of equal weight. Exams are open book, open notes.

Homework: Homework is assigned but not collected or graded. Homework is the basis of the exams.

Laboratory: The lab grade is 25% of the total grade.

Use of Calculators: You should have your own scientific calculator capable of performing such basic operations as trigonometry, powers, roots, logarithms and scientific notation. You should bring calculator to all classes, labs and tests. Calculators may be used in all exams. Each student is expected to provide his/her own calculator. Calculators may not be shared during an exam.

Missing an exam: If you miss an exam you get an F. It is completely and entirely YOUR responsibility to take steps to remove the F. You do NOT have the automatic right to take a make-up exam. You MUST provide me with convincing evidence that you can not or could not make it to the exam. Merely saying ‘I was sick’ or ‘My car wouldn’t start’ is not enough. If you were too sick to make it to the exam, then you MUST provide a note from a doctor to that effect. If you have to miss an exam for reasons other than illness (e.g. work related travel) you must inform me of this fact prior to the day of the exam and provide proof thereof. *Legitimate* reasons will be accepted, but the burden of proof is entirely upon the student.

Students with disabilities

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. Your cooperation is appreciated.

Attendance Policy

Students are expected to attend all classes, to be on time and to be prepared. Excessive absences will have a deleterious effect upon grades. Attendance will be taken.

Grade Scale:

93+	A	77 - 79	C+	60 - 63	D-
90 - 92 ...	A-	74 - 76	C	59	F
87 - 89 ...	B+	70 - 73	C-		
84 - 86	B	67 - 69	D+		
80 - 83	B-	64 - 66	D		

Academic Honesty: Students are governed by and expected to adhere to all TRCC academic policies.

Tentative schedule of topics to be covered:

- Introduction to Fibers and Telecommunications Ch. 1
- The Physics of Light Ch. 2
- Optical Fibers Ch. 3, 4, 5, 6
 - Attenuation
 - Dispersion
 - Maxwell's Equations
 - Modes
 - Single Mode/Multimode
- Fabrication/Testing C. 7, 8
- Light Sources Ch. 9, 10
- Receivers Ch. 11
- Fiber Components Ch. 12, 13