University Course Number: ELEG 640

Course Title: Optoelectronics

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Prerequisites: Basic undergraduate courses in semiconductor devices and electromagnetic waves.

Course Objectives:

1) To explain how the various optoelectronic devices operate and how they are assembled into a system.
2) To describe their use in digital transmission and information processing systems
3) To illustrate the current state-of-the-art by reference to journal articles and to examples of actual devices and systems in use today

Course Description:
Provides an introduction to the operating principles of optoelectronic devices used in various digital transmission and information processing systems. Emphasis is on the generation (via lasers) and detection of optical signals.
Optoelectronics
ELEG 640

Course Requirements

Homework: Problems assigned on a bi-weekly basis.

Exams: Midterm and a Final exam.

Class Attendance: Students are responsible for all material covered in class lectures and reading assignments.

Submit all homework and exams to the course instructor at the above address by the schedule shown on the Course Outline. (FAX to 302-831-1468 is preferred.) This will ensure rapid grading and recording of your work. Please include the University course number on all work. (Delays of up to one week are OK. Approval for longer delays should be requested from the instructor.)

The homework will account for 15% of your grade and the exams will count equally into the other 85%. Each exam will cover roughly half of the course material. The Midterm exam will be 1.5 hours long, while the Final will be 2 hours long.

The exams will be 'closed-book' but a formula and data sheet will be provided, so it will not be necessary to memorize equations or constants. It will only be necessary for you to be able to select the right equations and data from a list of all those covered by the course. Graded midterm exams will be returned. Final exams are not usually returned unless you specifically request it.

All homework assignments will be posted on the course website(www.ece.udel.edu/~hunsperg/640/). Homework will be graded on a "logical approach" basis rather than on whether you obtain the right answer. Thus you should be able to obtain 100% on the homework by making a reasonable effort to solve all problems and submitting them. Graded homework submitted by FAX will not be returned to you, but solutions will be posted on the website and you will be notified that we have received your homework. Note that solutions may be posted before the problems are due to be handed in, since I do not grade on the basis of correct answers and often students at different locations are taking the course on different schedules. Please try your best on the problems and then submit them before you look at the solutions. Be sure that you understand the homework solutions before taking the exams.