**ELEC 7970 Photovoltaics**  
Course Syllabus

**Prerequisites:** (1) graduate school enrolment; and (2) possess an elementary understanding of microelectronics, solid state physics and electronic circuits.

**Course Objectives:** (1) to develop an understanding of photovoltaic devices and systems; (2) to develop an understanding of the primary photovoltaic device technologies; and (3) to understand the optical considerations for a photovoltaic system; (4) to understand the power electronic portions of a photovoltaic system; and (5) exposure to the various applications of photovoltaics.

**Instructor:** Dr. Robert Dean (office: 222 Broun Hall, 844-1838, deanron@auburn.edu)

**Schedule:** Class: MWF (11:00am-11:50pm) BR 107, Office Hours: MW (3:00pm-4:00pm) and by appointment.


**Class Website:** [www.eng.auburn.edu/~deanron/Photovoltaics.html](http://www.eng.auburn.edu/~deanron/Photovoltaics.html). Note: I plan to post .pdf versions of my teaching notes on the class website.

**Special Needs:** Any student who needs special accommodations should make an appointment to discuss their needs as soon as possible. Accommodations for special needs will be made in accordance with the official policies of Auburn University.

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**Grading Policy**

Grades will be assigned on a 10% scale (90-100:A, 80-89:B, etc…) based on the point scale presented below

Homework: 50%

Class Presentation: 50%

**Homework**

Homework will be given, occasionally, throughout the semester. The due dates for homework assignments will be given on the days that the assignments are given. Late homework will not be accepted, unless due to an excused absence (illness, job interview, conference travel, etc…). Homework assignments must be submitted in a format that is organized, professional and legible (labeled axes, correct units, etc…).

**Class Presentation**

The last part of the semester will consist of each student giving a ~20min PowerPoint presentation on a topic relevant to this course and approved by the instructor. Instructions and guidelines for the class presentation will be given during the semester. **NOTE:** unexcused absences from class periods during the class presentations will adversely affect (i.e. lower) your class grade!

**Computer Resources**

Some Homework assignments may require the use of engineering software tools, such as PSPICE, MATLAB, and/or EXCEL. These tools are available on the College of Engineering Workstations (e.g., BR 123).
**Class Attendance**
Class attendance will not affect grading except as previously stated under Homework and Class Presentation. If a student knows that he or she will be absent for an excused absence, such as a job interview or to attend a conference, please let the instructor know ahead of time if possible.

**Class Etiquette**
The instructor is here to teach and the students are here to learn. Therefore it is important to maintain a classroom atmosphere that fosters learning. Therefore:

1. do not use cell phones during class
2. do not read newspapers during class
3. arrive on time
4. do not leave early unless you notify the instructor before class of a need to leave early that day
5. minimize disruptive behavior (such as non-class related conversations)
6. come prepared to learn
7. laptop/notebook computers and/or audio recording devices can be used to take notes

**Academic Honesty**
Students are expected to do their own work. Students may work together on homework assignments; however, each student must submit their own work for a homework assignment. Representation of someone else’s work as their own will result in a zero on the assignment and possible further disciplinary action by Auburn University. Other people’s work must be referenced where appropriate.

**Inclement Weather**
Auburn University may announce campus closings due to expected or occurring inclement weather, such as snow or ice storms. These campus closings, as well as tornado/severe thunderstorm warnings, are officially excused absences from class.

**Contingency Plan**
If normal class activities or computer lab availability are disrupted due to many students or the instructor experiencing illness or an emergency or crisis situation (such as a widespread flu outbreak), the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.