Syllabus: OPT 586L


Schedule Fall 2014 Room 305:
Lab: Monday 9:30 to 10:20 am

Lab Instructor:
Greg A. Smith, Assistant Research Professor
College of Optical Sciences, Room 707
The University of Arizona
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Office Hours: Mon. 10:30-11:30am, Wed. 8:00 - 9:30 am, or by appointment

Units: Lab (1)

Course Outline

- **Mathematica Fundamentals**
- **Polarization Ray Tracing.** Cascading polarization effects through systems. Polarization aberration function.
- **Polarization Effects at Reflecting and Refracting Interfaces.** Fresnel equations. Multilayer film polarization.
- **Polarization Aberrations Examples.** Uncoated lens. Fresnel rhomb.

In class practice in the computation of polarization effects when light propagates through optical systems. The interpretation of the resulting polarization aberrations. Mathematica routines will be used in class by groups of students for simulation of the polarization properties of optical interfaces and optical systems. Use of Mathematica is required, but proficiency not expected at the beginning of the semester. Relevant Mathematica code will be distributed or made available over the web. Distance learning students must participate via telephone sessions.

Grading:

- Homework 100%
- No final exam 0%

Textbook: None
**Academic Integrity**
According to the Arizona Code of Academic Integrity (http://web.arizona.edu/~studpubs/policies/cacaint.htm), “Integrity is expected of every student in all academic work. The guiding principle of academic integrity is that a student’s submitted work must be the student’s own.” Unless otherwise noted by the instructor, work for all assignments in this course must be conducted independently by each student. CO-AUTHORED WORK OF ANY KIND IS UNACCEPTABLE. Misappropriation of exams before or after they are given will be considered academics misconduct.

Misconduct of any kind will be prosecuted and may result in any or all of the following:
* Reduction of grade
* Failing grade
* Referral to the Dean of Students for consideration of additional penalty, i.e. notation on a student’s transcript re. academic integrity violation, etc.

**Students with Disabilities**
If a student is registered with the Disability Resource Center, he/she must submit appropriate documentation to the instructor if he/she is requesting reasonable accommodations. (http://drc.arizona.edu/instructor/syllabus-statement.shtml).

The information contained in this syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.