

OPTI 340A – Introduction to Optical Design

Meinel Room 422

Thursday 10:00 – 10:50 AM

Objectives: This one unit class will introduce students to the optical design software CODE V. At the end of the semester students should be able to maneuver comfortably within the CODE V environment, input multiple optical surfaces, generate performance metric reports, create a merit function and optimize an optical system. The ultimate goal of this class is to have students be able to excel on the first day of OPTI 340 next semester.

Instructor: Yuzuru Takashima
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Class Website: d2L

Office Hours: TBA

Required Text and Materials: Code V software is required for this course. Enrolled students may obtain an electronic key for one license by filling out a form in the Optical Sciences Academics Office (Room 403). This license will be good for a specified amount of time and can only be used on one electronic device.

Attendance Policy: Students are expected to be regular and punctual in class attendance and a significant portion of the grade is based on regular attendance in this class. Excused absences include: all holidays or special events observed by organized religions for those students who show affiliation with that particular religion and absences approved by the UA Dean of Students.

Grading Policy: The grading for the class will be based upon attendance and two take home exams.

Attendance	- 50%
Midterm	- 25%
Final	- 25%

The following grading scale will be used:

100%-90%: A | 75%-89%: B | 65%-74%: C | 55%-64%: D | 0%-54%: E

Preliminary Class Outline

Lecture 1: Class Intro/Obtaining CODE V

Lecture 2-3: Intro to CODE V/Inputting a Surface - 2 weeks

Lecture 4: Ray Tracing with CODE V

Lecture 5-6: Generating Reports in CODE V -2 weeks

Lecture 7: CODE V Merit Functions

Lecture 8: Optimizing in CODE V

Lecture 9: Command Line in CODE V

Lecture 10: First Half Review

Take-Home Midterm

Lecture 11: System Evaluation

Lecture 12: 3rd Order Aberrations

Lecture 13: Reflective & Aspheric Systems

Lecture 14: Second-Half Review

Take-Home Final

Academic Integrity

According to the Arizona Code of Academic Integrity (<http://deanofstudents.arizona.edu/aboutdeanofstudents>), "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 a Learning Disability

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/learn/test-accommodation.html>).

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.