Instructor: Dr. Joseph Shaw, Professor  
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Course Objectives: In this course you will learn the principles fundamental to designing and analyzing optical systems using geometrical optics and wave aberration theory. The main goals will be to gain conceptual understanding of optical systems, optical aberrations, and computer-aided design using the Zemax® optical design code.

Time & Location MWF 10:00 – 10:50 am in EPS 110

Class website:  http://www.coe.montana.edu/ee/jshaw/classes/OpticalDesign_S09.htm

Office Hours: TBD


Other useful books: W. J. Smith, Practical Optical System Layout (McGraw-Hill, 1997)  
Mouroulis & Macdonald, Geometrical optics and opt. design (Oxford 1997)  
D.C. O’Shea, Elements of modern optical design (Wiley, 1985)

Grading:  
Homework 25%  
Mid-term exam 25%  
Design Project 25% (written report and oral presentation)  
Final exam 25% (design-project oriented)

Class policies:  
1. Because many homework assignments build directly on each other, late homework will not be accepted without prior arrangement.  
2. I will always assume that, as graduate students, you are interested in learning and will behave professionally. However, any cheating or blatant plagiarism will be dealt with according to MSU policies (http://www2.montana.edu/policy/student_conduct/cg400.html#410.00).  
3. Collaboration with other students on homework and projects is encouraged, but each student must participate as a full partner and submit his or her own independently completed assignments.  
4. Collaboration with anyone on exams is not allowed.