



CREOL, The College of Optics and Photonics

OSE3043 Analytical Methods in Optics
CREOL, The College of Optics and Photonics
Credit Hours: 3
Term: FALL 2023
Syllabus

Time: Mondays, Wednesdays 3:00 PM to 4:15 PM
Location:
Prerequisites: MAC 2313 Calculus III
Instructor: Dr. Armando Perez-Leija
Email/Contact Info: aleija@creol.ucf.edu
Office Hours and Location: Thursdays 4:00pm-5:00pm or any other time by request.
CREOL building, room 266
Course Modality: Live
Class Website/Webcourse:
<https://webcourses.ucf.edu/courses/1439988>

Course Materials:

Analytical Methods in Optics will expose the students to mathematical and numerical concepts used extensively in optics, physics, and other engineering disciplines. With a focus on applications, this class is designed to teach the students mathematical concepts through relevant optical and engineering examples. The homework will have a required MATLAB component so the students, throughout the entirety of this course will gain an intuitive understanding for computer coding and MATLAB specifically. This analytical methods class will cover matrix and vector manipulations, solutions of linear systems, eigenvalues and eigenvectors, complex analysis, and integral transforms.

Make Up Policy: If an emergency arises and a student cannot submit assigned work on or before the scheduled due date or cannot take an exam on the scheduled date, the student **must** give notification to the instructor **no less than 24 hours before** the scheduled date and **no more than 48 hours after the** scheduled date.

The Basis for Final Grade:

Criteria	Grade Weighting
Homework	60%
Participation	10%
Midterm Exam	15%
Final Exam	15%
Total	100%

Assignment Submission:

Homework must be handed in, or submitted via CANVAS, one week after being assigned. The lowest graded homework will be dropped.

Homework Policy: I encourage students to solve the problems on their own consulting relevant references, e.g., class notes, books, etc. If needed, you can discuss the homework problems with classmates.

Midterm and Final Policy: These are special homework, and the students will have exactly one week to work on them. The policy for midterm/final is the same as homework, with the exception that students cannot discuss it with any other person.

Participation: Students must participate actively contributing to discussions as well as answering and asking questions in class.

Grading scale

100-95	A
94-90	A ₋
89-85	B ⁺
84-80	B
79-75	B ⁻
74-70	C ⁺
69-67	C
66-65	C ⁻
64-50	D
<50	F