



UNIVERSITY OF
CENTRAL FLORIDA

OSE 4410L - Optoelectronics

Laboratory

Section: 0001

Optics and Photonics

Course Information

Term: Spring 2026

Class Meeting Days: W

Class Meeting Time: 07:30AM - 10:20AM

Class Meeting Location: CROLA210

Modality: P

Credit Hours: 1.00

Instructor Information

Name: Rom Simovitch

Office Location: CREOL 228

Office Hours

By appointment

Email: rom.simovitch@ucf.edu

Course Description

OSE 4410L OPT- 1(0,3)Optoelectronics Laboratory: CR: OSE 4410. Experiments in the basics of semiconductor optoelectronic devices including photodiodes, light-

emitting diodes, laser diodes, CCDs. Applications include solar cells, displays, photodetection, and optical communications. Spring.

This lab course is associated with the theory course (OSE 4410) on the principles, design, and applications of optoelectronic devices. Basic specifications of key optoelectronic devices, including photodiodes, Light Emitting Diodes (LEDs), diode lasers, LED and Liquid Crystal Displays are experimentally studied by the students. The experiments include both DC and AC characteristics of the devices and emphasize both the electrical and optical figures of merit. The advantages and disadvantages of various types of photodetectors and light sources are experimentally and quantitatively studied in the lab.

Student Learning Outcomes

After successful completion of this course, students will be able to:

- develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

Required Course Materials and Resources

Notebook for Lab Notes :)

Recommended Course Materials

Title: Fundamentals of Photonics

Authors: B. E. A. Saleh and M. C. Teich

Publisher: Wiley

Publication Date: 2007

Edition: 2nd

Title: Optoelectronics and Photonics: Principles and Practices

Authors: S. O. Kasap

Publisher: Prentice Hall
Publication Date: 2001

Title: Semiconductor Optoelectronic Devices
ISBN: 9780080469782
Authors: Joachim Piprek
Publisher: Elsevier
Publication Date: 2013-10-22

Course Assessment and Grading Procedure

The course grade will be out a total of 100 points, broken down as follows:

- **Attendance:** 1 point for full attendance every lab session (10 total), late arrivals (5-20 min) will result in half-point deductions, with later arrivals possibly resulting in full point deduction.
- **Pre-Labs:** A short list of questions based on the experimental procedure will be assigned to be answered by the start of each lab. Each pre-lab will be worth 2 points, for a total of 20 points.
- **Lab Report/Paper:** A paper-style report (maximum of 5 pages) should be submitted by each student, which will combine findings/results from two related labs. This paper should include an abstract, introduction, theory, experimental results, analysis and discussion, a conclusion, and any other relevant parts. Each paper will be worth 14 points, for a total of 70 points. Note that experimental data can be shared among group members, but analysis and submission must be individual.

Assignment Schedule

Due Date	Assignment Name	Assignment Type	Points
	Roll Call Attendance	Assignment	100
1/16/26	Required Submission	Assignment	0

Due Date	Assignment Name	Assignment Type	Points
1/21/26	PRE-LAB 1: LED1	Assignment	2
1/28/26	PRE-LAB 2: LED2	Assignment	2
2/4/26	Lab Report 1	Assignment	100
2/4/26	PRE-LAB 3: LD1	Assignment	2
2/11/26	PRE-LAB 4: LD2	Assignment	2
2/18/26	PRE-LAB 5: PHOTOCONDUCTOR	Assignment	2
2/18/26	Lab Report 2	Assignment	100
2/25/26	PRE-LAB 6: PIN PHOTODIODE	Assignment	2

Grading Scale

Grading Scale

Letter Grade	Percentage
A	94-100%
A-	90-93%
B+	87-89%
B	84-86%
B-	80-83%
C+	77-79%
C	74-76%
C-	70-73%
D+	67-69%
D	64-66%
D-	61-63%
F	0-60%

Policies for Course Grade

Makeup Work Policy

Make-up Lab due to Emergency Reason - If an emergency arises and a student cannot attend a Lab on the scheduled date, the student must notify the instructor no less than 24 hours before the scheduled date and no more than 48 hours after the scheduled date. A make-up lab session will be arranged if official documents regarding the emergency are submitted to the instructor. The instructor will specify a new due date for submitting the report of the make-up lab. The late submission rule of section 4.2 will apply if the student fails to submit the report by the new due date. Any illness will be considered a medical emergency only if a doctor's letter, which confirms the illness, is submitted to the instructor as an official document within the time mentioned in this section. Zero credit will be given for the lab without official documents.

Missed/Late Assignments

Late pre-labs (submitted after the start of the corresponding lab) will receive a zero. For lab papers, a letter-grade deduction will be applied for each 24-hour period after the submission deadline.

Special exceptions may be made depending on circumstances.

Attendance

Attendance is mandatory for all lab classes. In case of un-excused absences, zero credit will be given for the report associated with that lab.

Artificial Intelligence (AI) Use Policy

The use of AI is **highly** discouraged, and all results and analysis must be your own. Submissions generated by/utilizing AI will receive an **immediate** zero.

Disability Access & Accommodations

The University of Central Florida is committed to providing equal access to all students with disabilities (ADHD, learning disabilities, Autism, chronic medical conditions, physical disabilities, etc.). To receive consideration for reasonable disability-related course accommodations, disabled students must contact Student Accessibility Services (SAS) and complete the steps required for SAS to review accommodation requests. More information can be found on the UCF [Student Accessibility Services](#) website under the Start Here tab or by contacting SAS directly (Ferrell Commons 185; sas@ucf.edu; Phone - 407-823-2371).

Approved accommodations are shared with course instructors via the SAS Course Accessibility Letter. Implementing certain accommodations may require discussion about specific considerations of the course design, course learning objectives, and the individual academic and course challenges experienced by the student. While students with disabilities or chronic health needs are also encouraged to discuss any course concerns with professors in addition to contacting SAS, professors are not required to facilitate disability-related adjustments to the course unless the professor has received a Course Accessibility Letter from SAS that outlines approved accommodations.

Academic Integrity

Students should familiarize themselves with UCF's Code of Conduct at Student Conduct and Integrity Office. According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

1. Academic misconduct is defined as any submitted work or behavior that obstructs the instructor of record's ability to accurately assess the student's understanding or completion of course materials or degree requirements (e.g., assignment, quiz, and/or exam). Examples of academic misconduct include but are not limited to: plagiarism, unauthorized assistance to complete an academic exercise; unauthorized communication with others during an examination, course assessment, or project; falsifying or misrepresenting academic work; providing misleading information to create a personal

advantage to complete course/degree requirements; or multiple submission(s) of academic work without permission of the instructor of record.

2. Any student who knowingly helps another violate academic behavior standards is also in violation of the standards.
3. Commercial Use of Academic Material. Selling of course material to another person and/or uploading course material to a third-party vendor without authorization or without the express permission of the University and the instructor of record. Course materials include but are not limited to class notes, the instructor of record's slide deck, tests, quizzes, labs, instruction sheets, homework, study guides, and handouts.
4. Soliciting assistance with academic coursework and/or degree requirements. The solicitation of assistance with an assignment, lab, quiz, test, paper, etc., without authorization of the instructor of record or designee is prohibited. This includes but is not limited to asking for answers to a quiz, trading answers, or offering to pay another to complete an assignment. It is considered Academic Misconduct to solicit assistance with academic coursework and/or degree requirements, even if the solicitation did not yield actual assistance (for example, if there was no response to the solicitation).

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, [The Golden Rule](#). UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and respond to academic misconduct when necessary. Penalties for violating rules, policies, and instructions within this course can range from a zero on the exercise to an "F" letter grade in the course. In addition, an Academic Misconduct report could be filed with the Office of Student Conduct and Academic Integrity, which could lead to disciplinary warning, disciplinary probation, or deferred suspension or separation from the University through suspension, dismissal, or expulsion with the addition of a "Z" designated on one's transcript.

Being found in violation of academic conduct standards could result in a student having to disclose such behavior on a graduate school application, being removed

from a leadership position within a student organization, the recipient of scholarships, participation in University activities such as study abroad, internships, etc.

Let's avoid all of this by demonstrating values of honesty, trust, and integrity. No grade is worth compromising your integrity and moving your moral compass. Stay true to doing the right thing: take the zero, not a shortcut.

Title IX

Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources and information concerning reporting options at [Let's Be Clear](#) and [UCF Cares](#).

For more information on access and community engagement, Title IX, accessibility, or UCF's complaint processes contact:

- Title IX – ONAC – [Office of Nondiscrimination & Accommodations Compliance](#) & askanadvocate@ucf.edu
- Disability Accommodation – Student Accessibility Services – [Student Accessibility Services](#) & sas@ucf.edu
- [Access and Community Engagement](#) (including the Ginsberg Center for Inclusion and Community Engagement, Military and Veteran Student Success, and HSI Initiatives)
- UCF Compliance and Ethics Office – [Compliance, Ethics, and Risk Office](#) & complianceandethics@ucf.edu
- The [Ombuds Office](#) is a safe place to discuss concerns.

Reporting an Incident or Issue

If you believe you have experienced discrimination by any faculty or staff member, contact the Office of Nondiscrimination & Accommodations Compliance via the [ONAC website](#) or at 407-823-1336. You can also choose to report using the UCF

Integrity Line either anonymously or as yourself at 1-855-877-6049 or by using the [online form](#). UCF cares about you and takes every report seriously. For more information see the [Reporting an Incident or Issue Webpage](#).

Deployed Active-Duty Military Students

Students who are deployed active-duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make arrangements.

Campus Safety

At UCF's Public Safety and Police, safety is the top priority. Emergencies on campus are rare, but if one should arise, it's important to be familiar with some basic safety and security concepts.

- In an emergency, always dial 911.
- Every UCF Classroom has an Emergency Procedure Guide posted on a wall near the door, which will show you how to respond to a variety of situations. This guide can also be found online [here](#).
- In the event of an active threat, remember **AVOID, DENY, DEFEND**. Choose the best course of action and act immediately. Watch the video [here](#) to learn more.
 - **AVOID**. Pay attention to your surroundings and have an exit plan. Get as much distance and as many barriers between you and the threat as quickly as possible.
 - **DENY**. When avoiding is difficult or impossible, deny the threat access to you and your space. Lockdown by creating barriers, turning the lights off and remaining quiet and out of sight. Make sure your phone is silenced, but do not turn it off.
 - **DEFEND**. When you are unable to put distance between yourself and the threat, be prepared to protect yourself. Commit to your actions, be aggressive and do not fight fairly. Do whatever it takes to survive.

- For emergencies on campus, UCF will utilize the [UCF Alert](#) system. All UCF students, faculty, and staff are automatically enrolled to receive these email and text alerts, however, it's a good idea to frequently ensure your [contact information is up to date](#).

Financial Aid Accountability

All instructors are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete this activity by the end of the first week of classes or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

Class Schedule

Course Schedule

Week	Date	Topic	Assignments Due
1	1/14	Introduction - Circuits	
2	1/21	LED part 1	Pre Lab
3	1/28	LED part 2	Pre Lab
4	2/4	LD part 1	Pre Lab + LED report
5	2/11	LD part 2	Pre Lab
6	2/18	PC/PD part 1	Pre Lab + LD report
7	2/25	PC/PD part 2	Pre Lab
8	3/4	Solar Cells	Pre Lab + PC/PD report
9	3/11	Digital Display	Pre Lab
10	Spring Break (NO LAB)		Having fun :)
11	3/25	Audio Transmitter/Receiver	Pre Lab + SC/DD report
12	4/1	Audio Transmitter/Receiver	Pre Lab
13	4/8	Optical Transmitter/Receiver	Pre Lab
14	4/15	Optical Transmitter/Receiver	Pre Lab
15	4/22	Makeup Lab	T/R report

