CREOL, The College of optics & photonics
B.S. in Photonic Science and Engineering

Mike McKee
Associate Director
Undergraduate Degree Programs
Optics and Photonics Technology

✧ An enabling technology – a general-purpose technology that fosters innovations across a broad spectrum of applications in a diverse array of economic sectors
✧ Profits are generated by companies that do not consider themselves a part of the photonics industry
✧ Is ubiquitous yet “invisible”
✧ Is a broad technology and not an industry
PHOTONIC SCIENCE & ENGINEERING

College of Engineering and Computer Science

College of Optics and Photonics

• CREOL – College of Optics & Photonics (COP) is a world-leading center of excellence.
• The BS Photonic Science and Engineering (BS-PSE) is a degree jointly offered by COP and the College of Engineering & Computer Science.
• Only B.S. Program in Florida, one of only 6 accredited in the nation.
<table>
<thead>
<tr>
<th>Course</th>
<th>Course Name</th>
<th>Notes</th>
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<tbody>
<tr>
<td>OSE 4720</td>
<td>Visual Optics</td>
<td>PR: OSE 3200 and OSE 3052. (Add OSE 3200 as PR)</td>
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<tr>
<td>OSE 4410</td>
<td>Optoelectronics</td>
<td>PR: OSE 3052 with C (2.0) grade or higher, CR: EEE 3350 (Remove EEE 3350 as PR, add as CR)</td>
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<tr>
<td>OSE 3200</td>
<td>Geometric Optics</td>
<td>Change from Spring to Fall offering.</td>
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<tr>
<td>OSE 3200L</td>
<td>Geometric Optics Lab</td>
<td>Change from Spring to Fall offering.</td>
</tr>
<tr>
<td>CHM 2040/2041</td>
<td>Chem Sequence</td>
<td>Chemistry is dropping this sequence, and will be now CHM 1025 and CHM 2045. (6 Credits)</td>
</tr>
<tr>
<td>OSE 3052</td>
<td>Foundations</td>
<td>PR: Grade of “C” (2.0) or better in MAP 2302 and PHY 2049C or PHY 2049 PR/CR: PHY 2049L (added PR: PHY 2049 and CR: PHY 2049L)</td>
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<tr>
<td>OSE 3200</td>
<td>Geometric Optics</td>
<td>PR: PHY 2049C or PHY 2049</td>
</tr>
<tr>
<td>PHY 2049L</td>
<td>Physics II</td>
<td>A &quot;C&quot; (2.0) or better is required for PHY 2049L. (Add to the list that exists in the catalog)</td>
</tr>
<tr>
<td>PHZ 3150</td>
<td>Introduction to Numerical Computing</td>
<td>Add PHZ 3150 as an acceptable option for EGN 3211. Must be completed with a &quot;C&quot; (2.0) or better.</td>
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</table>
Graduation Requirements

• 128 Credit Hours
• 9 hours of summer credit
• 2.25 Major GPA
• 2.00 UCF GPA
• Plus additional requirements

Electives Requirement

12 CR are needed to satisfy the restricted electives requirement

Approved Restricted Electives:
Refer to myKnights Audit for full list

FES 1006C Intro. To Engineering (1)
EGN 1007C Engr. Concepts and Methods (1)
OSE3043 Analytical Methods for Optics (3) PR: MAP 2302
OSE4721 Biophotonics (3) PR: OSE 3052
OSE4240 Intro. to Opt. Design (3) PR: OSE 3052, OSE 3200
OSE4720 Visual Optics (3) PR: OSE 3052, OSE 3200
OSE 4953 Senior Design Double Major ECE (1)
EEL 3342C Digital Systems (3)
EEL 3470 EM Fields (3)
EGN 4931H Eng. Honors Seminar-Research (3)
EFA 4413 Fundamentals of Electronic Materials (3)
MAP 4303 Ordinary Differential Equations II (3)
MAP 4341 Partial Differential Equations (3)
MAP 4371 Numerical Methods for Diff. Eq. (3)
MAS 3105 Linear Algebra (4)
MAS 5145 Adv. Linear Alg. and Matrix Theory (3)
OSE 4912 Directed Independent Research (3)
OSE 4931H Honors Directed Reading (3)
OSE 4970H Honors Thesis (3)
PHY 4604 Wave Mechanics I
PHY 4605 Wave Mechanics II
EOE 4443 Computer-Aided Analysis (3)
EOE 4493 Optical Engineering (3)
EOE 4593 Image Processing (3)
EOE 4723 Advanced Electromagnetics (3)
EOE 4724 Photonics (3)
EOE 4725 Fiber Optics (3)
Promoting Photonics

» Visit Valencia, Eastern Florida, Seminole State Intro to Engineering Courses
Advising Initiatives

CREOL UNDERGRADUATE ADVISING

Mike McKee will have Open Advising Hours without having to schedule an appointment. The meetings are private when you are meeting. No other students will be in the room, as is normal at UCF.

He will also be available for in-person advising in CREOL 104.

ZOOM: MONDAY – FRIDAY 3:00 PM – 4:00 PM via Zoom (link below) and

IN PERSON: TUESDAYS AND THURSDAYS – CREOL 104 – 7:00 AM – 4:00 PM.

You will initially be placed into a waiting room. If Mike is with a student, you may need to wait a few minutes before entering the Zoom room.

Please make sure your FULL NAME appears as your SCREEN NAME – and helpful to also have your UCF ID in the screen name.

JOIN USING ZOOM

You can also schedule an appointment using the link below.

Check Mike’s Schedule and Make Appointment
Jobs

77 Graduates since 2013

- Lockheed
- L3Harris
- Corning
- Northrop Grumman
- IBM
- Verizon
- Luminar
- ASML
- Audi
- Ball Aerospace
- Optigrate
- Lightpath
- General Cable
- Guidestar
- Graduate School (Princeton, Duke, Rochester, CREOL, Arizona)