

Photonic Science & Engineering 2023-2024

Major Courses Flowchart*

www.creol.ucf.edu
undergrad@creol.ucf.edu

Major Acceptance Requirements (C or better in these courses)

CHM 2045C**
Chem Fundamentals I (4)
PR: Chem Placement Test or
CHM 1025 (2)

Or

CHS 1440**
Principles of Chemistry (4)
PR: 1 Yr HS Chemistry

MAC 2311C**
Calculus I (4)

MAC 2312**
Calculus II (4)

MAC1140C &
MAC1114
C or better or
appropriate score on
math placement exam

PHY 2048**
PHY 2048L**
Physics I Lecture
and Lab (3/1)

Year 1 FTIC/
Transfer:
EGS 1006C (1)
EGS 1007C (1)

FTIC:
OSE 2050 (1)

Year 2 Fall

PHY2048
PHY2048L

PHZ 3150
Intro. to
Numerical
Computing (3)

Or

EGN 3211**
Engineering
Analysis (3)

PHY 2049**
PHY 2049L**
Physics II Lecture
and Lab (3/1)

MAC2312

MAC 2313**
Calculus III (4)

MAC2312

STA 3032
Probability /
Statistics (3)

MAC2312

Year 2 Spring

PHY2049
PHY2049L

MAC2313

PHY 3101
Physics III (3)

EEL 3004C**
Linear Circuits I
(3)

MAP 2302
Differential
Equations (3)**

MAC2313

ETIC/
Transfer:
MAS 3105 (4)
Transfer:
OSE 2050 (1)

Year 2 Summer

PHY2049
PHY2049L

MAC2313

EEE 3350
Semiconductor
Devices (3)

EEL 3123C**
Linear Circuits II
(3)

EEE 3307C
Electronics I
(4)

MAP2302

Year 3 Fall

PHY2049
PHY2049L

ETIC/
Transfer:
OSE 3043 (3)
in lieu of one
fall course

OSE 3200
Geometric Optics
(3)

OSE 3200L (1)

OSE 3052**
Foundations of
Photonics (3)

OSE 3052L** (1)

Year 3 Spring

EEE3350

OSE3052

OSE 4410
Optoelectronics (3)

OSE 4410L (1)

OSE 3053
EM Waves for
Photonics (3)

OSE 3052

OSE 4520
Laser Engineering
(3)

OSE 4520L (1)

ETIC/
Transfer:
OSE 4240 (3)
or
OSE 4720 (3)

Year 4 Spring

ETIC/
Transfer:
OSE 4721 (3)

OSE 4930
Frontiers of Optics
& Photonics
(3)

OSE 4951*
Senior Design I
(3)

OSE 4470

OSE 4470
Fiber-Optic
Commun (3)

OSE 4470L (1)

OSE 4830
Imaging and
Display (3)

OSE 4830L (1)

Year 4
Spring

OSE 4951

OSE 4952*
Senior Design II
(3)

ETIC/
Transfer:
OSE 4240 (3)
or
OSE 4720 (3)

Year 4 Fall

Good Things to Know:

- 2.25 Major GPA required for graduation
- Register for courses early so you are not closed out.
- Register for Critical Path Courses first.
- Once you complete Major Acceptance Requirement Courses, change major to PSE in my.ucf.edu.
- Check with advisor before selecting electives.

Scan to visit the
PSE Website



KEY

PREREQUISITE: →

COREQUISITE: →

CRITICAL PATH COURSES

Pre major requirements

Lab courses

Restricted Elective Options

RED BORDER: Course used for Major GPA Calc.

Lab courses are required for PSE majors.

** A grade of C (2.0) or better required
+ EE/PSE Double Majors will be required to enroll
in EEL 4914+OSE4953 and EEL4915L+OSE4953
to satisfy Senior Design requirements.

Restricted Elective Options

12 CR are needed to satisfy the restricted electives requirement. Electives shown on flowchart represent semesters in which courses are offered. Refer to myKnight Audit for full list

EGS 1006C Intro. To Engineering (1)¹
EGN 1007C Engr. Concepts and Methods (1)¹
OSE 2050 Intro. to Photonic Engineering Design (1)²
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)³
EEE 3342C Digital Systems (3)
EEL 3470 EM Fields (3)
EGN 4931H Eng. Honors Seminar-Research (3)
EMA 4413 Fundamentals of Electronic Materials
MAP 4303 Ordinary Differential Equations II (3)
MAP 4341 Partial Differential Equations (3)
MAP 4371 Numerical Methods for Diff. Eq. (3)
MAS 3105 Matrix and Linear Algebra (4) PR: MAC 2312
MAS 5145 Adv. Linear Alg. and Matrix Theory (3)
OSE 4912 Directed Independent Research (1)
OSE 4903H Honors Directed Reading (3)
OSE 4970H Honors Thesis (3)
PHY 4604 Wave Mechanics I
PHY 4605 Wave Mechanics II
PHZ 3113 Introduction to Theoretical Methods

Selected EEL/PHY/Math 4XXX Courses

¹ EGS 1006C and EGN 1007C are open only to students with less than 30 earned credit hours.
² OSE 2050 is open to students who have not completed MAP 2302 Differential Equations
³ OSE 4953 is open only to dual major ECE-PSE students and must be taken with EEL4914 and EEL4915L. 1 credit hour per semester.

PSE Advising

The PSE Advising Office is located in CREOL, Building 53, Room A213 or email at undergrad@creol.ucf.edu

*Flowchart is a suggested plan. Meet with advisor for personalized plan. Gen. Ed. courses not listed. In the event of an error, UCF Catalog takes precedence.