

UCF Degree Programs

ELECTRICAL ENGINEERING TECHNOLOGY - PHOTONICS CONCENTRATION (B.S.E.E.T.)

College of Engineering and Computer Science
Engineering Technology (ENT) Department
ENGR 207, 407-823-0770; Fax: 407-823-4746
<http://www.ent.ucf.edu>

Coordinator: Dr. Al Ducharme, E-mail: ducharme@mail.ucf.edu

Admission Requirements **none**

Degree Requirements

- Students should check with their ENT advisor frequently to ensure that they are making proper progress toward the degree.
- A grade of "C" (2.0) or better is required in all prerequisites and upper level courses.

1. UCF General Education Program (36+2 hrs)

A. Communication Foundations	9 hrs
1. ENC 1101 & 1102	
2. Prefer SPC 1016	
B. Cultural and Historical Foundations	9 hrs
C. Mathematical Foundations	6 hrs
1. Select MAC 1105	
2. Select STA 2023	
D. Social Foundations	6 hrs
E. Science Foundations	8 hrs
1. Select PHY 2053C	
2. Select BSC 1005/1005L, BSC 1050/1050L, or BSC2010C	

2. Common Program Prerequisites (CPP) (6/8 hrs)

(C (2.0) or better grades are required in all courses)		
MAC 2253	Calculus I	3/4 hrs
or MAC 2311	Calculus w/Analytical Geometry I	
MAC 2254	Applied Calculus II or equiv	3/4 hrs
or MAC 2312	Calculus w/Analytical Geometry II	
PHY 2053C	College Physics I/Lab	GEP
or PHY 2048/L	Physics for Engrs & Scientists I	

See "Common Prerequisites" in the Transfer and Transitions Services section (pg. 46) for more information.

3. Engineering Technology Core Requirements (22 hrs)

(C (2.0) or better grades are required in all courses)		
BSC 1005/L, BSC 1050/L, BSC2010C		GEP
ENC 3241	Writing for the Technical Professional	3 hrs
MAC 1105	College Algebra	GEP
MAC 1114	College Trigonometry	3 hrs
MAC 2253	Applied Calculus I	CPP
or MAC 2311	Calculus w/Analytical Geometry I	
MAP 3401	Problem Analysis	CPP
or MAC 2254	Applied Calculus II	
or MAC 2312	Calculus w/Analytical Geometry II	
PHY 2053C	College Physics I	CPP
PHY 2054C	College Physics II	4 hrs
ETG 3541	Applied Mechanics	3 hrs
ETI 3671	Technical Economic Analysis	3 hrs
ETI 3116	Applied Engrng Quality Assurance	3 hrs
ETI 4448	Applied Project Management	3 hrs
STA 2023	Statistical Methods I	GEP

4. Technical Specialization (60 hrs)

Lower Level Required and Elective Courses (20 hrs)

(C (2.0) or better grades are required in all courses)		
EST 3543C	Programmable Logic Controllers	3 hrs
CET 2364	System Applications in C	3 hrs
EET 3143C	Electronic Devices and Circuits	4 hrs
EET 2025C	Electrical Circuits	4 hrs
EET 3085C	Electricity and Electronics	4 hrs
	Lower level elective	2 hrs

Upper Level Required Courses (31 hrs)

(C (2.0) or better grades are required in all courses)		
EET 3716	Network Analysis	3 hrs
EET 4158C	Linear Integrated Circuits	3 hrs
EET 4548C	Power Systems	4 hrs
EST 3222	Intro to Photonics	3 hrs
EST 3213	Photonics Simulation	3 hrs
EST 3211	Wave Photonics	3 hrs
EST 4236	Laser Systems Technology	3 hrs
EST 4227	Photonics Sensors and Devices	3 hrs
EST 4256	Photonics Communication	3 hrs
EST 4225	Manufacturing of Photonics	3 hrs

Upper Level Technical Electives (9 hrs)

(C (2.0) or better grades are required in all courses)
Check with ENT faculty advisor for approved electives.

5. Departmental Exit Requirement (3 hrs)

(C (2.0) or better grade is required)

ETG 4950C	Senior Design Project or	3 hrs
EST 4259C	Photonic Systems	

- A grade of 2.0 or better is required in all prerequisites.

6. Foreign Language Requirements (0-8 hrs)

Admission: Two years of one foreign language in high school, or one year of one foreign language in college (or equivalent proficiency exam) prior to graduation.

Graduation: **none**

7. Approved Technical Electives (0-4 hrs)

Students should consult with the ENT Department for a list of the approved technical electives and the terms when specific courses of this type are to be offered.

8. University Minimum Graduation Requirements

- A 2.0 UCF GPA
- 60 semester hours earned after any CLEP award
- 48 semester hours of upper division credit completed
- 30 of the last 36 hours of course work must be completed in residency at UCF
- 25% of course work must be completed in residency at UCF
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted
- Complete the General Education Program, the Gordon Rule, the CLAST, and nine semester hours of Summer credit (if applicable)

Total Semester Hours Required: 128 hrs

Related Programs: Electrical Engineering Technology (Computer Systems Concentration).

Related Minors: **none**

Transfer Notes:

- Students transferring from any Florida public institution with an AA degree or with the general education program (GEP) requirements of that institution met have thereby satisfied UCF GEP requirements.
- Students entering a UCF undergraduate program and having a previously earned baccalaureate degree from an accredited institution have thereby satisfied UCF GEP requirements. (See also the section on the GEP found elsewhere in this catalog.)
- Courses taken from Community Colleges do not substitute for Upper Division Courses.
- Courses transferred must be formally evaluated for equivalency credit. The student must provide all supporting information to the ENT Department for this evaluation.
- ENT Departmental Residency Requirements consist of at least 32 semester hours of regularly-scheduled 3000 or 4000 level courses taken from the UCF ENT Department.
- PHY 2048/L can substitute for PHY 2053C.

Program Academic Learning Compacts

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at: http://www.o eas.ucf.edu/alc/academic_learning_compacts.htm

Tentative Course Schedule for the Photonics Concentration

The tentative course schedule listed below is a guide for those students who plan on completing their engineering technology degree requirements in four years. Many students choose to spread out these requirements over a longer period of time. All engineering technology students should meet with their faculty advisor to develop and maintain an appropriate plan of study.

Freshman Year	13 hrs	Spring	14 hrs
Fall			
ENC 1101 Composition I	3	ENC 1102 Composition II	3
MAC 1105 College Algebra	3	STA 2023 Statistical Methods	3
Biological science	4	Cultural/Historical Foundation	3
Social Foundation	3	Social Foundation	3
		Lower level elective	2

Sophomore Year

Fall	16 hrs	Spring	13/14 hrs
SPC 1016 Fund of Technical Pres	3	MAC 2253 Applied Calc I	3/4
PHY 2053C College Physics I	4	or MAC 2311 Calc w Anly Geo	
Cultural/Historical Foundation	3	ETI 3116 Appl Eng Quality Assur	3
MAC 1114 Trigonometry	3	ETG 3541 Applied Mechanics	3
CET 2364 Systems Applications in C	3	PHY 2054C College Physics II	4
Summer			
	7 hrs		
ENC 3241 Writing Tech Pros	3		
EET 3085C Electricity & Electronic	4		

Junior Year

Fall	13/14 hrs	Spring	15 hrs
MAP 3401 Problem Analysis	3/4	ETI 3671 Tech Economic Analysis	3
or MAC 2312 Calculus II		Cultural/Historical Foundations	3
or MAC 2254 Applied Calc II		EST 3211 Wave Photonics	3
EET 2025C Electrical Circuits	4	EET 3716 Network Analysis	3
EST 3543C Prog Logic Cont	3	Upper level elective	3
EST 3222 Intro to Photonics	3		
Summer			
	10 hrs		
EET 3143C Electronic Devices & Circ	4		
ETI 4448 Applied Project Management	3		
Upper level elective	3		

Senior Year

Fall	16 hrs	Spring	12 hrs
EET 4548C Power Systems	4	EST 4256 Photonics Comm	3
EET 4158C Linear Int Cir	3	ETG 4950C Sen Design Project	3
EST 3213 Photonics Simulation	3	or EST 4259C Photonic Systems	
EST 4236 Laser Sys Tech	3	EST 4227 Photo Sensors & Device	3
EST 4225 Manufacturing of Photonics	3	Upper level elective	3