

# UCF Degree Programs

## ENGINEERING TECHNOLOGY - OPERATIONS CONCENTRATION (B.S.E.T.) College of Engineering and Computer Science Engineering Technology (ENT) Department ENGR 207, 407-823-4742; Fax: 407-823-4746

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**Admission Requirements** none

### Degree Requirements

- Students should check with their ENT advisor frequently to insure 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, & ENC 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. ANT 2511, BSC 1005, BSC 1050, GLY 1030, GEO 1200 or MCB 1310 |       |

### 2. Common Program Prerequisites (CPP) (6/8 hrs) (C (2.0) or better grades are required in all courses)

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|---------------|-----------------------------------|---------|
| 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 (21 hrs)

- |   |  |
|---|--|
| ANT 2511, BSC 1005, BSC 1050, GEO 1200, GEO 2370, or GLY 1030 | GEP                                    |
| ENC 3241  | Writing for the Technical Professional |
| MAC 1105  | College Algebra                        |
| MAC 1114  | College Trigonometry                   |
| MAC 2253  | Applied Calculus I                     |
| or MAC 2311   | Calculus w/Analytical Geometry I       |
| MAP 3401  | Problem Analysis                       |
| or MAC 2312   | Calculus w/Analytical Geometry II      |
| PHY 2053C   | College Physics I                      |
| ETG 3541  | Applied Mechanics                      |
| ETI 4448  | Applied Project Management             |
| ETI 3671  | Technical Economic Analysis            |
| ETI 3116  | Applied Engineering Quality Assurance  |
| ETI 4635  | Technology Administration              |

### 4. Technical Specialization (60 hrs) (C (2.0) or better grades are required in all courses except the lower level technical electives)

#### Lower Level Required and Elective Courses (25 hrs)

- |  |                                |        |
|--|--------------------------------|--------|
| EST 3543C                                | Programmable Logic Controllers | 3 hrs  |
| CHM 1032, 1032L                          | General Chemistry, Lab         | 4 hrs  |
| CET 2364                                 | Systems Application in C       | 3 hrs  |
| EET 3085C                                | Electricity and Electronics    | 4 hrs  |
| STA 2023                                 | Statistical Methods I          | GEP    |
| Approved Lower Level Technical Electives |                                | 11 hrs |

#### Upper Level Required Courses (18 hrs)

- |           |                       |       |
|-----------|-----------------------|-------|
| ETI 4640  | Operations Management | 3 hrs |
| ETD 3350C | Applied CADD          | 3 hrs |
| ETI 3690  | Technical Sales       | 3 hrs |
| ETI 4186  | Applied Reliability   | 3 hrs |
| ETI 4700  | Occupational Safety   | 3 hrs |
| ETI 4205  | Applied Logistics     | 3 hrs |

#### Upper Level Technical Elective (Select 5) (17 hrs)

- |           |  |       |
|-----------|--|-------|
| CET 3010  | Introduction to Information Technology | 3 hrs |
| EST 3222  | Introduction to Photonics              | 3 hrs |
| ETC 4XXXC | Digital Cartography                    | 3 hrs |
| ETG 3533C | Applied Engrng Strength of Materials   | 4 hrs |
| ETI 3418C | Computer Numerical Controls            | 3 hrs |
| ETI 3421  | Materials & Processes                  | 3 hrs |

- |           |                               |       |
|-----------|-------------------------------|-------|
| EST 4502C | Metrology & Instrumentation   | 4 hrs |
| ETM 4220  | Applied Energy Systems        | 4 hrs |
| ETM 4331C | Applied Fluid Mechanics       | 4 hrs |
| GIS 3043C | GIS for Environmental Studies | 3 hrs |

### 5. Departmental Graduation Requirement (3 hrs) (C (2.0) or better grades are required in all courses)

- |           |                       |       |
|-----------|-----------------------|-------|
| ETG 4950C | Senior Design Project | 3 hrs |
|-----------|-----------------------|-------|
- A grade of 2.0 or better is required for 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

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:** Engineering Technology (Operations Concentration)

**Related Minors:** Interdisciplinary Informatics Technology

### 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 and 2049/L substitute for PHY 2053C and PHY 2054C respectively.

### 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](http://www.o eas.ucf.edu/alc/academic_learning_compacts.htm)

### Tentative Course Schedule for the Operations 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	13 hrs	
ENC 1101	Composition I	3	ENC 1102	Composition II	3
MAC 1105	College Algebra	3	CHM 1032	General Chemistry	4
	Biological science	4	MAC 1114	Trigonometry	3
	Cultural/Historical Foundation	3	Social Foundation		3

## Sophomore Year

Fall	13/14 hrs	Spring	12/13 hrs
SPC 1600 Oral Communications	3	Cultural/Historical Foundation	3
PHY 2053C College Physics I	4	STA 2023 Statistical Methods	3
Cultural/Historical Foundation	3	MAP 3401 Problem Analysis	3/4
MAC 2253 Applied Calc I	3/4	or MAC 2312 Calculus II	3
or MAC 2311 Calc w Anly Geo		or MAC 2254 Applied Calc II	
		ETI 3671 Tech Econ Analysis	

Summer	10 hrs
ETI 3116 App Eng Quality Assur	3
ENC 3241 Writing Tech Pros	3
Lower level elective	4

## Junior Year

Fall	16 hrs	Spring	16 hrs
EET 3085C Electricity and Electro	4	Upper level elective	3
Lower level elective	3	CET 2364 Sys Appl in C	3
Social Foundation	3	ETI 4635 Tech Admin	3
ETG 3541 Applied Mechanics	3	ETI 3690 Technical Sales	3
ETD 3350C Appl CAD	3	Lower level elective	4

Summer	6 hrs
ETI 4700 Occup Safety	3
ETI 4448 Applied Proj Mgmt	3

## Senior Year

Fall	15 hrs	Spring	14 hrs
ETI 4205 App Logistics	3	ETG 4950C Sr Design Proj	3
ETI 4640 Operations Mgmt	3	ETI 4186 Applied Reliability	3
EST 3543C Programmable Logic Cont	3	Upper level elective	4
Upper level elective	3	Upper level elective	4
Upper level elective	3		