

UCF Degree Programs

ENGINEERING TECHNOLOGY - DESIGN CONCENTRATION (B.S.E.T.)

College of Engineering and Computer Science
Engineering Technology (ENT) Department, ENGR 207

<http://www.ent.ucf.edu>

Coordinator: Dr. Eduardo Divo, 407-823-4753,
Email: edivo@mail.ucf.edu

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)

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|---|-------|
| 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, <i>or</i> 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 |
| <i>or</i> MAC 2311 | Calculus w/Analytical Geometry I | |
| MAC 2254 | Applied Calculus II or equiv | 3/4 hrs |
| <i>or</i> MAC 2312 | Calculus w/Analytical Geometry II | |
| PHY 2053C | College Physics I/Lab | GEP |
| <i>or</i> 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)

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|--|--|-------|
| ANT 2511, BSC 1005, BSC 1050, GEO 1200,
MCB 1310 <i>or</i> GLY 1030 | 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 |
| <i>or</i> MAC 2311 | Calculus w/Analytical Geometry I | |
| MAP 3401 | Problem Analysis | CPP |
| <i>or</i> MAC 2312 | Calculus w/Analytical Geometry II | |
| PHY 2053C | College Physics I | CPP |
| ETG 3541 | Applied Mechanics | 3 hrs |
| ETI 4448 | Applied Project Management | 3 hrs |
| ETI 3671 | Technical Economic Analysis | 3 hrs |
| ETI 3116 | Applied Engrng Quality Assurance | 3 hrs |
| ETI 4635 | Technology Administration | 3 hrs |

4. Technical Specialization (60 hrs)

(C (2.0) or better grades are required in all courses except lower level technical electives)

Lower Level Required and Elective Courses (26 hrs)

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|--------------------|--|--------|
| 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 |
| <i>or</i> EET 3086 | | |
| STA 2023 | Statistical Methods I | GEP |
| | Approved Lower Level Technical Electives | 12 hrs |

Select one of the following two options to complete your BSET.

a. Mechanical Technology Track

Upper Level Required Courses (22 hrs)

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|-----------|--------------------------------------|-------|
| EST 4502C | Metrology & Instrumentation | 4 hrs |
| ETD 3350C | Applied CADD | 3 hrs |
| ETG 3533C | Applied Engrng Strength of Materials | 4 hrs |
| ETI 3421 | Materials & Processes | 3 hrs |
| ETM 4220 | Applied Energy Systems | 4 hrs |
| ETM 4331C | Applied Fluid Mechanics | 4 hrs |

Upper Level Technical Elective (12 hrs)

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|-----------|---------------------|-------|
| ETI 4480C | Applied Robotics | 4 hrs |
| ETI 4700 | Occupational Safety | 3 hrs |

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|-----------|--|-------|
| ETM 4512C | Applied Design of Machine Elements | 3 hrs |
| ETI 3418C | Computer Numerical Controls | 3 hrs |
| ETM 4231C | Applied Heat Transfer | 4 hrs |
| ETM 4755 | Applied Air Conditioning | 4 hrs |
| CET 3010 | Introduction to Information Technology | 3 hrs |

b. Construction Technology Track

Upper Level Required Courses (22 hrs)

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|-----------|--------------------------------------|-------|
| ETD 3350C | Applied CADD | 3 hrs |
| ETG 3533C | Applied Engrng Strength of Materials | 4 hrs |
| ETC 4206 | Construction Estimating | 3 hrs |
| ETC 4241C | Construction Materials & Methods | 3 hrs |
| ETC 4242 | Construction Contracts & Specs | 3 hrs |
| ETC 4414C | Applied Structural Design I | 3 hrs |
| ETC 4415C | Applied Structural Design II | 3 hrs |

Upper Level Technical Elective (12 hrs)

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|-----------|-------------------------------|-------|
| EST 4502C | Metrology & Instrumentation | 4 hrs |
| ETC 4243 | Building Systems | 3 hrs |
| ETC 4XXX | Digital Cartology | 3 hrs |
| ETI 3421 | Materials & Processes | 3 hrs |
| ETI 4700 | Occupational Safety | 3 hrs |
| ETM 4331C | Applied Fluid Mechanics | 4 hrs |
| ETM 4220 | Applied Energy Systems | 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)

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|-----------|-----------------------|-------|
| ETG 4950C | Senior Design Project | 3 hrs |
|-----------|-----------------------|-------|
- 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

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.oegas.ucf.edu/alc/academic_learning_compacts.htm

Tentative Schedule for the Design 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.

Engineering Technology – 128 semester hours required**Freshman Year**

Fall	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	15/16 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	
or MAC 2311 Calc w Anly Geo		or MAC 2254 Applied Calc II	
		ETI 3671 Tech Econ Analysis	3
		Lower level elective	3

Summer

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

Junior Year

Fall	16 hrs	Spring	15 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	EST 3543C Prog Log Controllers	3
ETD 3350C Appl CAD	3	Lower level elective	3

I. Mechanical Technology Track

Summer	7 hrs
ETM 4331C Appl Fluid Mech	4
ETI 4448 Applied Proj Mgmt	3

Senior Year

Fall	13 hrs	Spring	14 hrs
ETI 3421 Materials & Processes	3	EST 4502C Metro Instr	4
ETG 3533C Appl. Eng Strength Mat.	4	ETG 4950C Sr Design Proj	3
Upper level elective	3	ETM 4220 Energy Systems	4
Upper level elective	3	Upper level elective	3

II. Construction Technology Track

Summer	6 hrs
Upper level elective	3
ETI 4448 Applied Proj Mgmt	3

Senior Year

Fall	12 hrs	Spring	16 hrs
ETC 4241C Construction Mat & Meth	3	ETG 4950C Sr Design Proj	3
ETC 4414C Applied Structural Des I	3	ETC 4206 Construction Estimating	3
ETC 4242 Const. Contracts & Spec	3	ETC 4415C Applied Structural Des II	3
Upper level elective	3	Upper level elective	3
		EIG 3533C	4