

UCF Degree Programs

ENGINEERING TECHNOLOGY - SPACE SCIENCES CONCENTRATION (B.S.E.T.)

College of Engineering and Computer Science
Engineering Technology (ENT) Department

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

Coordinator: Dr. Eduardo Divo, 407-823-4753,
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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)

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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 <i>or</i> PHY 2048 | |
| 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, GLY 1030, GEO 1200,
<i>or</i> MCB 1310 | | 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 | GEP |
| ETG 3541 | Applied Mechanics | 3 hrs |
| ETI 4635 | Technical Administration | 3 hrs |
| ETI 3671 | Technical Economic Analysis | 3 hrs |
| ETI 3116 | Applied Engineering Quality Assurance | 3 hrs |
| ETI 4448 | Project Management | 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 | Prog Logic Controllers | 3 hrs |
| CHM 1032, 1032L | General Chemistry with Lab | 4 hrs |
| CET 2364 | Systems Appl. in C | 3 hrs |
| EET 3085C | Electricity and Electronics | 4 hrs |
| AST 2002 | Astronomy | 3 hrs |
| STA 2023 | Statistical Methods I | GEP |
| Approved Lower Level Technical Electives | | 9 hrs |

Upper Level Required and Elective Courses (22 hrs)

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|-----------|------------------------------|-------|
| ETD 3350C | Applied CADD | 3 hrs |
| EMA 4103 | Space Environment | 3 hrs |
| ETM 4220 | Applied Energy Systems | 4 hrs |
| ETI 4838 | Flight Dynamics Technology | 3 hrs |
| STI 4381 | Ground System Design | 3 hrs |
| ETI 4835 | Rocket Propulsion Technology | 3 hrs |
| ETI 4836 | Space Systems Technology | 3 hrs |

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|---|---|-----------------|
| Upper Level Technical Electives (Select 4) | | (12 hrs) |
| ETG 3533C | Applied Engineering Strength of Materials | 4 hrs |
| EST 4502C | Metrology & Instrumentation | 4 hrs |
| ETI 4150 | Spacecraft QA and Testing | 3 hrs |
| ETI 4381 | Ground System Design | 3 hrs |
| EST 3222 | Intro to Photonics | 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 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: 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 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.oas.ucf.edu/alc/academic_learning_compacts.htm

Tentative Course Schedule for the Space Sciences 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
Fall	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	
		AST 2002 Astronomy	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 3671 Tech Econ Analysis	3
ETG 3541 Applied Mechanics	3	ETI 4838 Flight Dynamics Tech	3
ETD 3350C Appl CAD	3	ETI 4635 Tech Admin	3
Summer			
	6 hrs		
ETI 4448 Project Management	3		
Upper level elective	3		

Senior Year

Fall	15 hrs	Spring	13 hrs
ETI 4835 Rocket Prop Tech	3	ETG 4950C Sr Design Proj	3
EST 3543C Prog Log Control	3	ETM 4220 Energy Systems	4
ETI 4836 Space Systems Tech	3	EMA 4103 Space Environment	3
ETI 4381 Ground Systems Design	3	Upper level elective	3
Upper level elective	3		