

UCF Degree Programs

ENGINEERING TECHNOLOGY -

GEOMATICS CONCENTRATION (B.S.E.T.)

College of Engineering and Computer Science

Department of Engineering Technology (ENT)

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)

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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 Engineering Quality Assurance | 3 hrs |
| ETI 4635 | Technology Administration | 3 hrs |

4. Technical Specialization (66 hrs)

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

Lower Level Required and Elective Courses (21 hrs)

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| SUR 2101C | Surveying | 3 hrs |
| STA 2023 | Statistical Methods I | GEP |
| SUR 2140C | Advanced Surveying | 3 hrs |

15 hours of approved technical, courses will be accepted including but not limited to the following:

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|-----------|-----------------------------------|-------|
| SUR 2202C | Highway Drafting and Route Design | 4 hrs |
| SUR 2460 | Subdivisions | 3 hrs |
| SUR 2640 | Advanced Surveying Computations | 4 hrs |
| CGS 1363 | Geographic Information Systems | 3 hrs |

Upper Level Required Courses (30 hrs)

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|-----------|-------------------------------|-------|
| ETD 3350C | Applied CADD | 3 hrs |
| SUR 3530C | Geodetic Science | 3 hrs |
| SUR 4531 | Positioning with GPS | 3 hrs |
| SUR 3331 | Photogrammetry | 3 hrs |
| SUR 4463 | Land Subdivision & Platting | 3 hrs |
| SUR 4402 | Boundary Location | 3 hrs |
| SUR 3641 | Geospatial Computations | 3 hrs |
| SUR 4XXX | Cadastral Information Systems | 3 hrs |
| SUR 4XXX | Digital Cartography | 3 hrs |
| GIS 3043C | GIS Env. Studies | 3 hrs |

Upper Level Technical Elective (12 hrs)

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|-----------|-----------------------------------|-------|
| SUR 4380 | Satellite Remote Sensing | 3 hrs |
| SUR 4XXX | Digital Photogrammetry | 3 hrs |
| PLA 3610 | Property and Real Estate Law | 3 hrs |
| GEO 4035C | Remote Sensing of the Environment | 3 hrs |
| GIS 4301C | Advanced GIS Applications | 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 |
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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.

7. 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

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 Geomatics 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	16 hrs	Spring	16 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
SPC 1600 Oral Communications	3	Lower level required course	3

Sophomore Year

Fall	16/17 hrs	Spring	15/17 hrs
Cultural/Historical Foundation	3		
PHY 2053C College Physics I	4	STA 2023 Statistical Methods	3
Cultural/Historical Foundation	3	MAP 3401 Problem Analysis <i>or</i>	3/4
MAC 2253 Applied Calc I	3/4	MAC 2312 Calculus II	3
<i>or</i> MAC 2311 Calc w Anly Geo		<i>or</i> MAC 2254 Applied Calc II	
Lower level required course	3/4	ETI 3671 Tech Econ Analysis	3
		Lower level required course	3/4
Summer			
	12/14 hrs		
ENC 3241 Writing Tech Pros	3		
SUR 2101 Surveying	3		
Lower level required course	3/4		
Lower level required course	3/4		

Junior Year

Fall	15 hrs	Spring	12 hrs
SUR XXXX Digital Cartography	3	SUR 4531 Positioning with GPS	3
SUR 3530C Geodetic Science	3	SUR 4402 Boundary Location	3
Social Foundation	3	ETI 4448 Applied Proj Mgmt	3
SUR 3331 Photogrammetry	3	Upper level technical elective	3
ETD 3350C Appl CAD	3		
Summer			
	6/7 hrs		
Lower level required course	3/4		
Upper level technical elective	3		

Senior Year

Fall	12 hrs	Spring	12 hrs
ETG 3541 Applied Mechanics	3	ETG 4950C Sr Design Proj	3
ETI 3116 Appl. Engr. Quality Assurance	3	ETI 3671 Tech Economics Anly	3
SUR 4463 Land Subdivision & Platting	3	Upper level technical elective	3
SUR 3641 Geospatial Computations	3	Upper level technical elective	3