

# ENGINEERING TECHNOLOGY

Degree: Bachelor of Science  
 Specializations: Construction, Electrical,  
 Instructional Support, Manufacturing  
 Minors: Building Construction,  
 Electrical Engineering Technology,  
 Manufacturing Engineering Technology  
 Certificate: Technology Systems Support  
 Division: Technology, Research & Development  
 Building 70  
 (850) 474-2484  
 techrsh@uwf.edu  
 College: Professional Studies  
 Semester Hours Required for Degree: 120

Faculty: P.T. Northrup (Chairperson), V. Burgess, W.  
 Harrison, R.L. Lee, C.H. Wentz

The Engineering Technology program prepares graduates  
 for a variety of engineering associated positions with industry.

The Construction Specialization examines construction of all  
 types of buildings and prepares the student for a career in  
 construction science.

The Electrical Specialization prepares students for positions  
 as engineering technologists. Employment opportunities  
 exist in instrumentation, communications, digital systems,  
 power systems, manufacturing, and other related fields. The  
 graduates may also be involved in research development,  
 maintenance, production or sales in the area of electrical  
 engineering.

The Instructional Support Specialization prepares learners  
 to assume the role of network, telecommunications, and  
 instructional systems support in distance learning, training,  
 or educational environments. The focus of this specialization  
 is the implementation, maintenance, and adaptation of these  
 technologies with an instructional perspective. The program  
 is designed for delivery at a distance and exploits technology  
 to offer learners opportunity to pursue the degree even when  
 regular attendance is problematic or relocation is necessary.

Manufacturing Engineering Technology is designed for those  
 interested in the technical aspects of manufacturing, and  
 other industrial occupations. The curricula of most  
 engineering colleges have tended, in recent years, toward  
 preparing the new engineers for the much needed research  
 and development aspects of industry. This trend has created  
 a shortage of personnel at the level once occupied by the  
 newly graduated engineer. Manufacturing Engineering  
 Technology provides coursework in the areas of general  
 engineering fundamentals.

## PROGRAM REQUIREMENTS

In addition to general University requirements, students  
 seeking the B.S. in Engineering Technology must meet the  
 requirements listed below.

Students should consult with their academic advisor for  
 courses which may satisfy both the General Studies  
 requirements and common prerequisites. A minimum grade  
 of "C-" is required in major courses.

Contact the department for information concerning the  
 certificate program.

Course descriptions are listed alphabetically by prefix in the  
 back of this catalog. Courses preceded by "•" are taught at  
 Florida community/junior colleges.

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## CONSTRUCTION SPECIALIZATION

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### General Studies (36 sh)

For additional information see the General Studies section of  
 this catalog.

### Common Prerequisites (24 sh)

State mandated common prerequisites must be completed  
 prior to graduation, but are not required for admission to the  
 program.

ACG 2021	Principles of Financial Accounting .....	3
ACG 2071	Principles of Managerial Accounting .....	3
+ MAC 1105	College Algebra .....	3
+ MAC 1114	Trigonometry .....	2
+ MAC 1140	Precalculus Algebra .....	3
+ MAC 2311	Analytic Geometry & Calculus I .....	4
+ PHY 2053	General Physics I .....	3
+ PHY 2054	General Physics II .....	3

+ Indicates common prerequisites which can be used to satisfy  
 General Studies requirements.

### Lower Division Electives (0-12 sh)

Sufficient 1000/2000 level electives to complete at least 60  
 semester hours in the lower division. Current UWF students  
 may use elective courses at any level (1000-4999) to meet  
 this elective requirement.

### Major (44 sh)

BCN 2405	Construction Mechanics .....	3
BCN 3282C	Construction Surveying & Building Layout .....	3
BCN 3502	Plumbing & Drainage .....	3
BCN 3731	Construction Safety .....	3
BCN 4431	Structures I .....	4
BCN 4461C	Structures II .....	4
BCN 4510	Environmental Technology-Heat & Air .....	3
BCN 4701	Construction Administration .....	3
EET 3504C	Applications of Industrial Electricity and Electronics .....	3
EGS 3613	Principles of Engineering Economy .....	3
EST 4538	Instrumentation .....	3
ETD 4353C	Intermediate/Advanced Computer Assisted Drafting .....	3
ETI 3112	Applications of Quality Control .....	3
ETI 3445	Production Improvement .....	3

### Major-Related (15 sh)

ACG 3311	Applied Managerial Accounting .....	3
CGS 2570	Personal Computer Applications .....	3
REE 4813	Principles of Real Estate Marketing .....	3
Advisor approved elective	.....	3

Choose one:

FIN 3140	Personal Financial Planning .....	3
MAN 3025	Management Fundamentals .....	3
MAR 3023	Marketing Fundamentals .....	3

### Upper Division Electives (1 sh)

Sufficient 3000/4000 level electives to meet UWF's  
 requirement of 48 semester hours in the upper division or

completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## ELECTRICAL SPECIALIZATION

### General Studies (36 sh)

For additional information see the General Studies section of this catalog.

### Common Prerequisites (35 sh)

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. Courses in brackets indicate substitutes from Florida Public/Community Colleges and Universities.

• CET	2113C	Digital Fundamentals/Lab [EET 2112C]	4
• EET	1015C	DC Circuits/Lab	4
• EET	1025C	AC Circuits/Lab	4
• EET	1141C	Electronic Devices & Circuits I/Lab	4
• EET	1142C	Electronic Devices & Circuits II/Lab	4
+ MAC	1105	College Algebra	3
+ MAC	1114	Trigonometry	2
+ MAC	2311	Analytic Geometry & Calculus I	4
+ PHY	2053	General Physics I	3
+ PHY	2054	General Physics II	3

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

### Lower Division Electives (0-1 sh)

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

#### Recommended elective:

CGS	2570	Personal Computer Applications	3
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### Major (39 sh)

EET	3038C	Advanced Circuit Analysis	4
EET	3326C	Communication Systems	4
EET	3504C	Applications of Industrial Electricity and Electronics	3
EET	4356C	Advanced Communication	4
EET	4513	Electric Machinery	3
EET	4930	Seminar: Electrical Engineering Technology	3
EGS	3613	Principles of Engineering Economy	3
EST	4538	Instrumentation	3
ETD	4353C	Intermediate/Advanced Computer Assisted Drafting	3
ETI	3112	Applications of Quality Control	3
ETI	3445	Production Improvement	3
		3000/4000 level Engineering Technology elective	3

### Major-Related (13 sh)

CDA	3100	Microprocessor Systems	3
MAC	2312	Analytic Geometry & Calculus II	4
STA	2023	Elements of Statistics	3

#### Choose one:

COP	2253	Programming Using Java	3
COP	2334	Programming Using C++	3
CGS	3464	Programming Using Visual Basic for Non-Majors	3

### Upper Division Electives (8 sh)

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or

completion of all departmental requirements at the 3000/4000 level, whichever is greater.

## INSTRUCTIONAL SUPPORT SPECIALIZATION

### General Studies (36 sh)

For additional information see the General Studies section of this Catalog.

### Common Prerequisites (18 sh)

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program.

EME	2040	Introduction to Educational Technology	3
+ MAC	1105	College Algebra	3
+ MAC	1114	Trigonometry	2
+ PHY	2053	General Physics I	3
+ PHY	2054	General Physics II	3
+ PHY	2054L	General Physics II Lab	1
+ STA	2023	Elements of Statistics	3

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

### Lower Division Electives (6-19 sh)

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

### Major (39 sh)

EDF	3214	Psychological Foundations of Learning & Teaching	3
EET	3504C	Applications of Industrial Electricity and Electronics	3
EGS	3613	Principles of Engineering Economy	3
EME	3402	Instructional Technology	3
EME	3406	Web Environments for Learning and Information	4
EME	4454	Distance Education Technologies	3
EME	4622	Engineering Technology Tools: Site-based Educational Networks	4
EME	4627	Education and Training Technology Support Systems	4
EME	4944	Internship/Practica in Technology	3
EST	4538	Instrumentation	3
ETD	4353C	Intermediate/Advanced Computer Assisted Drafting	3
ETI	3112	Applications of Quality Control	3

### Major-Related (15 sh)

COP	4710	Database Systems	3
ISM	3011	e-Business System Fundamentals	3
ISM	4300	Systems Planning, Design & Control	3
MAN	3025	Management Fundamentals	3

#### Choose one:

COP	2253	Programming Using Java	3
COP	2334	Programming Using C++	3
CGS	3464	Programming Using Visual Basic for Non-Majors	3

**Upper Division Electives (6 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or completion of all departmental requirements at the 3000/4000 level, whichever is greater.

**MANUFACTURING SPECIALIZATION****General Studies (36 sh)**

For additional information see the General Studies section of this catalog.

**Common Prerequisites (28 sh)**

State mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program.

COP	xxxx	Introductory programming in Ada, C, C++, Pascal, or equivalent language .....	3
+ MAC	1105	College Algebra .....	3
+ MAC	1114	Trigonometry .....	2
+ MAC	1140	Precalculus Algebra .....	3
+ MAC	2311	Analytic Geometry & Calculus I .....	4
+ MAC	2312	Analytic Geometry & Calculus II .....	4
+ PHY	2053	General Physics I .....	3
+ PHY	2054	General Physics II .....	3
+ STA	2023	Elements of Statistics .....	3

+ Indicates common prerequisites which can be used to satisfy General Studies requirements.

**Lower Division Electives (0- 8 sh)**

Sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4999) to meet this elective requirement.

**Major (36 sh)**

EET	3504C	Applications of Industrial Electricity and Electronics .....	3
EGS	3613	Principles of Engineering Economy .....	3
EST	4538	Instrumentation .....	3
ETD	4353C	Intermediate/Advanced Computer Assisted Drafting .....	3
ETI	3112	Applications of Quality Control .....	3
ETI	3445	Production Improvement .....	3
ETI	3700	Industrial Safety (OSHA) .....	3
ETI	4411	Production Science .....	3
ETM	4231	Heat Transfer .....	3
ETM	4313	Industrial Hydraulics .....	3
ETM	4590	Design Analysis .....	3

Choose one:

ETI	3949	Cooperative Education .....	3
		Course offered 1-2 sh per semester	
		3000/4000 level major elective approved by advisor .....	3

**Major-Related (9 sh)**

CGS	2570	Personal Computer Applications .....	3
		Advisor approved elective .....	3
		3000/4000 level management (MAN) elective .....	3

**Upper Division Electives (15 sh)**

Sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or

completion of all departmental requirements at the 3000/4000 level, whichever is greater.

**MINORS****Building Construction Minor (15 sh)**

Construction Specialization majors may not earn this minor.

BCN	3731	Construction Safety .....	3
BCN	4701	Construction Administration .....	3
EET	3504C	Applications of Industrial Electricity and Electronics .....	3
ETD	4353C	Intermediate/Advanced Computer Assisted Drafting .....	3
ETI	3112	Applications of Quality Control .....	3

**Electrical Engineering Technology Minor (16 sh)**

Electrical Engineering Technology Specialization majors may not earn this minor.

EET	3038C	Advanced Circuit Analysis .....	4
EET	3504C	Applications of Industrial Electricity and Electronics .....	3
EET	4513	Electric Machinery .....	3
ETD	4353C	Intermediate/Advanced Computer Assisted Drafting .....	3
ETI	3112	Applications of Quality Control .....	3

**Manufacturing Engineering Technology Minor (15 sh)**

Manufacturing Specialization majors may not earn this minor.

EET	3504C	Applications of Industrial Electricity and Electronics .....	3
ETD	4353C	Intermediate/Advanced Computer Assisted Drafting .....	3
ETI	3112	Applications of Quality Control .....	3
ETI	3445	Production Improvement .....	3
ETI	4411	Production Science .....	3