**B.S. in Engineering Technology Program (ET, 124 hours)**
**Curriculum Checklist**

## *Liberal Studies Core Requirements* (15 hours)

### *C1: WRITING (6 hours reqired)*

| | |
|---|---|
| ENGL 101 | 3_____ |
| ENGL 102* | 3_____ |

### *C2: MATHEMATICS*

| | |
|---|---|
| Waived/MATH 140,145,or 146 | 3____ |

### *C3: ORAL COMM.*

| | |
|---|---|
| CMHC 201 Speech Comm. | 3_____ |

### *C4: WELLNESS*

| | |
|---|---|
| HEAL 123 or HSCC 101 | 3_____ |

### *C5: PHYSICAL & BIOLOGICAL SCIENCES*

| | |
|---|---|
| Science 1: waived/PHYS 130 | 3_____ |
| Science 2: waived/CHEM 139 | 3_____ |

### *First Year Seminar*

| | |
|---|---|
| waived/ET 190 | 3_____ |

## *Perspectives Categories* (18 hours)

| | |
|---|---|
| P1: Social Sciences | 3_____ |
| P1: Social Sciences | 3_____ |
| P3: History | 3_____ |
| P4: Humanities | 3_____ |
| P5: Fine Arts | 3_____ |
| P6: World Cultures | 3_____ |
| PX: Upper Level Perspective | 3_____ |

*(F) Indicates Fall only offering*
*(S) Indicates Spring only offering*
*(X) Indicates any Perspectives Course*
*(*) Indicates Prerequisite Required*

## *Major* (63 hours)

| | |
|---|---|
| ET 132 Engineering Graphics | 3_____ |
| ET 141 Engineering Materials and Processes | 3_____ |
| ET 231 3D Computer Modeling* | 3_____ |
| ET 232 Statics and Strength of Materials* | 3_____ |
| ECET 301 Electrical Systems* | 3_____ |
| ENGL 305 Technical Writing | 3_____ |
| ET 331 Quality Systems* | 3_____ |
| ET 335 Occupational Safety Hazards | 3_____ |
| ET 349 Rapid Tooling and Prototyping* | 3_____ |
| ET 351 Engineering Analysis* | 3_____ |
| ET 362 Engineering Logistics* | 3_____ |
| ET 410 Advanced 3D Computer Modeling & RP* | 3_____ |
| ET 420 Polymer Technology* | 3_____ |
| ET 425 Metrology and Reverse Engineering* | 3_____ |
| ET 436 Engineering Economic Analysis* | 3_____ |
| ET 441 Power Transmission Systems* | 3_____ |
| ET 449 Advanced Rapid Tooling & Prototyping* | 3_____ |
| ET 461 Engineering Project Management* | 3_____ |
| ET 472 Integrated Control Systems* | 3_____ |
| ET 478 Integrated Systems Project* | 3_____ |
| Technical Elective | 3_____ |

## *Math, Science and Electives* (25 hours)

| | |
|---|---|
| MATH 146 Applied Trigonometry (or 145) | 3_____ |
| MATH 140 Introductory Calculus* | 5_____ |
| MATH 170 Applied Statistics | 3_____ |
| PHYS 130 Introductory Physics I | 4_____ |
| CHEM 139 General Chemistry | 4_____ |
| General Elective, upper level | 3_____ |
| General Elective, upper level | 3_____ |
| General Elective, upper level | 3_____ |

**Application for graduation must be filed after earning (90) ninety hours and paying the $30 graduation fee.**

**Graduation Requirements**

25% of 124 = 31 hours for graduation must be at the 300-400 level. At least 46 hours at the 300/400 level in the *major* are required. A minimum GPA of 2.0 on all work attempted at WCU and on all (not each) courses in the major.

**Liberal Studies Notes**

An upper level perspectives course is required and must be outside the major; it counts for a lower level Perspectives course.

**Electives Notes:**

Students may choose to select their general and technical elective courses to earn either an Occupational Safety Certificate or an Engineering Sales and Distribution Certificate. See separate pages for the specifics of these options.

**B.S. in Engineering Technology Program (ET, 124 hours)**

**Suggested 4-Year Plan of Study**

## FIRST YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---|---|---|---|
| ENGL 101 Composition I (C1) | 3 | ENGL 102 Composition II* (C1) | 3 |
| ET 132 Engineering Graphics | 3 | ET 141 Engineering Materials and Processes | 3 |
| MATH 146 Applied Trigonometry (or 145) | 3 | Wellness (C4) | 3 |
| ET 190 Technology Systems | 3 | Humanities (P4) | 3 |
| Perspective (P5) | **3** | World Cultures (P6) | **3** |
| | **15** | | **15** |

## SECOND YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---|---|---|---|
| ET 231 3D Computer Modeling* | 3 | ET 232 Statics and Strength of Materials* | 3 |
| MATH 140 Introductory Calculus | 5 | MATH 170 Applied Statistics | 3 |
| PHYS 130 Introductory Physics I | 4 | Oral Communications (C3) | 3 |
| Social Science (P1) | 3 | ET 335 Occupational Safety Hazards | 3 |
| History (P3) | 3 | CHEM 139 General Chemistry | 4 |
| | **18** | | **16** |

## THIRD YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---|---|---|---|
| ECET 301 Electrical Systems* | 3 | ENGL 305 Technical Writing | 3 |
| ET 331 Quality Systems* | 3 | ET 351 Engineering Analysis* | 3 |
| ET 349 Rapid Tooling and Prototyping* | 3 | ET 362 Engineering Logistics* | 3 |
| ET 410 Advanced 3D Computer Modeling and Rapid Prototyping* | 3 | Elective | 3 |
| Elective | 3 | Social Science (P1) | 3 |
| | **15** | | **15** |

**After earning ninety (90) hours, the student must file an application form with the Dean after paying a $30 graduation fee to the University Cashier.**

## FOURTH YEAR

| Fall Semester | Hours | Spring Semester | Hours |
|---|---|---|---|
| ET 420 Polymer Technology* | 3 | ET 449 Advanced Tooling and Prototyping* | 3 |
| ET 436 Engineering Economic Analysis* | 3 | ET 425 Metrology and Reverse Engineering* | 3 |
| ET 441 Power Transmission Systems* | 3 | ET 472 Integrated Control Systems* | 3 |
| ET 461 Engineering Project Management* | 3 | ET 478 Integrated Systems Project* | 3 |
| Elective | 3 | Technical Elective | 3 |
| | **15** | | **15** |

*Total program requires 124 hours.*

*> Liberal Studies 42 hours.*

*> Major requirements 82 hours*

*(*) Indicates pre-requisite required*

*> EE and ENGR courses are offered once per year, in the semester shown above.*

*> Technical electives must be at 300-400 level*

*>One Perspective must be at the 300-400 level*

**Electives Notes:**

Students may choose to select their general and technical elective courses to earn either an Occupational Safety Certificate or an Engineering Sales and Distribution Certificate. See separate pages for the specifics of these options.

**Engineering and Technology**
**Engineering Sales and Distribution Certificate**

**Juniors and Seniors in the Engineering and Technology Department may earn a certificate in Engineering Sales and Distribution by completing the following required courses with a minimum GPA of 2.0:**

| Course Number and Name | Hours |
|---|---|
| ET 362 Engineering Logistics | 3 |
| ET 436 Engineering Economics | 3 |
| MKT 301 Principles of Marketing | 3 |
| MKT 306 Introduction to Professional Selling | 3 |
| MKT 310 Consultative Selling | 3 |
| MKT 409 Negotiations/Relationship Marketing | 3 |
| | **18** |

Students in the B.S. in Engineering and Technology program will already be taking ET 362. Four additional courses can be taken as a technical and three general, upper level electives to satisfy ET program requirements. This approach requires one course in addition to the regular ET program for the certificate.

**Engineering and Technology**
**Occupational Safety Certificate**

## Juniors and Seniors in the Engineering and Technology Department may earn a certificate in Occupational Safety by completing the following required courses with a minimum GPA of 2.0:

Students may elect to include in their programs of study a 14-15 hour sequence in the area of occupational safety. Emphasis is placed on interpretation, application and administration of the Occupational Safety and Health Act and other regulations to assist students to develop entry-level expertise that can be applied directly to business or industry.

| **Course Number and Name** | **Hours** |
|---|---|
| ENVH 230 Introduction to Environmental Health Science | 2 or 3 |
| **OR** ENVH 457 Industrial Hygiene | |
| **OR** HEAL 120 Personal and Community Health | |
| HSCC 240 Introduction to Emergency Medical Care | 3 |
| ET 335 Occupational Safety Standards | 3 |
| ET 336 Environmental Instrumentation | 3 |
| ET 337 Management of Safety Systems | 3 |
| **OR the equivalents of ET 335/336/337** | |
| | **14-15** |

Students in the B.S. in Engineering and Technology program will already be taking ET 362. Four additional courses can be taken as a technical and three general, upper level electives to satisfy ET program requirements. This approach requires one course in addition to the regular ET program for the certificate.