



# Pittsburg State University College of Technology Program Guide

Degree: Bachelor of Science in Engineering Technology

Major: Manufacturing Engineering Technology

Emphasis/Option:

Accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

As of Fall 2016

## Major Requirements (16 hours)

### Technical Sciences

|  |   |
|--|---|
| MECET 220: Statics .....                           | 3 |
| or PHYS 220: Engineering Mechanics I-Statics ..... | 3 |
| MECET 420: Kinematics .....                        | 2 |
| MECET 423: Mechanics of Materials .....            | 3 |
| MECET 424: Mechanics of Materials Laboratory ..... | 1 |
| MECET 524: Fluid Mechanics .....                   | 3 |
| MECET 525: Fluid Mechanics Laboratory .....        | 1 |
| MFGET 564: Heat Treatment and Metallurgy I .....   | 3 |

### Technical Specialties (Planned Sequences)

#### Tool Design

|   |   |
|---|---|
| MFGET 160: Manufacturing Graphics .....     | 3 |
| MFGET 261: Computer Aided Part Design ..... | 3 |
| MFGET 363: Principles of Tool Design .....  | 3 |

#### Manufacturing Processes

|  |   |
|--|---|
| MFGET 263 Manufacturing Methods I (satisfied by general education) (2 hours)           |   |
| MFGET 268 Manufacturing Methods I Laboratory (satisfied by general education) (1 hour) |   |
| MFGET 367: Manufacturing Methods II .....  | 4 |
| MFGET 661: Computer Aided Manufacturing .....  | 3 |
| MFGET 662: Computer Aided Manufacturing II .....                                       | 2 |
| MFGET 690: Manufacturing Production Control & Management .....                         | 3 |

#### Metalcasting

|   |   |
|---|---|
| MFGET 567: Principles of Metalcasting .....         | 3 |
| MFGET 568: Metalcasting Processing Laboratory ..... | 2 |
| MFGET 569: Casting Design and Simulation .....      | 3 |

#### Capstone Experience

|  |   |
|--|---|
| MFGET 666: Manufacturing and Design Project I .....  | 2 |
| MFGET 669: Manufacturing and Design Project II ..... | 3 |

#### Technical Specialties

|  |   |
|--|---|
| EET 141: Introductory Electronics .....              | 3 |
| EET 340: Introduction to Industrial Automation ..... | 3 |
| ETECH 502: Engineering Economy .....                 | 3 |
| MFGET 162: Welding Processes and Procedures .....    | 3 |
| MFGET 405: Quality Control .....                     | 3 |

## Support Courses (19 hours)

|   |   |
|---|---|
| ENGL 301: Technical/Professional Writing .....                            | 3 |
| MATH 122: Plane Trigonometry .....  | 3 |
| MATH 143 Elementary Statistics (satisfied by general education) (3 hours) |   |
| MATH 150: Calculus I .....  | 5 |
| PHYS 100: College Physics I .....   | 4 |
| or PHYS 104: Engineering Physics I .....                                  | 4 |
| PHYS 130: Elementary Physics Laboratory I .....                           | 1 |

In order to meet the accreditation requirements of the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>, partial waivers from the Pittsburg State University general education requirements have been allowed.

PHYS 104 Engineering Physics I is the preferred physics support course.

# GENERAL EDUCATION REQUIREMENTS

(44-45 hrs.)

## Basic Skills 12 hours

|         |     |                                       |   |
|---------|-----|---------------------------------------|---|
| COMM    | 207 | Speech Communication.....             | 3 |
| ENGL    | 101 | English Composition.....              | 3 |
| ENGL    | 190 | Honors English Composition.....       | 3 |
| or ENGL | 299 | Introduction to Research Writing..... | 3 |
| MATH    | 143 | Elementary Statistics.....            | 3 |

## Sciences 8 hours

|                  |     |                                 |   |
|------------------|-----|---------------------------------|---|
| Natural Sciences |     |                                 |   |
| BIOL             | 113 | Environmental Life Science..... | 4 |

|                   |         |  |   |
|-------------------|---------|--|---|
| Physical Sciences |         |  |   |
| CHEM              | 105/106 | Introductory Chemistry and Laboratory..... | 4 |

## Social Studies 3 hours

|     |     |                                |   |
|-----|-----|--------------------------------|---|
| SOC | 100 | Introduction to Sociology..... | 3 |
|-----|-----|--------------------------------|---|

## Political Studies 3 hours

|      |     |                    |   |
|------|-----|--------------------|---|
| POLS | 101 | U.S. Politics..... | 3 |
|------|-----|--------------------|---|

## Producing and Consuming.....6 hours

|  |     |   |   |
|--|-----|---|---|
| Technology                             |     |   |   |
| MFGET                                  | 263 | Manufacturing Methods I.....            | 2 |
| MFGET                                  | 268 | Manufacturing Methods I Laboratory..... | 1 |
| Economy/Business ( <i>Select one</i> ) |     |   |   |
| ACCTG                                  | 201 | Financial Accounting.....               | 3 |
| ECON                                   | 191 | Issues in Today's Economy.....          | 3 |
| MGMKT                                  | 101 | Introduction to Business.....           | 3 |

## Fine Arts and Aesthetic Studies (*Select one*)..... 2-3 hours

|       |     |   |   |
|-------|-----|---|---|
| ART   | 155 | Printmaking and Paper Arts.....                             | 3 |
| ART   | 178 | Introduction to the Visual Arts.....                        | 3 |
| ART   | 188 | The Designed World.....                                     | 3 |
| ART   | 217 | Crafts I.....   | 3 |
| ART   | 222 | Jewelry Design I.....                                       | 3 |
| ART   | 233 | Drawing I.....  | 3 |
| ART   | 244 | Ceramics I.....   | 3 |
| ART   | 266 | Sculpture I.....  | 3 |
| ART   | 277 | Painting I.....   | 3 |
| ART   | 288 | Introduction to Art History I.....                          | 3 |
| ART   | 289 | Introduction to Art History II.....                         | 3 |
| ART   | 311 | Art Education.....  | 3 |
| ART   | 351 | Printmaking, Papermaking, Bookarts and the Letterpress..... | 3 |
| ART   | 430 | Automotive: Art and Design.....                             | 3 |
| COMM  | 105 | Performance Appreciation.....                               | 3 |
| COMM  | 205 | Performance Studies.....                                    | 3 |
| COMM  | 295 | Theatre History.....  | 3 |
| ENGL  | 250 | Introduction to Creative Writing.....                       | 3 |
| HHP   | 151 | Dance Appreciation.....                                     | 3 |
| MUSIC | 120 | Music Appreciation.....                                     | 3 |
| MUSIC | 121 | Introduction to Music Literature.....                       | 2 |

|                         |     |                               |   |
|-------------------------|-----|-------------------------------|---|
| <b>Cultural Studies</b> |     | <b>3 hours</b>                |   |
| GEOG                    | 106 | World Regional Geography..... | 3 |

|                              |     |                                |   |
|------------------------------|-----|--------------------------------|---|
| <b>Health and Well Being</b> |     | <b>4 hours</b>                 |   |
| Psychological                |     |                                |   |
| PSYCH                        | 155 | General Psychology.....        | 3 |
| Physical                     |     |                                |   |
| HHP                          | 150 | Lifetime Fitness Concepts..... | 1 |

|                       |     |                |   |
|-----------------------|-----|----------------|---|
| <b>Human Heritage</b> |     | <b>3 hours</b> |   |
| Philosophy            |     |                |   |
| PHIL                  | 105 | Ethics.....    | 3 |

Notes

NOTE: The information contained herein is intended to be used for the planning of a student's academic program and does not constitute a contract. While this guide was prepared with the latest information, courses, graduation requirements, and curricula are subject to change.

When a student attains 85 semester hours of credit (including current enrollment) the student must apply for a degree check in the Office of the Registrar (Degree Checking Section), Room 102 Russ Hall.

**MINIMUM GENERAL REQUIREMENTS:** The minimum requirements for graduation include 124 semester hours of which 60 hours must be from a four year university. In addition, 45 semester hours must be upper division and 30 hours in residence at PSU (including 24 of the last 30). Minimum GPA for non-education degree is 2.0 overall [2.0 in major], secondary education degree is 2.5 overall [2.75 in major], and early/late childhood/unified degree is 2.80 overall [3.0 in major]. A minimum GPA of 2.0 in any minor and in residence coursework is required. General Education and all degree requirements are provided in the online catalog. Refer to individual departments for specific requirements.