

**THE UNIVERSITY OF AKRON
AKRON OHIO
SUMMIT COLLEGE**

**MANUFACTURING ENGINEERING TECHNOLOGY, COMPUTER AIDED MANUFACTURING OPTION
2880: Associate of Applied Science Degree**

FIRST YEAR**Fall Semester**

| | | <u>Credit Hours</u> | <u>Prerequisites</u> |
|-----------|---|----------------------------|---|
| 5540: | Physical Education | 1 | |
| 2020:121 | English | 4 | Placement test |
| 2030:151* | Technical Mathematics I | 2 | Placement test |
| 2030:152* | Technical Mathematics II | 2 | 2030:151 with grade of C- or better or placement test |
| 2820:161 | Technical Physics: Mechanics I (Sch. Lab) | 2 | 2030:152 coreq. |
| 2880:100* | Basic Principles of Manufacturing Mgmt. | 4 | |
| 2880:110* | Manufacturing Processes | <u>3</u> | |
| | | 18 | |

Spring Semester

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|-----------|---|----------|--|
| 2020:222 | Technical Report Writing <u>OR</u> | | 2020:121, 3300:111 or equivalent |
| 3300:112 | English Comp II | 3 | 3300:111 |
| 2030:153 | Technical Mathematics III | 2 | 2030:152 or equiv with grade of C- or better or placement test |
| 7600:106 | Effective Oral Communication | 3 | |
| 2820:131 | Software Applications for Technology | 1 | 2030:151 |
| 2880:130 | Work Measurement & Cost Estimating | 3 | 2880:100 |
| 2880:151* | Industrial Safety & Environmental Protection | 2 | |
| 2940:210 | Computer Aided Drawing I | 3 | |
| 2820:163* | Technical Physics: Electricity & Magnetism (Sch. Lab) | <u>2</u> | 2820:161 prereq.; 2030:153 coreq. |
| | | 19 | |

SECOND YEAR**Fall Semester**

| | | | |
|-----------|--|----------|-----------------------------------|
| 2820:162 | Technical Physics: Mechanics II (Sch. Lab) | 2 | 2820:161 prereq.; 2030:153 coreq. |
| 2880:211 | Computerized Manufacturing Control | 3 | 2880:100 |
| 2920:130* | Introduction to Hydraulics and Pneumatics | 3 | |
| 2870:348* | CNC Programming I (Sch. Lab) | 3 | 2940:121; 2030:154 or permission |
| 2040:240 | Human Relations <u>OR</u> | | |
| 3750:100 | Introduction to Psychology | <u>3</u> | |
| | | 14 | |

Spring Semester

| | | | |
|----------|--|----------|--------------------|
| 2880:201 | Robotics & Automated Manufactg. (Sch. Lab) | 3 | 2880:100 or perm. |
| 2880:232 | Labor Management Relations | 3 | 2880:100 |
| 2880:241 | Introduction to Quality Assurance (Sch. Lab) | 3 | 2880:100; 2030:152 |
| | Technical Elective* | 3 | |
| | General Education Elective | <u>3</u> | |
| | | 15 | |

TOTAL CREDITS = 66

Note:

- * Students completing NTMA Journeyman's Machinist Program receive bypass credit for courses marked with an "**". Those not completing the entire program or who have completed the program prior to 1/1/96, see an advisor.

| <u>General Electives</u> | | <u>Credit Hours</u> |
|-----------------------------------|-------------------------------------|----------------------------|
| 2040:241 | Technology and Human Values | 2 |
| 2040:242 | American Urban Society | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| <u>Technical Electives</u> | | |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2520:101 | Essentials of Marketing Technology | 3 |
| 2820:164 | Technical Physics: Heat & Light | 2 |
| 2920:101 | Introduction to Mechanical Design | 3 |
| 2920:142 | Introduction to Material Technology | 3 |
| 3450:138 | Mathematics of Finance | 1 |

Associate Degree in Manufacturing Engineering Technology

In General

Manufacturing Engineering Technology is concerned with the analysis, design, and management of all the resources, facilities, and people involved in manufacturing processes. Manufacturing Engineering Technology requires a background in basic technical subjects, management techniques, work measurement, safety procedures, plant layout, quality control, maintenance, production control, economics, and computer applications such as CAD, CNC, and CAM.

Career Opportunities

A graduate of this program finds employment in manufacturing supervision and control. Duties involve the design modification, installation, and operation of integrated systems of people, materials, machines, and methods used to produce a product at a profit.

Specific career opportunities may be found in the following functional areas:

- Manufacturing Engineering Technician
- Manufacturing Supervision
- Methods - production, planning, methods and engineering
- Work Measurements - time study, motion study, and standards
- Wage Payment - wage incentives, job evaluation
- Controls - production control, quality control, inventory control
- Plant Facilities and Design - plant layout, material handling, product design, storage facilities, maintenance of plant equipment
- Industrial Relations - management-union relations, workers' compensation
- Purchasing
- Safety and Industrial Hygiene
- Estimating
- Profit and Cost Analysis
- Quality Assurance

Second Year

A student should consult an adviser in the Summit College Advising Office, Polsky Building, Room 301, 330-972-7220, any time questions arise regarding scheduling of courses or requirements for graduation.

Placement

A student is encouraged to check with his/her major department and with the Center for Career Management, 330-972-7747, regarding employment opportunities in the field.

Cooperative Education

Co-op is available on an optional basis in this academic program. To obtain additional information on program benefits, eligibility requirements, or to apply for the program, contact the Center for Career Management.