



# Mechanical Design Technology Concentration

## Bachelor of Science in Industrial Technology

### AAS Degree Completion Program

#### Description of Program

The Bachelor of Science in Industrial Technology (BSIT) is a degree completion curriculum designed for students who hold a *qualifying Associate in Applied Science degree* (AAS) in an industrial or technology related field. All required degree courses are offered on ECU's campus during the daytime.

The **BSIT Mechanical Design Technology Concentration** emphasizes application of state of the art software, digitizing, & product realization /development equipment. Graduates have the opportunity to work as design professionals or as members of a design team. Many graduates progress to supervise a design team or manage a design project. Graduates meet nationally recognized standards in demonstrating knowledge and skills in applying design practices & drafting concepts to solve a broad & varied range of design problems. Professional opportunities upon graduation are found in a range of engineering and architecture related disciplines.

This option prepares individuals to apply basic engineering principles & technical skills in support of engineers engaged in the design and development phases of a wide variety of projects involving mechanical systems. It includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype & operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, & report preparation.

#### Program requirements

- Completed a qualifying associate of applied science degree program.
- Apply up to 60 semester hours from an accredited community college or technical institute.
- Minimum 60 semester hours must be completed at a four-year college or university.
- Minimum 33 semester hours of major coursework must be completed at ECU.
- Only courses with a 'C' or better will transfer.
- Total 120 hours required for this degree.
- Visit the program website for admission requirements – [www.ecu.edu/BSIT](http://www.ecu.edu/BSIT).

#### Industrial Technology Degree Requirements

##### Industrial Technology Major Coursework (42 hours)

- Technical Writing
- Technology Project Management
- Cost and Capital Analysis
- Industrial Supervision
- Introduction to Statistical Process Control
- Engineering Graphics II with Lab
- Rapid Prototyping with Lab
- Jig and Fixture Design with Lab
- Geometric Dimensioning & Tolerancing with Lab
- Computer Numerical Control with Lab
- Robotics in Computer Integrated Manufacturing with Lab
- Plant Layout and Materials Handling
- Approved Technical Electives (6 hours)

##### Courses to transfer or taken at ECU (78 hours)

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|---|---|
| <b>AAS Technical courses (38 hrs)</b>     | <b>Math (3 hours)</b>                     |
| <b>English (6 hours)</b>                  | College Algebra                           |
| Composition I                             | <b>Humanities &amp; Fine Arts (9 hrs)</b> |
| Composition II                            | At least one in Humanities                |
| <b>Natural Science (7 hours)</b>          | At least one in Fine Art                  |
| * College Physics 1 with lab              | Hum/Fine Arts to total 9 hours            |
| Natural Science elective                  | <b>Social Science (9 hours)</b>           |
| <b>General Ed Elective (3 hours)</b>      | Principles of Microeconomics              |
| <b>Health &amp; Exercise (2, 1 hours)</b> | Introductory Psychology                   |
|   | Personnel & Industrial Psychology         |

\*highly recommended as one of the natural sciences– required prerequisite for DESN 3032 Engineering Graphics 2

#### Contact Information

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| <b>Program Website:</b>          | <a href="http://www.ecu.edu/BSIT">www.ecu.edu/BSIT</a> |



This program is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE) and the Southern Association of Colleges and Schools (SACS).

For more information about admission, tuition, financial aid, housing, and more, please visit ECU's website at [www.ecu.edu](http://www.ecu.edu).