



Bachelor of Science in Industrial Engineering Technology

Department of Technology Systems

Program Description

The bachelor's degree in Industrial Engineering Technology (IET) prepares graduates for a career in industrial engineering, productivity improvement, process control and overall management in manufacturing and service industries. The program employs an application oriented hands-on approach to allow students to learn and practice skills in communications, teamwork, problem solving, management, and leadership. The technical content of the curriculum covers engineering fundamentals, materials and processes, electro-mechanical and electronic systems, process control, quality engineering, production planning, lean manufacturing, six-sigma philosophy, sustainability, design for manufacturing and assembly, and product and process design.

A capstone project is conducted by students to validate the concepts learned. Students work with teams from businesses to solve real life problems. Opportunities are also available to obtain further industry experience through co-op positions, internships and course-based projects in the program.

Employment Opportunities

Graduates are employed in manufacturing, healthcare, banking, and other service industries to contribute in functional areas of production, planning, facilities management, technical sales, operations, and other related areas. The wide appeal of the program is shown by the range of firms that have employed our graduates. These include:

- ◆ Patheon
- ◆ Kennametal
- ◆ Philip Morris
- ◆ Robert Bosch
- ◆ Black and Decker
- ◆ ASMO
- ◆ Roche Biomedical
- ◆ Goodyear
- ◆ Siemens
- ◆ ABB Pinetops
- ◆ Buehler Products, Inc.
- ◆ Pratt and Whitney
- ◆ Universal Leaf
- ◆ Abbott Diagnostics
- ◆ Farval Lube Systems
- ◆ American Concrete
- ◆ Naval Aviation Depot
- ◆ Hyster-Yale

The career mobility of our graduates is demonstrated by the list of positions that similar graduates have held, which include:

- ◆ Industrial Engineer
- ◆ Operations Manager
- ◆ President
- ◆ Project Engineer
- ◆ Chief Executive Officer
- ◆ Six-sigma Black Belt
- ◆ Production Manager
- ◆ VP of Operations
- ◆ Automation Engineer
- ◆ Tech Sales Manager
- ◆ Lean Coordinator
- ◆ Process Engineer

Required Coursework

Industrial Engineering Technology Coursework (72 hours):

- Industrial Technology Applications of Computer Systems
- Engineering Graphics I with Lab
- Computer Aided Design with Lab
- Electricity/Electronics Fundamentals with Lab
- Thermal and Fluid Systems with Lab
- Electromechanical Systems with Lab
- Materials and Processes Technology with Lab
- Computer Numerical Control (CNC) with Lab
- Robotics in Computer Integrated Manufacturing with Lab
- Plant Layout and Material Handling
- Static and Strength of Materials
- Technical Presentations
- Manufacturing Systems Planning
- Advanced Manufacturing Systems
- Work Methods & Ergonomic Analysis
- Introduction to Statistical Process Control
- Technical Writing
- Industrial Safety
- Technology Project Management
- Cost and Capital Project Analysis
- Industrial Supervision
- Quality Assurance Concepts
- Capstone



Choose one approved elective:

- Electromechanical Systems Integration with Lab
- Special Topics in Industrial Engineering Technology
- Operations Research

General Education and Cognates (48 hours):

English (6 hours)

- Composition 1
- Composition 2

Science (8 hours)

- General Physics I with Lab
- General Physics II with Lab

Humanities & Fine Arts (9 hrs)

- At least one Humanities course
- At least one Fine Art course.
- Hum/Fine Arts to total 9 hours

Math (6 hours)

- College Algebra
- Statistics for Business

Health & Exercise (2,1 hours)

Social Science (9 hours)

- Microeconomics
- Intro to Psychology
- Industrial Psychology

Any General Ed Elective (3 hrs)

Electives (4 hours)

Contact Information

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For more information about admission, tuition, financial aid, housing, and campus tours, please visit ECU's website at www.ecu.edu.