



# Bachelor of Science in Industrial Engineering Technology

Department of Technology Systems

## Program Description

The Industrial Engineering Technology (IET) degree prepares graduates for a career in manufacturing and industrial engineering, productivity improvement, process control, and overall management in manufacturing industries. Graduates learn and practice skills in an application oriented hands-on environment to gain skills in communications, teamwork, problem solving, management, and leadership. With skills to put technology systems together to produce products, knowledge to improve productivity and profitability of companies, and insights to lead people to form empowered and efficient teams, makes IET graduates ideal candidates to lead manufacturing and service businesses in the 21<sup>st</sup> century.

An on-campus or industry professional industrial experience in the form of a capstone course allows students to get real life working experience. Students may also pursue co-op or internship opportunities.

## Employment Opportunities

IET graduates are employed in manufacturing, healthcare, banking, and other service industries to contribute to functional areas of production, planning, facilities management, technical sales, operations, and other related functions. IET graduates are employed by:

- ◆ ThermoFisher
- ◆ Spirit Aerosystems
- ◆ Avient (Dyneema)
- ◆ Grady White Boats
- ◆ Hyster Yale
- ◆ Naval Aviation Depot
- ◆ ABB
- ◆ Amazon Robotics
- ◆ Pratt and Whitney
- ◆ Hitachi
- ◆ Goodyear Tires

Career titles of IET graduates include:

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

## Comments from our students about the IET program:

“The IET program provided me with hands-on experience. With the right classes and textbooks, ample team projects and group problem solving exercises it provided me with real world experience that has really helped me firmly get rooted for a proficient career.”

**Brent J. Ackermann, BS IET, 2010, Engineering Leader & Product Support Engineer, ABB Pinetops.**

“I believe the IET degree at ECU is a wonderful program that completely changed my life. I encourage all my friends and acquaintances to seriously consider it as a career option. My friends see my success and the passion I have for my work and are truly inspired to adopt it as their own career path.”  
**Holly Chandler, BS IET, 2012, Manufacturing Engineer, Air System Components, Inc.**

## 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
- Professional industrial experience



Choose one approved elective:

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

### 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](http://www.ecu.edu).