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, 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:

- DSM
- Kennametal
- Philip Morris
- Robert Bosch
- Black and Decker
- ASMO
- Roche Biomedical
- Maytag
- Siemens
- USCG, Elizabeth City
- Buehler Products, Inc.
- Pratt and Whitney
- Universal Leaf
- Abbott Diagnostics
- Farval Lube Systems
- American Concrete
- Naval Aviation Depot
- NACCO Materials Handling

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
- Business Unit Manager
- Technical Sales Manager
- Lean Coordinator
- Lean Champion

Required Coursework

Industrial Engineering Technology Coursework (69 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
- Manufacturing Systems Planning
- Advanced Manufacturing Systems
- Electromechanical Systems Integration with Lab
- 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

General Education and Cognates (57 hours):

English (6 hours)
- Composition 1
- Composition 2

Science (12 hours)
- General Physics I
- General Physics II
- Chemistry

Humanities & Fine Arts (10 hrs)
- At least one Humanities course
- Business & Professional Comm.
- Hum/Fine Arts to total 10 hours

Math (8 hours)
- College Algebra
- Trigonometry

Health & Exercise (3 hours)
- Microeconomics
- Intro to Psychology
- Industrial Psychology
- Social Science Elective

Social Science (12 hours)
- Economic Principles
- Government & Politics

Electives (9 hours)
- Humanities & Fine Arts
- Business & Professional Comm.
- Hum/Fine Arts

Contact Information

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