



BS in Industrial Engineering Technology (IET)

Department of Technology Systems

East Carolina University

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 hrs):

- ITEC 2000 Ind. Tech Applications of Computer Systems
- ITEC 2054 Electricity/Electronics Fundamentals with Lab
- ITEC 2080 Thermal and Fluid Systems with Lab
- ITEC 2090 Electromechanical Systems with Lab
- ITEC 3200 Intro to Statistical Process Control
- ITEC 3290 Technical Writing
- ITEC 3292 Industrial Safety
- ITEC 3300 Technology Project Management
- ITEC 3800 Cost and Capital Project Analysis
- ITEC 4293 Industrial Supervision
- ITEC 4300 Quality Assurance
- DESN 2034 Engineering Graphics I with Lab
- DESN 2036 Computer Aided Design with Lab
- IENG 2020 Materials and Processes Technology with Lab
- IENG 2076 Computer Numerical Control with Lab
- IENG 3020 Robotics in Computer Integrated Mfg with Lab
- IENG 3300 Plant Layout and Material Handling
- IENG 3600 Static and Strength of Materials
- IENG 4020 Manufacturing System Planning
- IENG 4023 Advanced Manufacturing Systems
- IENG 4092 Operations Research
- IENG 4200 Work Methods & Ergonomic Analysis
- IENG 4900 Capstone

General Education and Cognates (57 hrs):

English (6 hrs)

- ENGL 1100 Composition
- ENGL 1200 Composition

Science (12 hrs)

- PHYS 1250/51 General Physics I
- PHYS 1260/61 General Physics II
- Chemistry course

Humanities & Fine Arts (10 hrs)

- At least one in Humanities
- COMM 2410 or 2420 Speech
- Hum/Fine Arts to total 10 hrs

Math (8 hrs)

- MATH 1065 College Algebra
- MATH 1074 Trigonometry
- MATH 2119 Calculus

Health & Exercise (3 hrs)

Social Science (12 hrs)

- ECON 2113 Prin. of Microecon
- PSYC 1000 Intro to Psychology
- PSYC 3241 Industrial Psych
- Social Science Elective

Approved Electives (6 hrs)

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>.