ENGINEERING TECHNOLOGY: INDUSTRIAL (ETI)

ETI1110C INTRODUCTION TO QUALITY ASSURANCE (3.00 Credits)
This course defines the role of quality in an industrial environment. Topics include the use of quality management techniques and quality philosophies, process development, techniques used for evaluation, approaches used on continuous operations, methods used to control quality, and the International Organization for Standardization (ISO) series of standards. The responsibility of quality assurance during the engineering, manufacturing, and marketing of a product is also covered.
Total Contact Hrs: 64.00
Lecture Hrs: 48.00
Lab Hrs: 16.00

ETI1420 PROCESSES AND MATERIALS (3.00 Credits)
This course provides coverage of the characteristics, fundamentals, and manufacturing properties of materials, including metal alloys, polymers, ceramics, and composites. The metal-casting processes and the shaping and forming processes are also covered along with the machines needed for manufacturing.
Total Contact Hrs: 64.00
Lecture Hrs: 48.00
Lab Hrs: 16.00

ETI1622 CONCEPTS OF LEAN AND SIX SIGMA (4.00 Credits)
This course provides students with an introduction to the fundamentals of lean, and Six Sigma. A comprehensive overview of the lean and six sigma methodologies including the Define, Measure, and Control phases will be presented.
Total Contact Hrs: 64.00
Lecture Hrs: 64.00

ETI1701 SAFETY (3.00 Credits)
This course focuses on the theories and principles of occupational safety and health in a practical and useful real world job related setting. The major topics include the Occupational Safety and Health Administration (OSHA) compliance, safety standards, code enforcement, ergonomic hazards, mechanical hazards, falling, lifting, electrical hazards, fire hazards, industrial hygiene, radiation, noise, emergencies, and environmental safety.
Total Contact Hrs: 64.00
Lecture Hrs: 48.00
Lab Hrs: 16.00

ETI2535C AUTOMATED PROCESS CONTROL (3.00 Credits)
This course introduces modern control theory and the use of sensors, actuators, and controllers. Tthe student will be introduced to state of the art control systems used in industry and the elements that comprise a closed-loop network.
Total Contact Hrs: 64.00
Lecture Hrs: 48.00
Lab Hrs: 16.00

ETI2610C PRINCIPLES OF SIX SIGMA (4.00 Credits)
This course provides students with an introduction to the basic principles and theories of Six Sigma as used in the continual improvement process. The course examines the tools most common to six sigma projects and how and when to use them. Course coverage focuses on measurement methods, data collection, data integrity, and graphical methods of presenting findings.
Total Contact Hrs: 64.00
Lecture Hrs: 32.00
Lab Hrs: 32.00
Complete all the courses in the following option:
- Pre or Corequisite: ETI1622 (minimum grade: C)

ETI2623C TOOLS FOR LEAN MANUFACTURING (4.00 Credits)
This course provides students with an overview of lean manufacturing concepts, and a working knowledge of the tools required to implement and maintain a lean manufacturing facility. Course coverage includes mistake proofing, the 5Ss for operators, quick changeover, overall equipment effectiveness (OEE), cellular manufacturing, and the Kanban system.
Total Contact Hrs: 64.00
Lecture Hrs: 32.00
Lab Hrs: 32.00
Complete all the courses in the following option:
- Pre or Corequisite: ETI2610C (minimum grade: C)

ETI2644 PRODUCTION AND INVENTORY CONTROL (3.00 Credits)
Application of industrial engineering theory and practice to the area of operations management planning and control (MPC). Analysis and understanding of forecasting, aggregate planning, operations strategy, capacity planning, supply- chain management, just-in-time systems, lean manufacturing, agile manufacturing, materials requirement planning, inventory management, short- term scheduling and sequencing, line balancing, and other pertinent topics.
Total Contact Hrs: 48.00
Lecture Hrs: 48.00