

# AUT 144: MANUFACTURING SYSTEMS, METHODS, AND PROCESSES

This course provides an introduction to the common types of Manufacturing Systems and Manufacturing Support Systems, Production Operations, Facilities, Product/Production Relationships, while highlighting the philosophy of Lean Manufacturing and Just-in-Time (JIT) Manufacturing. This includes an introduction to Production Performance indicators including Safety, Quality, Delivery, Cost, and Morale (SQCDM). Automated techniques covering robotics, automated inspection, material handling, and logistics/ID systems will be examined. Common types of Manufacturing Systems (single station, assembly lines, automated production lines, automated assembly lines, cellular, and flexible manufacturing) will be studied. Coverage of Manufacturing Support Systems will include an overview of product design, process planning, and production planning/control. Students will be prepared to analyze production processes resulting in operational standards, including cycle time analysis to meet tact times.

**Credits:** 3

**Lecture Hours:** 3

**Prerequisites:**

PREREQUISITE: As required by the program.