MIT - MANUFACTURING AND INDUSTRIAL ENGINEERING TECHNOLOGY

MIT 3350 Applied Human Factors Cr. 3
Introduction to human physiological and psychological functions and capabilities from an engineering viewpoint; sensory information processing and motor abilities, human-machine design aspects. Offered Yearly.

MIT 3500 Machine Tool Laboratory Cr. 1
Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. Offered Fall, Winter.
Prerequisites: ([ET 2140 with a minimum grade of D-])

MIT 3520 Manufacturing Processes Theory Cr. 2
Nature and deformation behavior of materials commonly used in manufacturing; basic processes used in transforming them into useful products; scientific theory underlying those processes; criteria for selecting particular processes. Offered Fall, Winter.
Prerequisites: ([CHM 1020 with a minimum grade of D-]) AND (May be taken concurrently: [MIT 3500 with a minimum grade of D-])

MIT 3600 Process Engineering Cr. 3
Prerequisites: ([MIT 3520 with a minimum grade of D-])

MIT 4700 Computer-Aided Design and Manufacturing Cr. 3
Fundamentals of computer-aided manufacturing using computer software. Two- and three-dimensional applications programming, numerical control and programming. Offered Yearly.
Prerequisites: ([ET 2140 with a minimum grade of D-]) AND ([MIT 3520 with a minimum grade of D-] OR [MIT 3510 with a minimum grade of D-])
Course Material Fees: $25

MIT 4800 Quality Control Cr. 4
Introduction to total quality systems design and to basic analytical techniques for quality control. Offered Irregularly.
Prerequisites: ([ET 3850 with a minimum grade of D-])

MIT 4990 Guided Study Cr. 1-6
Supervised study and instruction in the field selected by the student. Offered Irregularly.
Repeatable for 6 Credits

MIT 5500 Machine Tool Laboratory Cr. 1
Laboratory experiences in manufacturing processes, machine tools, and mechanization. Calibration and part-setup. Offered Fall, Winter.
Prerequisites: ([ET 2140 with a minimum grade of D-])

MIT 5700 Industrial Robots Modeling and Simulation Cr. 4
Modeling, simulation and programming of industrial robots in flexible manufacturing environment; the direct and inverse kinematic problems; homogeneous and composite homogeneous transformation matrices; links, joints, the Denavit-Hartenberg representation; kinematic equations for manipulators; and geometric approach applied for 2DOF, 3DOF, and up to 6DOF manipulators. Offered Winter.
Restriction(s): Enrollment limited to students with a class of Unranked Grad or Senior; enrollment is limited to Graduate or Undergraduate level students.

MIT 7700 Robotics and Flexible Manufacturing Cr. 4
Kinematics, dynamics and controls of the manipulators, their design and applications in flexible manufacturing cells. Computer-integrated manufacturing. Offered Irregularly.
Prerequisite: ET 7430 with a minimum grade of C and MIT 4700 with a minimum grade of C-
Restriction(s): Enrollment is limited to Graduate level students.