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 C-

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 C- and May be taken concurrently: MIT 3500 with a minimum grade of C-

MIT 3600 Process Engineering Cr. 3  
Prerequisites: MIT 3520 with a minimum grade of C-

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 C- and MIT 3520 with a minimum grade of C-  
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 Intermittently.  
Prerequisites: ET 3850 with a minimum grade of C-

MIT 4990 Guided Study Cr. 1-6  
Supervised study and instruction in the field selected by the student. Offered Intermittently.  
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 C-

MIT 5700 Industrial Robots Modeling and Simulation Cr. 4  
Topics include: the direct kinematic problem (homogeneous transformation matrices, composite homogeneous transformation matrix, links, joints and their parameters, the Denavit-Hartenberg representation, kinematic equations for manipulators); the inverse kinematic problem (geometric approach applied for 2DOF, 3DOF, 4DOF, 5DOF, and 6DOF manipulators; modeling, simulation and off-line programming of industrial robots and cobots (collaborative robots); and current trends and research in industrial robotics and cobotics. Offered Winter.  
Restriction(s): Enrollment is limited to Graduate or Undergraduate level students; enrollment limited to students with a class of Unranked Grad or Senior.