AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY (2870)

2870:301 Computer Control of Automated Systems (3 Credits)
The development of computer based systems and computer programs using robotics and machine controllers as the solutions for automated manufacturing problems.

2870:311 Facilities Planning (3 Credits)
Prerequisite: 2940:180 or 2940:210 or permission. An application based study of facilities analysis, design and layout utilizing software based solutions.

2870:332 Management of Technology Based Operations (3 Credits)
A study of the techniques and knowledge necessary to effectively manage technical personnel.

2870:348 CNC Programming I (3 Credits)
Prerequisites: [2030:154 and 2920:121] or 2880:248, or permission. Introduction to CAM (Computer Aided Manufacturing) based CNC (Computer Numerical Control) programming; development of milling, drilling, and turning programs.

2870:441 Advanced Quality Practices (3 Credits)
Prerequisite: 2880:241 or permission. Specific quality assurance procedures will be developed conceptually, proven mathematically, and then tested in lab exercises. Industry accepted SQC software will be used.

2870:448 CNC Programming II (3 Credits)
Prerequisite: 2870:348. The study of advanced CNC programming techniques utilizing an industry standard CAM programming software package and CNC program verification software.

2870:470 Simulation of Manufacturing Systems (3 Credits)
Prerequisite: 2880:211. Computer simulation solutions applied to the traditional manufacturing problems of equipment justification, production line balancing, and capacity planning.

2870:480 Automated Production (3 Credits)
Prerequisites: 2870:301, 2870:448, and 2880:201. A study of the automated production system. The various systems studied thus far, CNC, robotics, automated machines via PLCs, and facilities design, are integrated and analyzed from a production standpoint.

2870:485 SME Manufacturing Technologist Certification Preparation (2 Credits)
Prerequisites: 2870:441 and 2920:347. Pre/Corequisite: 2870:480. Provides a review for the SME Manufacturing Technologist Certification Exam. Topics include a review of materials and manufacturing processes, automated systems and control, quality and process control methods, manufacturing management, and other topics appearing on the exam.

2870:490 Manufacturing Project (2 Credits)
Prerequisite: Senior status. Advanced CADCAM topics are presented. A comprehensive project is undertaken.

2870:495 Individual Investigation in Manufacturing Engineering Technology (2 Credits)
Selected topic(s) that provide for specific individual study in the area of manufacturing engineering technology under the direct supervision of a faculty member.

2870:496 Special Topics in Manufacturing Engineering Technology (1-3 Credits)
Prerequisite: Permission. Selected topic(s) that provide for specific course work in the area of manufacturing engineering technology offered once or only occasionally in areas where no formal course exists.

2870:499 Workshop in Manufacturing Engineering Technology (1-3 Credits)
Prerequisite: Permission. Group studies of special topics in manufacturing engineering technology.