AUTOMATED MFG ENG TECH (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 [2880:248 or 2920:121]. 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)
Prerequisites: 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: 2880:211 or senior status. 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. The issues of line balance, reliability, queue sizing, and personnel matters are included.

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.