For Students Enrolled in:

MTT: Machine Tool Technology, Associate in Applied Science
2007 to Present

Program Description: The associate in applied science degree in Machine Tool Technology emphasizes the advanced manufacturing technologies. Students are prepared to work in precision tooling, machining, and manufacturing. Graduates could qualify for positions as machine tool operators; machinists; Computerized Numerically Controlled (CNC) machinists and programmers; Electrical Discharge Machine (EDM) operator/programmers; computer-aided drafting/design and computer-aided machining/manufacturing (CAD-CAM) programmers, toolmakers, mold makers and inspectors.

Program Outcomes:
Upon successful completion of this program, students should be able to:

- Analyze, interpret, qualify and apply engineering specifications for the production of manufactured/machined parts, and, assist in solving engineering related problems.
- Solve routine problems associated with work-cell (shop floor) machining/manufacturing.
- Demonstrate continuous knowledge and skill development traits required for mastery of advanced technologies.
- Decipher and evaluate the impact of shop-floor technologies.
- Communicate advanced technological concepts in an oral, written, and graphical format.
- Formulate a means for continuous evaluation of personal growth requirements to assure technological preparedness in managing a career in the challenging field of precision machining/manufacturing.
- Operate conventional and Computer Numerically Controlled machine (CNC) tools and other automated equipment.
- Program machine tools and related equipment via the use of Computer Aided Manufacturing (CAM) system hardware and software.
- Validate, via inspection, and process documents, the readiness of products for customer distribution.

Semester by Semester Plan:

**Semester 1:**
MAT 110
MTT 110
MTT 111
TCC 111
MTT 112

**Semester 2:**
MTT 122
MTT 124
MAT 111
ENG 100

**Semester 3:**
MTT 214
MTT 210
MTT 219
ENG 112
COMM 100
Social Science Elective
Semester 4:  
MTT 220  
MTT 229  
MTT 230  
PHY 100  
Machining Electives  

Total Credits: 67-68  

Notes:  
MAT 160, MAT 161 may be elected instead of MAT 110, MAT 111.  

Social Science Electives (SOC 100 to 200), American History II (HIS 120); or, Microeconomics Principles (ECO 220)  

Suggested machining electives: Manufacturing Processes (MTT213), Technical Mechanics (TME 231), Statics and Strength of Materials (TME 216), Project Management Processes (TCC 121), Robotics and Programmable Logic Controllers (TME 220), Fluid Power and Controls (TME 229), Robotic Systems (TME 232), Introduction to Nanotechnology (SCI 105), CSEL (College Sponsored Experiential Learning), any 3 or 4 credit combination