MECHATRONICS ENGINEERING TECHNOLOGY
A.A.S. Program (A40350)

Courses required to meet graduation requirements in this curriculum are offered primarily during day hours. Minimum time for completion: five semesters full-time attendance. The Associate in Applied Science degree is awarded graduates of this curriculum. The Mechatronics Engineering Technology curriculum prepares graduates to use basic engineering principles and technical skills in developing and testing automated, servomechanical, and other electromechanical systems. Includes instruction in prototype testing, manufacturing and operational testing, systems analysis and maintenance procedures. Graduates should be qualified for employment in industrial maintenance and manufacturing including assembly, testing, startup, troubleshooting, repair, process improvement, and control systems and should qualify to sit for Packaging Machinery Manufacturers Institute (PMMI) mechatronics or similar industry examinations.

GENERAL EDUCATION COURSES:  

English/Communications:
- ENG 111 Writing and Inquiry ..................................................3
- ENG 112 Writing/Research in the Disc. .........................................3
OR ENG 114 Prof Research & Reporting ......................................3
OR ENG 113 Literature-Based Research .......................................3
Humanities/Fine Arts:
- Elective .................................................................................3
Natural Sciences/Mathematics:
- MAT 171 Precalculus Algebra ..................................................4
OR MAT 121 Algebra/Trigonometry I .........................................3
Social/Behavioral Sciences:
- Elective ................................................................................3

MAJOR COURSES:
- ATR 112 Intro to Automation ..................................................3
- BPR 111 Blueprint Reading ......................................................2
- CIS 110 Intro to Computers ....................................................2
- DFT 151 CAD I .......................................................................3
- EGR 110 Intro to Engineering Tech .........................................3
- ELC 117 Motors and Controls ..................................................3
- ELC 128 Intro to PLC .............................................................2
- ELC 131 Circuit Analysis I .......................................................4
- ELC 213 Instrumentation ........................................................4
- ELN 229 Industrial Electronics .................................................4
- HYD 110 Hydraulics/Pneumatics .............................................3
- ISC 112 Industrial Safety .......................................................2
- MEC 130 Mechanisms ............................................................3
- MEC 180 Engineering Materials ............................................3
- PHY 151 College Physics I .....................................................4
OR PHY 131 Physics-Mechanics ................................................4

Program electives: .................................................................6

Math/Physics Note: Students planning to transfer to a 4 year college should consider taking MAT 171, MAT 172, and PHY 151. Please see you Mechatronics Engineering Technology advisor.

Work-Based Learning Option: Qualified students may elect to take up to 3 credit hours of Work-Based Learning.

Total Credit Hours Required .....................................................71/73

DEVELOPMENTAL COURSE REQUIREMENTS*

- CTS 080 Computing Fundamentals ........................................3
- DRE 098 Integrated Reading Writing III ..................................3
- DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060 (MAT 121) .......................................................6
- DMA 065 (MAT 171) .................................................................7
- MAT 001 (MAT 171) .................................................................1

*Developmental coursework (including all prerequisites) will be required of students whose placement test scores indicate a need for greater proficiency in the areas of reading, English, mathematics, and computers. Please refer to the Course Descriptions section for prerequisite course information.

Suggested Program Sequence Day

Fall – 1st year
- EGR 110 Intro to Engineering Tech ........................................2
- ELC 131 Circuit Analysis I ....................................................4
- DFT 151 CAD I .......................................................................3
- MAT 171 Precalculus Algebra ...............................................4
OR MAT 121 Algebra/Trigonometry I ........................................3
- MEC 180 Engineering Materials ............................................3

Total Credit Hours Required .....................................................15/16

Mechatronics Engineering Technology
General Engineering Certificate Program (C403501)

MAJOR COURSES:
- ATR 112 Intro to Automation ..................................................3
- ELC 131 Circuit Analysis I ....................................................4
- DFT 151 CAD I .......................................................................3
- MAT 171 Precalculus Algebra ...............................................4
OR MAT 121 Algebra/Trigonometry I ........................................3
- MEC 180 Engineering Materials ............................................3

Total Credit Hours Required .....................................................15/16

Suggested Program Sequence Day

Fall – 1st year
- EGR 110 Intro to Engineering Tech ........................................2
- ELC 131 Circuit Analysis I ....................................................4
- DFT 151 CAD I .......................................................................3
- MAT 171 Precalculus Algebra ...............................................4
OR MAT 121 Algebra/Trigonometry I ........................................3
- MEC 180 Engineering Materials ............................................3

Total Credit Hours Required .....................................................15/16

Mechatronics Engineering Technology