

# TECHNICAL STUDIES

**Award: Associate of Applied Science Degree**

**Major: Technical Studies**

**Specialization: Manufacturing Engineering Technology**

*Possible occupations for graduates in the Manufacturing Engineering Technology program include: manufacturing engineer, control and instrumentation technician, process controls engineer or electromechanical technician. This field of study also suggests career areas in management, supervision and Quality Assurance.*

The Associate of Applied Science degree in Technical Studies with a specialization in Manufacturing Engineering Technology is designed to provide the technical skills and knowledge base required for those individuals who seek employment or professional development in the field of manufacturing automation. The knowledge and skills needed for success in this field or as a manager of an automated production process include a knowledge of CAD, material science, machine and process technology, basic electronics, digital and microprocessor electronics, instrumentation, PLC systems/programming as well as managerial courses in business, economics and Quality Assurance. The curriculum is structured not to require previous electrical or electronics experience, however these and other skills, will be reinforced through lab exercises as the student progresses through the curriculum.

## Curriculum

Course No.	Title	Credits
<b>First Semester</b>		
CAD 140	Technical Drawing	3
ENG 111	College Composition I	3
	or	
ENG 137	Communication Processes I	(3)
ETR 113	DC and AC Fundamentals I	4
IND 165	Principles of Industrial Technology I	4
MTH 103/163	Applied Technical Math I/ Pre-calculus I <sup>a</sup>	<u>3</u>
		17
<b>Second Semester</b>		
ETR 114	DC and AC Fundamentals II	3
HLT/PED	Health and Physical Education	1
IND 166	Principles of Industrial Technology II	4
PHY 100	Elements of Physics <sup>b</sup>	4
	Social Science Elective <sup>c</sup>	3
SDV	Student Development	<u>1</u>
		16
<b>Third Semester</b>		
ETR 273	Computer Electronics I	4
	Humanities/Fine Arts Elective <sup>c</sup>	3
CAD 241	3D Parametric Modeling	3
MEC 111	Materials for Industry	3
HLT/PED	Health and Physical Education	1
BUS 200	Principles of Management	<u>3</u>
		17

#### Fourth Semester

ETR 237	Industrial Electronics	3
ETR 274	Computer Electronics II	4
IND 251	Automated Manufacturing Systems	4
MEC 112	Processes of Industry	3
EGR 206	Engineering Economics	<del>3</del> 17
<b>Total credits required</b>		<b>67</b>

<sup>a</sup> Based on math placement testing.

<sup>b</sup> Students who wish to transfer may elect to take PHY 201-202 in lieu of this course.

<sup>c</sup> Please refer to the list of Humanities/Fine Arts and Social Science Electives that are approved to fulfill this requirement available in Admissions and Records.