INSTRUMENTATION AND CONTROL AUTOMATION/

COMPUTER AIDED DRAFTING SPECIALIZATION

Award
Associate of Applied Science Degree in Instrumentation and Control Automation Technology (with a Specialization in Computer Aided Drafting)

Length
Four Semester (Two-Year Program)

Purpose
The demand for instrumentation technicians with computer aided drafting skills has increased significantly over the past five years. The Instrumentation and Control Automation/Computer Aided Drafting specialization provides the necessary instruction to meet this need in today's process control environment.

Occupational Objectives
CAD Drafter
CAD Specialist
Engineering Aide
Instrument Designer
Instrument Mechanic
Instrument Technician
Calibration and Instrumentation Technician
Electronic Drafter
Mechanical Drafter
Mechanical Engineering Technician

Admission Requirements
Entry into most curriculum courses in Instrumentation and Control Automation/Computer Aided Drafting specialization require that students be eligible for MTH 115.

Program Requirements
The Instrumentation and Control Automation/Computer Aided Drafting Specialization provides a core of electrical and electronic courses which must precede any specialized work. About one fourth of this curriculum is composed of general education courses; one fourth of supporting and related technical work; and one half of specialized courses.

Upon satisfactory completion of the four semester curriculum, the student will be awarded an Associate of Applied Science degree in Instrumentation and Control Automation Technology with a specialization in Computer Aided Drafting.

The rapid rate of change in current technologies requires that course content in technical areas reflect this change. Therefore, courses completed and submitted for acceptance

toward an Associate of Applied Science degree in this program should have been completed no longer than seven years prior to graduation. Courses completed more than seven years prior to graduation must be evaluated by the department for content agreeable to current academic and technological standards. Students who plan to transfer to a four-year college after completing A.A.S. degree requirements should inform their academic advisors at the beginning of studies to determine the appropriate courses to meet transfer requirements.

Advanced Placement

Students who have completed a two-year high school electrical or electronics program or students who have occupational experience may qualify for advanced placement. Proficiency tests may be administered upon request, to determine placement level and the amount of credit to be awarded.

FIRST SEMESTER (Fall)

DRF	114	Drafting I	3
ENG	111	College Composition I (or ENG 115)	3
ETR	113	DC & AC Fundamentals I	4
ITE	115	Introduction to Computer Applications & Concepts	3
MTH	115	Technical Mathematics I	3
SDV	106	Preparation for Employment 1 (or SDV 100)	1
			17

SECOND SEMESTER (Spring)

ETR	101	Electrical/Electronics Calculations I	3
ETR	114	DC & AC Fundamentals II	4
ETR	203	Electronic Devices I	4
ETR	167	Logic Circuits & Systems	4
PHY	131	Applied Physics I	3
			18

THIRD SEMESTER (Fall)

DRF	201	Computer Aided Drafting and Design I	4
INS	220	Introduction to Fluid Power	3
INS	230	Instrumentation I	4
SAF	127	Industrial Safety	2
___	___	Social Science Elective 1	3
			16

FOURTH SEMESTER (Spring)

DRF	202	Computer Aided Drafting and Design II	3
ELE	233	PLC Systems I	3
INS	231	Instrumentation II	4
SPD	137	Oral Interpretation	3
_____	_____	Social Science Elective [1]	3
_____	_____	Health or PE	2
			18

Total Minimum Credits 69

FOOTNOTE:

[1] Students may choose from college approved Social Science electives on page 33 of the NRCC catalog.

NOTES:

All courses should be taken in sequence, as shown below.

ETR 113 Corequisite = MTH 04

ETR 114 Corequisiste = MTH 115

ETR 203 Corequisite = ETR 114

ETR 167 Corequisite = ETR 203

ELE 233 Prerequisite = ETR 167 and Corequisite = ETR 204

INS 211 Corequisite = ETR 204

ELE 115 is strongly recommended for students who do not have a background in electricity, electronics, or instrumentation and who are enrolled in MTH 03.