SUPPLY CHAIN AUTOMATION A.A.S.

60 Semester Credit Hours; Curriculum: 0290

The Supply Chain and Automation Program prepares students for an industrial certification designed to develop the skills and knowledge necessary to enter into the growing field of supply chain logistics, advanced manufacturing, transportation and warehousing. Students will demonstrate skills in overall automated processes and procedures used in warehousing, productions, inventory control, and distribution.

***Note**: Refer to* IAI General Education Courses *page for guidelines on General Education course selection.*

Code	Title	Hours
General Education Requirements		
Area A — Communications		
EGL 101	Composition I	3
Select one of the following:		3
EGL 102	Composition II	
EGL 111	Introduction to Business and Technical Writing (recommended)	
EGL 212	Technical Writing Applications (recommended)	
SPE 103	Effective Speech	
Area B — Mathematics		
Select one course from Area B (MAT 114 recommended)		3-4
Area C — Science		
No course required (PHY 101 recommended)		0-3
Area D — Social and Behavioral Sciences		
Select one course from a social or behavioral science discipline		3
Area E — Humanities/Fine Arts		
Select one course from a humanities or fine arts discipline		3
Area F — Global Studies [1]		
Select one course that satisfies Global Studies requirement		0-3
Area G — U.S. Diversity Studies [2]		
Select one course that satisfies U.S. Diversity Studies requirement		0-3
Total Hours		**15**

1 Students may take a Global Studies course that satisfies both Area F and another Area requirement.

2 Students may take a U.S. Diversity course that satisfies both Area G and another Area requirement.

Code	Title	Hours
Major Requirements		
ELT 101	Introduction to Electronics	5
ELT 107	Survey of Electronics	3
ELT 231	Fundamentals of Microprocessors	3
MEC 220	Elements of Machine Design	3
MFG 102	Industrial Drafting and Design	3
MFG 112	Automated Storage and Distribution	3
MFG 120	Introduction to Welding	4
MFG 135	Hydraulics, Pneumatics and Controls	3
MFG 240	Programmable Logic Controllers (PLC)	4
MFG 245	Programmable Automation Controllers (PAC)	4
Select additional courses from the following to total at least ten credit hours:		10
CNS 105	Networking Essentials	
ELT 120	Introduction to Radio Frequency Identification	
GIS/EAS 190	Geographic Information Systems I	
MFG 110	Introduction to Machining	
MFG 140	Introduction to Robotics and Vision Systems	
MFG 220	Automation Vision Systems	
MFG 250	Advanced Automation Applications (PLC/PAC/HMI)	
MGT 155	Operations and Supply Chain Management	
MGT 156	Introduction to Transportation, Warehousing and Logistics	
Total Hours		**45**

Program Learning Outcomes

1. Implement supply chain methods defined by various technical programs used to keep the plant running smoothly with as high a level of productivity as possible.
2. Acquire technical skill set to support heating, ventilation and air conditioning projects.
3. Acquire technical skills to support automation and robotics projects.
4. Implement supply chain technologies in transportation, shipping and receiving.
5. Understand how to implement programmable logic controllers (PLC) and robotic automation projects to improve production efficiency and plant safety.

Supply Chain Automation A.A.S. Pathway

The following Pathway is recommended for students pursuing an Associate in Applied Science degree in Supply Chain Automation.

For more information or program specific advising contact the Department Chair or Program Coordinator. **General Education courses should be selected from the list of** IAI General Education Courses**.**

Course	Title	Hours
First Year		
Fall Semester		
EGL 101	Composition I	3
MAT 114	Applied Mathematics I	4
MFG 102	Industrial Drafting and Design	3
MFG 112	Automated Storage and Distribution	3
Select one Social and Behavioral Sciences course that also satisfies Global Studies[1] or U.S. Diversity Studies[2] requirement		3
	Hours	**16**
Spring Semester		
ELT 101	Introduction to Electronics	5
MFG 135	Hydraulics, Pneumatics and Controls	3
Select one of the following:		3
EGL 102	Composition II	
EGL 111	Introduction to Business and Technical Writing	
EGL 212	Technical Writing Applications	
SPE 103	Effective Speech	
Select one of the following:		3
CNS 105	Networking Essentials	
ELT 120	Introduction to Radio Frequency Identification	
MFG 110	Introduction to Machining	
MFG 220	Automation Vision Systems	

MGT 155	Operations and Supply Chain Management	
MGT 156	Introduction to Transportation, Warehousing and Logistics	
	Hours	**14**
Second Year		
Fall Semester		
ELT 107	Survey of Electronics	3
MFG 120	Introduction to Welding	4
MFG 240	Programmable Logic Controllers (PLC)	4
Select one of the following:		4
GIS/EAS 190	Geographic Information Systems I	
MFG 140	Introduction to Robotics and Vision Systems	
MFG 250	Advanced Automation Applications (PLC/PAC/HMI)	
	Hours	**15**
Spring Semester		
ELT 231	Fundamentals of Microprocessors	3
MEC 220	Elements of Machine Design	3
MFG 245	Programmable Automation Controllers (PAC)	4
Select one elective course not taken previously:		3-4
CNS 105	Networking Essentials	
ELT 120	Introduction to Radio Frequency Identification	
GIS/EAS 190	Geographic Information Systems I	
MFG 110	Introduction to Machining	
MFG 140	Introduction to Robotics and Vision Systems	
MFG 220	Automation Vision Systems	
MFG 250	Advanced Automation Applications (PLC/PAC/HMI)	
MGT 155	Operations and Supply Chain Management	
MGT 156	Introduction to Transportation, Warehousing and Logistics	
Select one Humanities/Fine Arts course that also satisfies Global Studies[1] or U.S. Diversity Studies[2] requirement		3
	Hours	**16-17**
	Total Hours	**61-62**

1 At least one Global Studies course is required for degree completion.

2 At least one U.S. Diversity course is required for degree completion.

Note: Pathway is a recommended sequence of courses. Part-time students should contact the program coordinator to discuss a part-time pathway as well as course prerequisites and recommendations.