AAS in Technical Studies – Industrial Manufacturing (47.9999)

Overview

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Program Description

The Industrial Manufacturing Technology (IMFG) program provides students with a broad range of mechanical, electrical, and electronic skills. Students are provided with a learner-centered curriculum based on integrated academic and technical content, employability skills, along with work-based learning opportunities that enable them to connect what they are learning with real-live work scenarios. The program is closely aligned with the needs of employers, industry, and labor.

Graduates who earn credentials in this program work in various industries to make or process raw materials into finished products using industrial machines.

Students must maintain a 2.0 grade point average and complete all required courses to graduate from this program. Completion time depends on course load, course withdrawals, and repeat courses. The program takes approximately four semesters to complete based on full-time status (15+ hours per semester).

Student Learning Outcomes

1. Demonstrate an understanding of functional and structural overviews of processes to include plant safety and quality in the manufacturing environment.
2. Use and operate safely hand tools, power tools, hydraulic systems, and pneumatic systems.
3. Explain the automation components of manufacturing.

Diploma

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Exit Points

TD - Industrial Manufacturing (15.0613)

CTC – Manufacturing Fundamentals (15.0613)
CTS – Industrial Manufacturing (15.0613)
CTS – Industrial Electronics Technician (15.0613)
CTS - Millwright Apprentice (15.0613)
CTS - Basic Machine Tool Technology (15.0613)

Program Curriculum

Curriculum (Click to Download Curriculum)

INDUSTRIAL INSTRUMENTATION and Electrical Concentration

Course No.		Lecture	Lab	Total Credit Hrs.	Total Clock Hrs.
ORNT 1000	Freshman Seminar	1	0	1	15
IMFG 1100	Introduction to Manufacturing	2	0	2	30
IMFG 1120	Tools and Equipment Used in Manufacturing	1	1	2	60
IMFG 1200	Automation	1	1	2	45
IMFG 1300	Introduction to Fabrication, Process Technology, & Machining	1	2	3	75
CTC –Manufacturing Fundamentals (15.0613)		6	4	10	240
IMFG 1215	Basic AC/DC Electrical	1	2	3	105
IMFG 1121	Basic Mechanical	1	2	3	105
CTS - Industrial Manufacturing (15.0613)		8	8	16	450
IMFG 1433	Wiring/Electrical Blueprint Interpretation	1	1	2	60
IMFG 1150	Fluid Power I	1	2	3	90
IMFG 1235	Motor Controls	1	2	3	105
IMFG 2123	Understanding Programmable Controllers	0	3	3	105
IMFG2100	Basic Process Control	1	2	3	105
CTS – INDUSTRIAL ELECTRONICS TECHNICIAN (15.0613)		12	18	30	915
IMFG1250	Advanced Programmable Controllers Mechatronics	1	3	3	105

IMFG 2800	Advanced Process Control Mechatronics	0	4	4	120
IMFG 2999	Elective or Coop	0	3	3	90
IMFG 2999	Elective or Coop	0	3	3	90
JOBS 2450	Job Seeking Skills	2	0	2	30
TD –INDUSTRIAL MANUFACTURING (15.0603) CONCENTRATION		15	31	45	1350
ENGL 1010	English Composition I	3	0	3	45
MATH XXXX	College Algebra or Contemporary Math	3	0	3	45
	Social Science Elective	3	0	3	45
	Natural Science Elective	3	0	3	45
	Humanities Elective	3	0	3	45
AAS-Technical Studies- Industrial Manufacturing		30	31	60	1575

MILLWRIGHT CONCENTRATION:					
	CORE COURSES:				
ORNT 1000	Freshman Seminar	1	0	1	15
IMFG 1100	Introduction to Manufacturing	2	0	2	30

IMFG 1120	Tools and Equipment Used in Manufacturing	1	1	2	60
IMFG 1200	Automation	1	1	2	45
IMFG 1300	Introduction to Fabrication, Process Technology, & Machining	1	2	3	75
CTC –Manufacturing Fundamentals (15.0613)		6	4	10	225
IMFG 1215	Basic AC/DC Electrical	1	2	3	105
IMFG 1121	Basic Mechanical	1	2	3	105
	CTS - Industrial Manufacturing	8	8	16	435
IMFG 1320	Millwright I	3	0	3	60
IMFG 1321	Millwright I Lab	0	3	3	90
IMFG 1420	Millwright II	3	0	3	45
IMFG 1421	Millwright II Lab	0	3	3	120
IMFG 1130	Pneumatics Applications	0	3	3	90
CTS – MILLWRIGHT APPRENTICE (15.0613)		14	17	31	840
IMFG 1325	Pipefitting	0	2	2	60
IMFG 1140	Hydraulics Applications	0	3	3	90
IMFG 1210	Material Handling	1	1	2	45
IMFG 1315	Welding	0	2	2	60
IMFG ????/IMFG 2999	Elective or Co-op	0	3	3	90
JOBS 2450	Job Seeking Skills	2	0	2	30

TD – INDUSTRIAL MANUFACTURING (15.0613)		17	28	45	1230
ENGL 1010	English Composition I	3	0	3	45
MATH XXXX	College Algebra or Contemporary Math	3	0	3	45
	Social Science Elective	3	0	3	45
	Natural Science Elective	3	0	3	45
	Humanities Elective	3	0	3	45
AAS-Technical Studies- Industrial Manufacturing (47.9999)		32	28	60	1455

MACHINE TOOL TECHNOLOGY CONCENTRATION					
ORNT 1000	Freshman Seminar	1	0	1	15
IMFG 1100	Introduction to Manufacturing	2	0	2	30
IMFG 1120	Tools and Equipment Used in Manufacturing	1	1	2	45
IMFG 1200	Automation	1	1	2	45
IMFG 1300	Introduction to Fabrication, Process Technology, & Machining	1	2	3	75
CTC –Manufacturing Fundamentals (15.0613)		6	4	10	210
IMFG 1215	Basic AC/DC Electrical	1	2	3	75
IMFG 1121	Basic Mechanical	1	2	3	75
	CTS - Industrial Manufacturing	8	8	16	360
IMFG 1110	Shop Mathematics	2	1	3	60

IMFG 1310	Machine Shop I	1	5	6	165
IMFG 1340	Basic Lathe	0	3	3	90
IMFG 1440	Basic Mill	0	3	3	90
CTS-Basic Machine Tool Technology (15.0613)		11	20	31	765
IMFG 1410	Machine Shop II	2	4	6	150
IMFG 2710	CNC	1	2	3	75
IMFG ????/IMFG 2999	Elective or Co-op	0	3	3	90
JOBS 2450	Job Seeking Skills	2	0	2	30
TD – INDUSTRIAL MANUFACTURING		16	29	45	1110
ENGL 1010	English Composition I	3	0	3	45
MATH XXXX	College Algebra or Contemporary Math	3	0	3	45
	Social Science Elective	3	0	3	45
	Natural Science Elective	3	0	3	45
	Humanities Elective	3	0	3	45
AAS-Technical Studies- Industrial Manufacturing (47.9999)		31	29	60	1335

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