ADVANCED MANUFACTURING CAREER CLUSTER DESIGN

Automation Engineering Pathway

CIP CODE 15.0406

INTRODUCTORY LEVEL

Title	Code	Credit	Special Considerations
Introduction to Manufacturing	13001	0.5	
Production Print Reading I	21108	0.5	
Introduction to Computer Coding	31001	0.5	
Introduction to Physical Computing	31002	0.5	
Introduction to Skilled Trades	38001	0.5	
Introduction to Engineering	41310	1	

TECHNICAL LEVEL

Title	Code	Credit	Special Considerations
Computer Programming	10152	1	
Mechanical Power Transmission Systems	13302	0.5	
Fundamentals of Electrical Theory	17101	1	
Engineering Design	21006	1	
Robotics I	21009	1	
Foundations of Electronics	21201	1	
Welding Processes I	39207	1	
Hand & Power Tools	40400	0.5	

APPLICATION LEVEL

Title	Code	Credit	Special Considerations
Cybersecurity I	10020	1	
Industrial Maintenance Systems	13303	0.5	Prerequisite course required; see competency profile.
Digital Electronics	21008	1	
Computer Integrated Manufacturing	21010	1	
Workplace Experience in Engineering – Comprehensive	21048	1	
Robotics II	39009	0.5	Prerequisite course required; see competency profile.
Automated Integrated Systems I	39010	0.5	
Automated Integrated Systems II	39020	0.5	Prerequisite course required; see competency profile.
Hydraulics & Pneumatics	39302	0.5	
Workplace Experience in Engineering	41048	0.5	
Materials Science in Engineering	41355	0.5	

APPROVED PATHWAY:

1. Includes a minimum of three secondary-level credits.
2. Includes a work-based element.
3. Consist of a sequence:
   a. Introductory-level course.
   b. Technical-level course.
   c. Application-level course.
4. Supporting documentation includes:
   a. Articulation Agreement(s).
   b. Certification.
   c. Program Improvement Plan.
   d. Program of Study.
5. Technical-level and Application-level courses receive .5 state weighted funding in an approved CTE pathway.