COMPUTER INTEGRATED MANUFACTURING: AAS

Associate in Applied Science | 63 credit hours minimum

Area of Interest: Advanced Manufacturing, Industrial Occupations, and Transportation

Program Website (https://stlcc.edu/programs-academics/pathways/a-m-i-o-t/computer-integrated-manufacturing/)

Academic Advising (https://stlcc.edu/admissions/advising/)

Program Description:

This program prepares students for positions in manufacturing. The program is designed to accommodate new students as well as those individuals already working in the field.

Graduates will know how to translate general ideas of the engineer into specific, detailed plans and communicate those plans to other people in the organization. Depending on the electives chosen, students will be prepared for work in automation, facilities maintenance, production operations, quality, technical graphics or other areas of the manufacturing enterprise.

Location. This program is offered in its entirety at Florissant Valley.

Related Program. The Engineering Department offers a certificate in the following area:

> Precision Machining Technology, Certificate of Specialization (http://catalog.stlcc.edu/programs/precision-machining-technology-certificate-specialization/)

Cost of Attendance. For more information on cost of attendance visit MoSCORES (https://scorecard.mo.gov/Search/).

Program Career and Salary Information. Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: https://scorecard.mo.gov/scorecard/ (https://www.google.com/url/?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_i2lO96zEytILO-s5xaJCQ). Search using School / Program "St. Louis Community College" and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

Interested in this program? Start the enrollment process by visiting the Apply to STLCC (https://www.stlcc.edu/admissions/apply-to-stlcc/) page.

At the completion of the program, students are expected to:

1. identify, clarify and solve technical problems using applied knowledge of math, science and engineering.
2. practice effective oral and written communication.
3. demonstrate ability to learn from and respond to rapidly occurring changes in automation, graphics and machine tool usage.

Missouri Civics Examination. Students entering college for the very first time in fall 2019 and who intend to complete an associate's degree must successfully complete a civics examination. Information on who is eligible for a waiver can be found on the STLCC website (https://stlcc.edu/programs-academics/missouri-civics-exam.aspx).

Program of Study

Code	Title	Credit Hours
General Education		
ENG 101	College Composition I (MOTR ENGL 100)	3
COM 101	Oral Communication I (MOTR COMM 100)	3
MTH 140	Intermediate Algebra (or MTH 140S or higher) [1]	3
XXX xxx	Social & Behavioral Sciences: Civics Requirement (http://catalog.stlcc.edu/general-education/)	3
XXX xxx	Social & Behavioral Sciences MOTR Elective (http://catalog.stlcc.edu/general-education/)	3
XXX xxx	Life or Physical Science Elective	3
Health and Wellness Requirement		
XXX xxx	Health and Wellness Elective (http://catalog.stlcc.edu/course-descriptions/courses/hw/)	2
Program Requirements		
GE 131	Engineering Technology Orientation	1
EGR 100	Engineering Drawing	2-3
or ME 154	Mechanical Blueprint Reading	
EGR 133	Introduction to AutoCAD I	2
GE 101	Technical Computer Applications	3
or GE 121		
ME 133	Production Control	3
ME 151	Manufacturing Processes I	3
or ME 120	Manual Machining I	
ME 152		3
or ME 212	Introduction to Computer Numerical Control (CNC) Machining	
ME 249	Materials and Metallurgy	3
QC 212	Quality Tools for Advanced Manufacturing	3
GE 240	Product Design and Fabrication	4
3-D CAD Requirement		
Select one of the following:		2-4
EGR 147	Introduction to Engineering Design	
ME 230	Introduction to 3-D Solid Modeling for Design	
EGR 145		
EGR 148		
Fundamentals Course		
Select one of the following:		3
ME 140	Introduction to Robotics	
ME 121	Computer Integrated Manufacturing	
GE 151		
Electives		
Select 11 credit hours of the following elective areas:		11
ME XXX		
EGR XXX		

QC XXX	
GE XXX	

Total Credit Hours   **63-66**

[1] Except MTH 165 and MTH 166

Full-Time Academic Plan

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PLEASE NOTE: If you originally enrolled at STLCC prior to Spring 2024, you may need to view an archived catalog (https://www.stlcc.edu/programs-academics/course-catalog/) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Code	Title	Hours	Prerequisites	Milestones/Notes
First Year				
Fall				
MTH 140	Intermediate Algebra (or MTH 140S or higher)	3	Satisfactory placement and Reading Proficiency	
ME 151 or 120	Manufacturing Processes I or Manual Machining I	3	Reading Proficiency	
GE 101 or 121	Technical Computer Applications or	3	Reading Proficiency	
ENG 101	College Composition I (MOTR ENGL 100)	3	Placement score or ENG 030 or ENG 070 with a grade of "C" or better or recommendation of department and Reading Proficiency or concurrent enrollment in RDG 079	
EGR 100 or ME 154	Engineering Drawing or Mechanical Blueprint Reading	2-3	Reading Proficiency	
GE 131	Engineering Technology Orientation	1	Reading Proficiency	Discuss academic plan and elective choices with faculty advisor.
	Credit Hours	**15-16**		
Spring				
ME 212 or 152	Introduction to Computer Numerical Control (CNC) Machining or	3	Reading Proficiency or departmental approval	Offered Spring semester only
EGR 133	Introduction to AutoCAD I	2	Reading Proficiency	
ME 140 or 121 or 151	Introduction to Robotics or Computer Integrated Manufacturing or	3	Reading Proficiency	Offered every 2 years
XXX xxx	CIM Elective	3		Choose from ME, EGR, QC, GE
XXX xxx	Life and Physical Science Elective	3		Choose from BIO, CHM, GEG 103, GEO, PHY, or PSI. College Physics is recommended.
XXX xxx	Health and Wellness Elective (http://catalog.stlcc.edu/course-descriptions/courses/hw/)	1		
	Credit Hours	**15**		
Second Year				
Fall				
ME 249	Materials and Metallurgy	3	Reading Proficiency	Offered every 2 years

QC 212	Quality Tools for Advanced Manufacturing	3	MTH 124 or MTH 140 (or MTH 140S) with a minimum grade of "C", and Reading Proficiency	Offered every 2 years
COM 101	Oral Communication I (MOTR COMM 100)	3	Concurrent enrollment in ENG 070 or Reading Proficiency	
EGR 147 or ME 230 or 145 or 148	Introduction to Engineering Design or Introduction to 3-D Solid Modeling for Design or or	2-4		
CIM Elective		5		Choose from ME, EGR, QC, GE
	Credit Hours	**16-18**		
Spring				
GE 240	Product Design and Fabrication	4	ME 151 or EE 134 or EGR 100 or ME 111 with minimum grades of "C" or department approval, and Reading Proficiency	Final culminating project experience; Offered every 2 years
ME 133	Production Control	3	Reading Proficiency	
CIM Elective		3		Choose from ME, EGR, QC, GE
XXX xxx	Health and Wellness Elective (http://catalog.stlcc.edu/course-descriptions/courses/hw/)	1		
XXX xxx	Social & Behavioral Sciences: Civics Requirement (http://catalog.stlcc.edu/general-education/)	3		Apply for graduation.
XXX xxx	MOTR Social & Behavioral Sciences Elective (http://catalog.stlcc.edu/general-education/)	3		
	Credit Hours	**17**		
	Total Credit Hours	**63-66**		

*Click on the hyperlinked course number to view additional information about the course.

**Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

*** It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.