



Science, Technology, Engineering, and Mathematics

Career and Academic Pathways (CAPs)

Program Map: Associate of Science Degree for Engineering Technology - Advanced Manufacturing

Total number of units: 60 units

Top Code/Academic Plan: 0924.00

Updated on March 20, 2022

Semester 1	Course Code	Course	Units	Notes	Notes for Part-time students
Program Course	ENG GEN 101	Introduction to Engineering and Engineering Technology	2		
Program Course	EGD TEK 102	Engineering Graphics with Intro to GD&T and 2 D CAD	3		
Program Course	IND TEK 106	Shop Math and Measurements	2	Co-requisite for MIT 101.	
Program Course	MIT 101	Machine Shop Training and Safety	2	Co-requisite for IND TEK 106.	
Program Course	MATH 260	Pre-Calculus	5		This course may have sections that include a low cost (LCT) or no cost textbook (ZTC). Check the current catalog for the section number(s). You can search for classes in the ELAC and LACCD Schedule of Classes under "Class Search Type" as "Zero Textbook Cost" or "Low-Cost Textbook Classes."

Total Units 14

Intersession	Course Code	Course	Units	Notes	Notes for Part-time students
Program Course	EGD TEK 111	2 D Computer Aided Design with Autocad	3	Pre-requisite EGD TEK 102.	
Program Course	EGD TEK 121	3 D Computer Aided Design with SolidWorks	2	Pre-requisite EGD TEK 102.	

Total Units 5

Semester 2	Course Code	Course	Units	Notes	Notes for Part-time students
Program Course	IND TEK 103	Technical Writing & Communication	2		
Program Course	IND TEK 104	Print Reading with GD&T	2	Pre-requisite EGD TEK 102.	
Program Course	MIT 201	Manufacturing Processes	3	Pre-requisite MIT 101.	
Program Course	ENG TEK 101	Engineering Technology Applications	2		
Program Course	PHYSICS 011	Introductory Physics	4	This course also meets LACCD GE Area A. This course has sections that are part of the Honors Program. Check the current catalog for the section number(s). To apply for admission to the Honors Program, please visit the ELAC Counseling Center. For additional information about the Honors Program, please visit the ELAC Honors Program website or contact Dr. Bermudez at bermudn@elac.edu .	

Total Units 13

Intercession	Course Code	Course	Units	Notes	Notes for Part-time students
Program Course	ENG TEK 101	Restricted Electives: Choose any EGD or ENG TEK or ENG GEN courses.	2		
GE Course	ENGLISH 101	College reading and Composition	3	This course has sections that are part of the Honors Program. Check the current catalog for the section number(s). To apply for admission to the Honors Program, please visit the ELAC Counseling Center. For additional information about the Honors Program, please visit the ELAC Honors Program website or contact Dr. Bermudez at bermudn@elac.edu .	This course may have sections that include a low cost (LCT) or no cost textbook (ZTC). Check the current catalog for the section number(s). You can search for classes in the ELAC and LACCD Schedule of Classes under "Class Search Type" as "Zero Textbook Cost" or "Low-Cost Textbook Classes."
Total Units			5		

Semester 3	Course Code	Course	Units	Notes	Notes for Part-time students
Program Course	EGD TEK 221	CAD Advanced Applications in SolidWorks	2	Pre-requisite EGD TEK 121.	
Program Course	EGD TEK 111	Additive Manufacturing I 3D printing	2	Pre-requisite MIT 101 & EGD TEK 121.	
Program Course	EGD TEK 125	CNC Set up & Operation	2	Pre-requisite MIT 101.	
GE Course		LACCD GE Area B2	3	Student may select any course from LACCD GE Area B2.	
GE Course		LACCDGE Area C	3	Student may select any course from LACCD GE Area C.	
Total Units			12		

Semester 4	Course Code	Course	Units	Notes	Notes for Part-time students
Program Course	ENG TEK 225	CNC Design with MasterCAM	2	Pre-requisite ENG TEK 125.	
Program Course	ENG TEK 290	Engineering Technician Capstone	3		
GE Course		LACCD GE Area B1	3	This course is suggested as it also meets a CSU grad requirement should a student be interested in CSU transfer.	
GE Course	HEALTH 002	Health and Fitness	3	This course covers both LACCD GE Area E1 and E2.	
Total Units			11		

Degree Path and Requirements:

This map is a suggested term-by-term sequence of courses to complete the program in a recommended time frame. This is an efficient and recommended plan, but actual plans may vary by individual student need. This map cannot replace a meeting with [counselors](#).

Department Advising Notes:

Associate of Science Degree in a Career Technical Education or transfer as a Engineering Technology major to a 4 year program. See a [counselor](#) to assure that your personal map is most accurate to meeting your individual academic needs and goals.

Program Description

The Engineering Technician: Advanced Manufacturing program is designed to train the students and the workforce in high growth and high demand technologies such as; Additive Manufacturing - 3D printing of Polymers and Metals, CNC programming with Mastercam and Operator training in addition to Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM). The program offers hands-on experience to become technicians who are able not only to manufacture but analyze and design products, to communicate professionally both orally and in writing, and to work on team-based projects. The program emphasizes apprenticeship and work-based learning.

Career and Transfer Opportunities

Visit the [Transfer Center](#) for transfer information, which varies based on transfer college. Make an appointment with a [counselor](#). Students can visit [Career and Job Services](#) for career counseling and further exploration.

Transfer to a 4 year college as a Engineering Technology major. Possible careers: Manufacturing Engineering Technician.

Youtube Videos

[Computer-Controlled Machine Tool Operators. Metal and Plastic Career Video](#)

[A career as an engineering technician](#)

[Advanced Manufacturing Career Pathways](#)

Program Map

A suggested sequence of classes to complete a degree, certificate, or program of study. Students should consult an academic counselor for variations to this plan based on part-time or full-time status, transfer plans, pre-requisites needed, etc.

Prerequisite Course

A specific course that must be completed before advancing to the next course.

Check the online catalog at elac.edu for the latest and most accurate information.

Contact

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