

Mechanical Engineering Technology

Program Description:

Students prepare for careers as engineering technicians with an emphasis on mechanical systems. Instruction focuses on computer-aided drafting and design (CADD). Students have opportunities to work on community and college projects that may include patent application drawings and detailed machine shop production drawings. Extended learning opportunities are available with industry partners

For program costs and fees refer to the catalog TUITION AND FEES PAGE.

Program Learning Outcomes:

1. Apply principles of mathematics and applied science to perform technical calculations and solve technical problems
2. Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software
3. Analyze a loaded beam
4. Collect and analyze experimental data
5. Analyze a body in motion and describe using position, velocity and acceleration
6. Identify characteristics of steel, ceramics, and plastics
7. Design and carry out experiments
8. Identify and apply appropriate standards necessary to complete a project
9. Produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances
10. Solve engineering problems through computer modeling, employing an engineering computer language, and hand calculations
11. Conduct standards tests, collect data, and apply results to improve processes
12. Design systems, components or processes
13. Function professionally and with ethical responsibility as an individual and on multidisciplinary teams

Mechanical Engineering Technology AAS (90 credits) General Education Courses not previously listed

Required Courses

Quarter 1	AMATH170	Engineering Foundational Mathematics	prereq: MATH087	5
			*counts as Gen Ed	
	ENGR&111	Engineering Graphics I		5
	ENGR&112	Engineering Graphics II		5
Quarter 2	MET111	Geometric Dimensioning and Tolerancing	prereq: ENG101	5
			MATH151	
	MET218	Introduction to 3 D Modeling	prereq: ENGR&111, ENGR&112	5

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	ENGL&101	ENGLISH COMPOSITION I	*counts as Gen Ed	5
Quarter 3	MET130	Manufacturing Methods		5
	MET260	Advanced CAD Operations	prereq: ENGR&111, ENGR&112	5
Quarter 4	MET140	Mechanical Measurements		5
	MATH&141	Pre-calculus I	*counts as Gen Ed	5
	PHYS&221	Engineering Physics I w/Lab	*counts as Gen Ed	5
Quarter 5	ENGR&214	Statics	prereq: PHYS221	5
	MATH&142	Pre-calculus II	*counts as Gen Ed	5
Quarter 6	MET140	Mechanical Measurements		5

Electives (10 Credits required)

	MET296	Work-based Learning Experience		1-13
	MET214	Engineering Projects I		5
	MET130	Manufacturing Methods		5
	MET216	Engineering Projects II		7
	MET297	Work-based Learning Seminar		2

Note: See a Career Advisor prior to choosing courses that meet general education requirements.

Mechanical Engineering Technology AAS-T (106 credits)

Required Courses

Quarter 1	AMATH170	Engineering Foundational Mathematics	prereq: MATH087	5
			*counts as Gen Ed	
	ENGR&111	Engineering Graphics I		5
	ENGR&112	Engineering Graphics II		5
	ENGR191	Engineering Technology Study Lab I		1
Quarter 2	MATH&141	Pre-calculus I	*counts as Gen Ed	5
	CS&141	Computer Science 1 Java		5
	MET218	Introduction to 3 D Modeling	prereq: ENGR&111, ENGR&112	5
	ENGR192	Engineering Technology Study Lab II	prereq: ENGR191	1
	ENGL&101	ENGLISH COMPOSITION I	*counts as Gen Ed	5

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Quarter 3	MATH&142	PRECALCULUS II *counts as Gen Ed	5
	MET260	Advanced CAD Operations prereq: ENGR&111, ENGR&112	5
	ENGR193	Engineering Technology Study Lab III prereq: ENGR192	1
	CHEM&121	INTRODUCTION CHEMISTRY *counts as Gen Ed	5
Quarter 4	MATH&151	CALUCLUS I *counts as Gen Ed	5
	PHYS&221	Engineering Physics I w/Lab *counts as Gen Ed	5
		Engineering Physics I Lab	1
	CMST&210	Interpersonal Communications *counts as Gen Ed	5
	ENGR194	Engineering Technology Study Lab IV prereq:ENGR193	1
Quarter 5	MATH&152	Calculus II *counts as Gen Ed	5
	PHYS&222	Engineering Physics II Lecture	5
		Engineering Physics II Lab	1
	ENGR195	Engineering Technology Study Lab V prereq:ENGR194	1
	PSYCH&100	General Psychology *counts as Gen Ed	5
Quarter 6	MATH&153	Calculus III *counts as Gen Ed	5
	PHYS&223	Engineering Physics III Lecture	5
		Engineering Physics III Lab	1
	ENGR&214	Statics prereq: PHYS221	5
	ENGR196	Engineering Tech. Study Lab VI	1
	CMST&152	Intercultural Communications *counts as Gen Ed	5