



2012-2013 PETITION/PROGRAM SHEET
Degree: Bachelor of Science
Major: Mechanical Engineering Technology

About This Major . . .

The objective of the Mechanical Engineering Technology Program is to provide the knowledge necessary to apply state-of-the-art techniques to design and build products and systems to meet the current and future needs of society. The Bachelor of Science Degree in Mechanical Engineering Technology is designed for a student who is doer or implementer - one who is able to apply mathematics, the natural and engineering sciences, engineering principles, and current engineering practices to the solution of design problems and to the operation and testing of mechanical systems.

The Mechanical Engineering Technology graduate applies established procedures that use current state-of-the-art techniques to work with mechanical systems. Laboratory courses are an integral component of the Mechanical Engineering Technology program and are designed to develop student competence to apply experimental design methods, as well as provide a “hands-on” approach to designing and building products and systems to meet the current and future needs of society. The employment of METs in manufacturing related areas should increase as the demand for improved machinery and machine tools grows and industrial machinery and processes become increasingly complex. Emerging technologies in biotechnology, and nanotechnology will create new job opportunities for METs. In addition to job openings from growth, many openings should result from the need to replace workers who leave the labor force.

For more information on what you can do with this major, go to <http://www.coloradomesa.edu/career/whatmajor.html>

POLICIES:

1. It is your responsibility to determine whether you have met the requirements for your degree. Please see the Catalog for a complete list of graduation requirements.
2. You must turn in your “Intent to Graduate” form to the Registrar’s Office **by September 15 if you plan to graduate the following May, and by February 15 if you plan to graduate the following December.**
3. This program sheet must be submitted with your graduation planning sheet to your advisor during the **semester prior to the semester of graduation, no later than October 1 for spring graduates, no later than March 1 for fall graduates.**
4. Your advisor will sign and forward the Program Sheet and Graduation Planning Sheet to the Department Head for signature.
5. Finally, the Department Head or the department administrative assistant will take the signed forms to the Registrar’s Office. (Students cannot handle the forms once the advisor signs.)
6. If your petition for graduation is denied, it will be your responsibility to reapply for graduation in a subsequent semester. Your “Intent to Graduate” does not automatically move to a later graduation date.
7. NOTE: The semester before graduation, you will be required to take a Major Field Achievement Test (exit exam).

NAME: _____ **STUDENT ID #** _____

LOCAL ADDRESS AND PHONE NUMBER: _____

_____ () _____

I, (Signature) _____, hereby certify that I have completed (or will complete) all the courses listed on the Program Sheet. I further certify that the grade listed for those courses is the final course grade received except for the courses in which I am currently enrolled and the courses which I complete next semester. I have indicated the semester in which I will complete these courses.

Signature of Advisor _____ 20_____
Date

Signature of Department Head _____ 20_____
Date

Signature of Registrar _____ 20_____
Date

Student should work closely with a faculty advisor when selecting and scheduling courses prior to registration.

Degree Requirements:

- 125 semester hours total (A minimum of 28 taken at CMU)
- 40 upper division credits (A minimum of 15 taken within the major at CMU)
- 2.00 cumulative GPA or higher in all CMU coursework
- 2.00 cumulative GPA or higher in coursework toward the major content area
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- When filling out the program sheet a course can be used only once.
- A student must follow the CMU graduation requirements either from 1) the program sheet for the major in effect at the time the student officially declares a major; or 2) a program sheet for the major approved for a year subsequent to the year during which the student officially declares the major and is approved for the student by the department head. Because a program may have requirements specific to the degree, the student should check with the faculty advisor for additional criteria. It is the student's responsibility to be aware of, and follow, all requirements for the degree being pursued. Any exceptions or substitutions must be approved by the student's faculty advisor and Department Head.
- See the "Undergraduate Graduation Requirements" in the catalog for additional graduation information.

GENERAL EDUCATION REQUIREMENTS (31 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is on the general education list of options and a requirement for your major, you must use it to fulfill the major requirement and make a different selection within the general education requirement.

Course No	Title	Sem.hrs	Grade	Term
English (6 semester hours, must receive a grade of "C" or better and must be completed by the time the student has 60 semester hours.)				
ENGL 111	English Composition	3	_____	_____
ENGL 112	English Composition	3	_____	_____
(ENGL 129, Honors English, may be substituted for ENGL 111 & ENGL 112.)				

Math: (3 semester hours, must receive a grade of "C" or better, must be completed by the time the student has 60 semester hours.)

MATH 119	Pre-Calculus	5*	_____	_____
*3 credits apply to the General Ed requirements and 2 credit applies to Foundation Courses				

Humanities (3 semester hours)

Social and Behavioral Sciences (6 semester hours)

SOCI 120	Technology and Society	3	_____	_____
----------	------------------------	---	-------	-------

Natural Sciences (7 semester hours, one course must include a lab)

PHYS 111/111L <u>or</u> PHYS 131/131L				
PHYS _____		4	_____	_____
PHYS _____		1	_____	_____
CHEM 131 <u>or</u> CHEM 121				
CHEM _____		4*	_____	_____

*2 credits apply to the General Ed requirements and 2 credits apply to Foundation Courses

History (3 semester hours)

HIST _____			_____	_____
------------	--	--	-------	-------

Course No	Title	Sem.hrs	Grade	Term/Trns
Fine Arts (3 semester hours)				
_____	_____	_____	_____	_____

OTHER LOWER DIVISION REQUIREMENTS (6 semester hours)

Kinesiology (3 semester hours)

KINE 100	Health and Wellness	1	_____	_____
KINA 1 _____		1	_____	_____
KINA 1 _____		1	_____	_____

Applied Studies (3 semester hours)

SPCH 102	Speechmaking	3	_____	_____
----------	--------------	---	-------	-------

FOUNDATION COURSES (22semester hours) Must complete with a "C" or higher.

CHEM 131 <u>or</u> CHEM 121				
CHEM _____		2*	_____	_____

*2 credits apply to the General Ed requirements and 2 credits apply to foundation courses

CHEM 131L or CHEM 121L				
CHEM _____		1	_____	_____

MAMT 115	Intro to Machine Shop	3	_____	_____
----------	-----------------------	---	-------	-------

MATH 119	Pre-Calculus	2*	_____	_____
----------	--------------	----	-------	-------

*3 credits apply to the General Ed requirements and 2 credits apply to foundation courses

MATH 135	Engineering Calculus I	4	_____	_____
----------	------------------------	---	-------	-------

MATH 136	Engineering Calculus II	4	_____	_____
----------	-------------------------	---	-------	-------

STAT 200	Probability and Statistics	3	_____	_____
----------	----------------------------	---	-------	-------

WELD 151	Industrial Welding	3	_____	_____
----------	--------------------	---	-------	-------

MECHANICAL ENGINEERING TECHNOLOGY MAJOR

REQUIREMENTS (66 semester hours) Must pass all courses with a grade of "C" or higher.

Basic Engineering Courses (17 semester hours)

ENGR 101	Introduction to Engineering	2	_____	_____
----------	-----------------------------	---	-------	-------

ENGR 125	CAD and Fabrication	3	_____	_____
----------	---------------------	---	-------	-------

ENGR 140	First-Year Engr. Projects	3	_____	_____
----------	---------------------------	---	-------	-------

ENGR 224	Materials Science	2	_____	_____
----------	-------------------	---	-------	-------

ENGR 224L	Materials Science Lab	1	_____	_____
-----------	-----------------------	---	-------	-------

ENGR 261	Statics and Structures	3	_____	_____
----------	------------------------	---	-------	-------

ENGR 263	Mechanics of Solids	3	_____	_____
----------	---------------------	---	-------	-------

MET Courses (30 semester hours)

ENGR 312	Thermo & HT	3	_____	_____
----------	-------------	---	-------	-------

ENGR 317	Fund of Cir and Elect	3	_____	_____
----------	-----------------------	---	-------	-------

ENGR 321	Fluid Mechanics	3	_____	_____
----------	-----------------	---	-------	-------

ENGR 325	Component Design	3	_____	_____
----------	------------------	---	-------	-------

ENGR 343	Dynamics	3	_____	_____
----------	----------	---	-------	-------

ENGR 426	Manuf. Processes & Sys	3	_____	_____
----------	------------------------	---	-------	-------

ENGR 435	Industrial Controls	3	_____	_____
----------	---------------------	---	-------	-------

ENGR 436	Fluid & Elec. Power Sys	3	_____	_____
----------	-------------------------	---	-------	-------

ENGR 445	MET Design Proj I	3	_____	_____
----------	-------------------	---	-------	-------

ENGR 485	MET Design Proj II	3	_____	_____
----------	--------------------	---	-------	-------

Other Required Courses (12 semester hours)

CSCI 130	Intro to Engineering Computing	3	_____	_____
----------	--------------------------------	---	-------	-------

ENGL 425	Scientific Writing	3	_____	_____
----------	--------------------	---	-------	-------

MAMT 151	Numerical Control Mach I	3	_____	_____
----------	--------------------------	---	-------	-------

MAMT 155	Numerical Control Mach II	3	_____	_____
----------	---------------------------	---	-------	-------

MET Technical Electives (7 semester hours, must be upper-division)

_____			_____	_____
-------	--	--	-------	-------

_____			_____	_____
-------	--	--	-------	-------

_____			_____	_____
-------	--	--	-------	-------

Choose from any upper-division natural or physical science, math or engineering course in consultation with your advisor.

SUGGESTED COURSE SEQUENCING FOR A MAJOR IN MECHANICAL ENGINEERING TECHNOLOGY

This is a recommended sequence of course work. Certain courses may have prerequisites or are only offered during the Fall or Spring semesters. It is the student's responsibility to meet with the assigned advisor and check the 2 year course matrix on the Colorado Mesa website for course availability.

FRESHMAN YEAR

Fall Semester	Hours	Spring Semester	Hours
ENGR 101 Intro to Engineering	2		5
MATH 119 Pre-Calculus	5	MATH 135 Engineering Calculus I	4
ENGL 111 English Composition	3	ENGL 112 English Composition	3
ENGR 125 CAD and Fabrication	3	ENGR 140 First-Year Engr. Projects	3
KINE 100 Health and Wellness	1	MAMT 115 Intro to Machine Shop	3
General Education History	<u>3</u>	WELD 151 Industrial Welding	<u>3</u>
	17		16

SOPHOMORE YEAR

Fall Semester	Hours	Spring Semester	Hours
MATH 136 Engineering Calculus II	4	CSCI 130 Intro to Engineering Computing	3
PHYS 131 or 111 Fundamental Mechanics	4	MAMT 151 Numerical Controls Mach I (1 st Mod)	3
PHYS 131L or 111L Fundamental Mech Lab	1	MAMT 155 Numerical Controls Mach II (2 nd Mod)	3
CHEM 121 or 131 General Chemistry	4	KINA 1** Activity	1
CHEM 121L or 131L General Chemistry Lab	1	ENGR 261 Statics and Structures	3
	14	<u>SOCI 120</u> Technology and Society	<u>3</u>
			16

JUNIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
ENGR 263 Mechanics of Solids	3	ENGR 325 Component Design	3
ENGR 224 Materials Science	3	ENGR 343 Dynamics	3
ENGR 317 Fundamentals of Circuits and Elec	3	ENGR 312 Engineering Thermodynamics	3
ENGR 321 Fluid Mechanics	3	SPCH 102 Speechmaking	3
STAT 200 Probability and Statistics	3	ENGL 425 Scientific Writing	<u>3</u>
General Education Humanities	<u>3</u>		15
	18		

SENIOR YEAR

Fall Semester	Hours	Spring Semester	Hours
ENGR 445 Senior Project 1	3	ENGR 485 Senior Project 2	3
ENGR 426 Manufacturing Proc & Sys	3	ENGR 436 Fluid and Elec. Power Systems	3
ENGR 435 Industrial Controls	3	MET Technical Elective	3
MET Technical Elective	4	General Education Social Science	3
KINA 1** Activity	<u>1</u>	General Education Fine Arts	<u>3</u>
	14		15