2013-2014 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

All CMU baccalaureate graduates are expected to demonstrate proficiency in critical thinking, communication fluency, quantitative fluency, and specialized knowledge/applied learning. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply the knowledge, techniques, skills, and modern tools of engineering to engineering problems. (Critical Thinking/Applied Learning)
2. Apply knowledge of mathematics, science, and technology to engineering problems. (Quantitative Fluency)
3. Effectively use oral, written, and graphical communication skills to address both technical and non-technical audiences. (Communication Fluency)
4. Apply the ethical standards of the discipline to engineering problems. (Specialized Knowledge)

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 have read and understand the policies listed on the last page of this 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.

_____ _____ 20_____
Signature of Advisor Date

_____ _____ 20_____
Signature of Department Head Date

_____ _____ 20_____
Signature of Registrar 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 **or** PHYS 131/131L				
PHYS		4		
PHYS		1		
CHEM 131 **or** 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 **or** 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		3	WELD 151	Industrial Welding	3
		17			16

SOPHOMORE YEAR

Fall Semester		Hours	Spring Semester		Hours
MATH 136	Engineering Calculus II	4	CSCI 130	Intro to Engineering Computing	3
PHYS 131or 111	Fundamental Mechanics	4	MAMT 151	Numerical Controls Mach I (1st Mod)	3
PHYS 131L or 111L	Fundamental Mech Lab	1	MAMT 155	Numerical Controls Mach II (2nd 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	SOCI 120	Technology and Society	3
					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	3
General Education Humanities		3			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	1	General Education Fine Arts		3
		14			15

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).