

Name: \_\_\_\_\_ CMU ID #: \_\_\_\_\_

**IMPORTANT NOTE: This sheet is only a worksheet to track your progress in the CMU/CU-Boulder Mechanical Engineering Partnership Program. An official review of your coursework will be performed by CU administration to ensure completion of all graduation requirements.**

- In order to take any Math, Science or Engineering courses, each listed prerequisite (or an equivalent course) must be completed with a grade of “C” or better.
- All engineering students must take ENGL 111 and 112 unless they meet or exceed one of the following criteria: ACT ENGL 24 or SAT Verbal 550 or AP English (Lit & Comp or Lang & Comp) 4 or IB English 4.

Minimum credits to graduate: 128 hrs

**CMU/CU-BOULDER MECHANICAL ENGINEERING**  
**REQUIRED COURSES:**

Course No	Title	Sem.hrs	Grade	Term/Trns
<b>Mathematics and Computer Science:</b> 19 semester hours				
MATH 135	Engineering Calculus I	4	_____	_____
MATH 136	Engineering Calculus II	4	_____	_____
MATH 253	Calculus III	4	_____	_____
MATH 236	Differential Equations & Linear Algebra	4	_____	_____
CSCI 130	Intro to Engr Computing	3	_____	_____
<b>Physical Science:</b> 18 semester hours				
PHYS 131	Fundamental Mechanics	4	_____	_____
PHYS 131L	Fundamental Mechanics Laboratory	1	_____	_____
PHYS 132	Electromagnetism & Optics	4	_____	_____
PHYS 132L	Electromagnetism & Optics Laboratory	1	_____	_____
CHEM 131	General Chemistry	4	_____	_____
CHEM 131L	General Chemistry Laboratory	1	_____	_____
Science Elective: 3 semester hours. Must be selected from: PHYS 230, PHYS 231, BIOL 209 or CHEM 311				
_____	_____	3	_____	_____
<b>English:</b> 3 semester hours				
ENGL 425	Scientific Writing	3	_____	_____
<b>Machining:</b> 1 semester hour				
MAMT 102	Machining Fundamentals	1	_____	_____
<b>Basic Engineering:</b> 19 semester hours				
ENGR 101	Introduction to Engineering	1	_____	_____
ENGR 125	CAD and Fabrication	3	_____	_____
ENGR 140	1st-Year Engr Projects	3	_____	_____
ENGR 224	Materials Science	2	_____	_____
ENGR 224L	Materials Science Lab	1	_____	_____
ENGR 261	Statics and Structures	3	_____	_____
ENGR 343	Dynamics	3	_____	_____
ENGR 263	Mechanics of Solids	3	_____	_____

Course No Title Sem.hrs Grade Term/Trns  
**CU-Boulder Mechanical Engineering Courses:**

Course No	Title	Sem.hrs	Grade	Term/Trns
41 semester hours				
MCEN 2000	Professionalism Seminar	1	_____	_____
MCEN 3012	Thermodynamics	3	_____	_____
MCEN 3017	Circuits & Electronics	3	_____	_____
MCEN 3021	Fluid Mechanics	3	_____	_____
MCEN 3022	Heat Transfer	3	_____	_____
MCEN 3025	Component Design	3	_____	_____
MCEN 3030	Computational Methods	3	_____	_____
MCEN 3037	Exp Design & Data Anal	2	_____	_____
MCEN 3032	Thermodynamics 2	3	_____	_____
MCEN 4026	Manufacturing Processes & Systems	3	_____	_____
MCEN 4037	Measurements Laboratory	2	_____	_____
MCEN 4043	System Dynamics	3	_____	_____
MCEN 4045	ME Design Project 1	3	_____	_____
MCEN 4047	Mechanical Engineering Laboratory	2	_____	_____
MCEN 4085	ME Design Project 2	3	_____	_____
	Writing for Design Project	1	_____	_____

**ELECTIVE COURSES:**

<b>Humanities and Social Science:</b> 15 semester hours (6 hours must be upper division). Check website for complete list of courses.				
9 semester hours Lower Division Humanities & Social Science				
SOCI 120	Technology & Society	3	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
6 semester hours Upper Division Humanities & Social Science				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
<b>Technical Electives:</b> 12 semester hours (6 hours MCEN and 6 hours upper division math, science or engineering courses).				
MCEN	_____	_____	_____	_____
MCEN	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

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 responsibility of the student to meet regularly with their assigned advisor.

### Freshman Year

FALL SEMESTER		Credit Hr	SPRING SEMESTER		Credit Hr
MATH 135	Engineering Calculus I	4	MATH 136	Engineering Calculus II	4
PHYS 131	Fundamental Mechanics	4	PHYS 132	Electromagnetism & Optics	4
PHYS 131L	Fundamental Mechanics Lab	1	PHYS 132L	Electromagnetism & Optics Lab	1
ENGR 101	Introduction to Engineering	1	ENGR 140	1 <sup>st</sup> Year Engineering Projects	3
ENGR 125	CAD & Fabrication	3	CSCI 130	Introduction to Engineering Computing	3
MAMT 102	Fundamental Machining	1	TOTAL		15
	TOTAL	14			

### Sophomore Year

FALL SEMESTER		Credit Hr	SPRING SEMESTER		Credit Hr
MATH 253	Calculus III	4	MATH 236	Differential Equations & Linear Algebra	4
CHEM 131	General Chemistry	4	ENGR 343	Dynamics	3
CHEM 131L	General Chemistry Lab	1	ENGR 263	Mechanics of Solids	3
ENGR 224	Materials Science	2		Science Elective**	3
ENGR 224L	Materials Science Lab	1		Hum/Soc Sci Elect (Lower Div)	3
ENGR 261	Statics & Structures	3	TOTAL		16
SOCI 120	Technology & Society	3			
	TOTAL	18			

### Junior Year

FALL SEMESTER		Credit Hr	SPRING SEMESTER		Credit Hr
MCEN 2000	Professionalism Seminar	1	MCEN 3025	Heat Transfer	3
MCEN 3012	Engineering Thermodynamics	3	MCEN 3022	Component Design	3
MCEN 3017	Circuits & Electronics	3	MCEN 3037	Experimental Design & Data Analysis	2
MCEN 3021	Fluid Mechanics	3	MCEN 3032	Thermodynamics 2	3
MCEN 3030	Computational Methods	3	ENGL 425	Scientific Writing	3
	Hum/Soc Sci Elect (Lower Div)	3		Hum/Soc Sci Elect (Upper Div)	3
	TOTAL	16	TOTAL		17

### Senior Year

FALL SEMESTER		Credit Hr	SPRING SEMESTER		Credit Hr
MCEN 4026	Manufacturing Processes & Sys	3	MCEN 4047	ME Laboratory	2
MCEN 4043	Systems Dynamics	3	MCEN 4085	ME Design Project 2	3
MCEN 4037	Measurements Lab	2		Writing for Design Proj.	1
MCEN 4045	ME Design Project 1	3		MCEN Technical Elective	3
	MCEN Technical Elective	3		General Technical Elective	3
	Hum/Soc Sci Elect (Upper Div)	3		General Technical Elective	3
	TOTAL	17	TOTAL		15

Black – CMU courses, red – CU courses

Total Credit Hours = 128

\*\* Courses that fulfill the 3-credits of Science Elective are: PHYS 230, PHYS 231, BIOL 109 or CHEM 311