2019 – 20 DEGREE REQ. WORKSHEET
CMU/CU Boulder Mechanical Engineering Partnership Program
www.coloradomesa.edu/engineering

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 27 or SATRW 630 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
Mathematics and Computer Science: 20 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	4		
Physical Science: 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 151	Engineering Chemistry	4		
CHEM 151L	Engineering Chemistry Lab	1		
Science Elective: 3 semester hours. Must be selected from: PHYS 230, PHYS 231, BIOL 209 or CHEM 311				
_____	_____	3		
English: 3 semester hours				
ENGL 325	Writing for Engineers	3		
Machining: 1 semester hour				
MAMT 102	Machining Fundamentals	1		
Basic Engineering: 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 263	Mechanics of Solids	3		
ENGR 343	Dynamics	3		

Course No	Title	Sem.hrs	Grade	Term/Trns
CU Boulder Mechanical Engineering Courses: 39 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 3032	Thermodynamics 2	3		
MCEN 3047	Data & Measurements	4		
MCEN 4026	Manufacturing Processes & Systems	3		
MCEN 4043	System Dynamics	3		
MCEN 4045	ME Design Project 1	3		
MCEN 4085	ME Design Project 2	3		
MCEN 4086	Writing for Design Project	1		

ELECTIVE COURSES:

Free Elective: 1 credits

_____ ____ _____ ____ _____ _____

Humanities and Social Science: 15 semester hours (6 hours must be upper division). Check website for complete list of courses. Link given at end of worksheet.

9 semester hours Lower Division Humanities & Social Science

SOCI 120 Technology & Society 3 _____ _____

_____ ____ _____ ____ _____ _____

_____ ____ _____ ____ _____ _____

6 semester hours Upper Division Humanities & Social Science

_____ ____ _____ ____ _____ _____

_____ ____ _____ ____ _____ _____

Technical Electives: 12 semester hours (6 hours MCEN and 6 hours upper division math, science or engineering courses).

MCEN ____ _____ ____ _____ _____

MCEN ____ _____ ____ _____ _____

_____ ____ _____ ____ _____ _____

_____ ____ _____ ____ _____ _____

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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
CHEM 151	Engineering Chemistry	4	PHYS 131	Fundamental Mechanics	4
CHEM 151L	Engineering Chemistry Lab	1	PHYS 131L	Fundamental Mechanics Lab	1
ENGR 101	Introduction to Engineering	1	ENGR 140	1st Year Engineering Projects	3
ENGR 125	CAD & Fabrication	3	CSCI 130	Introduction to Engineering Computing	4
MAMT 102	Machining Fundamentals	1			
	TOTAL	14		TOTAL	16

Sophomore Year

FALL SEMESTER		*Credit Hr*	*SPRING SEMESTER*		*Credit Hr*
MATH 253	Calculus III	4	MATH 236	Differential Equations & Linear Algebra	4
PHYS 132	Electromagnetism & Optics	4	ENGR 343	Dynamics	3
PHYS 132L	Electromagnetism & Optics 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 3022	Heat Transfer	3
MCEN 3012	Engineering Thermodynamics	3	MCEN 3025	Component Design	3
MCEN 3017	Circuits & Electronics	3	MCEN 3047	Data & Measurements	4
MCEN 3021	Fluid Mechanics	3	MCEN 3032	Thermodynamics 2	3
MCEN 3030	Computational Methods	3	ENGL 325	Writing for Engineers	3
	Hum/Soc Sci Elect (Lower Div)	3			
	TOTAL	16		TOTAL	16

Senior Year

FALL SEMESTER		*Credit Hr*	*SPRING SEMESTER*		*Credit Hr*
MCEN 4026	Manufacturing Processes & Sys	3	MCEN 4085	ME Design Project 2	3
MCEN 4043	System Dynamics	3	MCEN 4086	Writing for Design Projects	1
MCEN 4045	ME Design Project 1	3		MCEN Tech Elective	3
	MCEN Tech Elective	3		General Technical Elective	3
	General Technical Elective	3		Hum/Soc Sci Elect (Upper Div)	3
	Hum/Soc Sci Elect (Upper Div)	3		Free Elective	1
	TOTAL	18		TOTAL	14

Total Credit Hours = 128

Black – CMU courses, red – CU courses. . Note, a student must have a minimum of 45 CU credits by graduation.

* Courses that fulfill the 3-credits of Science Elective are: PHYS 230, PHYS 231, BIOL 209 & 209L, or CHEM 311

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University of Colorado Boulder

Acceptable Course Substitutions

MAMT 115 (3)	for MAMT 102 (1)
MATH 151 (5)	for MATH 135 (4)
MATH 152 (5)	for MATH 136 (4)
CHEM 131 (4)	for CHEM 151 (4)
CHEM 131L (1)	for CHEM 151L (1)

Humanities & Social Science Electives
See: http://www.coloradomesa.edu/engineering/documents/HSSAcceptableClasses-April2019Update.pdf

General Technical Electives
CMU 300 and 400 level courses in the following subjects are considered General Technical Electives: CHEM, ENGR, MATH, and PHYS. CU Boulder upper level CVEN and MCEN Technical Electives count. CU Boulder upper-level EMEN courses count as General Technical Electives. These courses are sometimes offered online during the summer.

MCEN Technical Electives
4000 level MCEN courses not otherwise required for the major are considered MCEN Technical Electives. One EMEN upper level course can apply towards the MCEN Technical Elective.

Grade Requirements
The minimum passing grade for prerequisite and co-requisite classes in the BSME curriculum is a C. This includes courses completed outside the department (MATH, PHYS, etc.). The minimum passing grade for standalone classes is a D-. In addition, students need to have a cumulative and major GPA of at least 2.25 in order to graduate from the CU Boulder College of Engineering.

Free Electives
College level coursework accepted by CU Boulder not used otherwise to satisfy BSME degree requirements. Use Transferology.com to verify that courses will transfer to CU Boulder.

Course Work Not Accepted for Transfer Credit
The following course work will not be accepted for transfer credit and will not count toward a degree at Boulder:

- any courses in which the grade earned is below a C- (1.70)
- courses identified by CU Boulder as remedial, such as remedial English, mathematics, science and developmental reading
- vocational-technical courses that are offered at two-year and proprietary institutions (exceptions may be granted only by the CU Boulder dean responsible for the student's curriculum—when exceptions appear to be warranted, appropriate department heads make recommendations to their respective deans regarding credit for such courses)
- courses in religion that constitute specialized religious training or that are doctrinal in nature
- credits earned for work experience or through a cooperative education program
- outdoor leadership education course work
- credits earned in physical education activity courses
- courses or programs identified as college orientation