2019 – 20 DEGREE REQ. WORKSHEET
CMU/CU Boulder Electrical & Computer 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 Electrical & Computer 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 ELECTRICAL & COMPUTER ENGINEERING REQUIRED COURSES:

Course No	Title	Sem.hrs	Grade	Term/Trns
Mathematics and Computer Science: 23 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		
MATH 369	Discrete Structures I	3		
CSCI 130	Intro to Engr Computing	4		
Physical Science: 10 semester hours				
PHYS 131	Fundamental Mechanics	4		
PHYS 131L	Fundamental Mechanics Laboratory	1		
PHYS 132	Electromagnetism & Optics	4		
PHYS 132L	Electromagnetism & Optics Laboratory	1		
Science Elective: 3 semester hours. Must be selected from: PHYS 230, PHYS 231, BIOL 209 & 209L or CHEM 311				
_____	____ _____	3		
Basic Engineering: 17 semester hours				
ENGR 101	Introduction to Engineering	1		
ENGR 140	1st Year Engr. Projects	3		
EECE 225	Intro to Circuits & Elect.	3		
EECE 226	Circuits as Systems	3		
EECE 227	Electronics Design Lab	3		
EECE 235	Digital Logic	3		
Sophomore Elective: 3 semester hours. May be replaced by Advanced Concentration Electives. Must be selected from: Renewable Energy, Application of Embedded Systems, or Electronics for Wireless Communication				
_____	____ _____	3		

Course No	Title	Sem.hrs	Grade	Term/Trns
CU Boulder Electrical & Computer Engineering Core: 28 semester hours				
CSCI 2270	Data Structures	4		
ECEN 2310	Prog w/Math Software	1		
ECEN 3250	Microelectronics	3		
ECEN 3300	Linear Systems	3		
ECEN 3350	Prog of Digital Systems	3		
ECEN 3360	Digital Design Lab	3		
ECEN 3810	Probability	3		
ECEN 4593	Comp. Org. Tech. Elective	3		
ECEN 4610	Capstone (Part 1)	3		
ECEN 4620	Capstone (Part 2)	3		
ELECTIVE COURSES:				
Software Elective: 3 semester hours				
ECEN	____ _____	____		
ECEN Technical Electives: 16 semester hours				
ECEN	____ _____	____		
ECEN	____ _____	____		
ECEN	____ _____	____		
ECEN	____ _____	____		
ECEN	____ _____	____		
Free Electives: 7 semester hours				
_____	____ _____	____		
_____	____ _____	____		
_____	____ _____	____		
Humanities and Social Science: 18 semester hours. 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				
_____	____ _____	____		
_____	____ _____	____		
ENGL 325	Writing for Engineers	3		

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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		Cr Hr		Spring Semester		Cr 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	Intro to Engineering	1		CSCI 130	Intro to Engineering Computing	4
ENGR 140	1st Year Engr Projects	3			HUM/SS Elective (Lower Div)	3
	HUM/SS Elective (Lower Div)	3				
	Total	**16**			**Total**	**16**
Sophomore Year						
MATH 236	Differential Eqs & Linear Alg	4		MATH 253	Engineering Calculus III	4
MATH 369	Discrete Structures I	3		EECE 226	Circuits as Systems	3
EECE 225	Intro to Circuits & Electronics	3		EECE 227	Electronics Design Lab	3
SOCI 120	Technology & Society	3		EECE 235	Digital Logic	3
	Sophomore Elective**	3			Science Elective***	3
	Total	**16**			**Total**	**16**
Junior Year						
CSCI 2270	Data Structures	4		ECEN 3300	Linear Systems	3
ECEN 2310	Program w/Math Software	1		ECEN 3360	Digital Design Lab	3
ECEN 3250	Microelectronics	3			ECEN Software Elective	3
ECEN 3350	Programming of Digital Systems	3			ECEN Technical Electives	3
ECEN 3810	Probability	3			Free Electives	3
ENGL 325	Writing for Engineers	3				
	Total	**17**			**Total**	**15**
Senior Year						
ECEN 4610	Capstone (Part 1)	3		ECEN 4620	Capstone (Part 2)	3
	ECEN Technical Electives	7		ECEN 4593	Comp. Org. Tech. Elective	3
	HUM/SS Elective (Upper Div)	3			ECEN Technical Electives	6
	Free Electives	4			HUM/SS Elective (Upper Div)	3
	Total	**17**			**Total**	**15**
					Total Credits	**128**

Black – CMU courses, red – CU courses
* Courses that fulfill the 3-credits of Freshman Elective are: ENGR 140, CHEM 131 or CHEM 151
** Courses that fulfill the 3-credits of Sophomore Elective are: Choose 1 from Renewable Energy, Application of Embedded Systems or Electronics for Wireless Systems
***Courses that fulfill the 3-credits of Science Elective are: PHYS 230, PHYS 231, BIOL 209 & 209L, CHEM 311, ENGR 312, or MCEN 3012

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Acceptable Course Substitutions
MATH 151 (5) for MATH 135 (4)
MATH 152 (5) for MATH 136 (4)

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

ECEN Technical Electives:
Course availability varies year to year. Courses highlighted in yellow are not currently offered through the CU Boulder/CMU Partnership and may be taken on the Boulder campus.

Course Number	Course Name	Prerequisite (all minimum C)
ECEN 4341	Bioelectromagnetics	ECEN 3400 and ECEN 3810 or APPM 3570 or MATH 4510
ECEN 4242	Communication Theory	ECEN 3300 and ECEN 3810
ECEN 4652	Communication Lab	ECEN 4242
ECEN 4632	Intro to Digital Filtering	ECEN 3300
ECEN 4532	DSP Lab	ECEN 4632
ECEN 4138	Control Systems Analysis	ECEN 3300
ECEN 4638	Controls Lab	ECEN 4138
ECEN 3410	EM Waves & Transmission	ECEN 3400
ECEN 4634	Microwave & RF Lab	ECEN 3410
ECEN 4797	Intro to Power Electronics	ECEN 3250
ECEN 4517	Power Electronics Lab	ECEN 4797
ECEN 4827	Analog IC Design	ECEN 3250
ECEN 3170	Energy Conversion 1	ELCE 226 and PHYS 132
ECEN 4606	Undergraduate Optics Lab	ECEN 3400

Grade Requirements
The minimum passing grade for prerequisite and co-requisite classes in the BSECE 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 BSECE 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