

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

This 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. The BSCE degree is conferred by CU Boulder.

- To take Math, Science, or Engineering courses each listed prerequisite (or an equivalent course) must be completed with a grade of “C–” or better
- 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 semester hours**

**REQUIRED COURSES:**

Course No	Title	hr	Grade	Term
<b>Mathematics and Computer Science:</b> 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:** 14 semester hours

PHYS 131	Fundamental Mechanics	4	_____	_____
PHYS 131L	Fundamental Mechanics Laboratory	1	_____	_____
PHYS 132	Electromagnetism & Optics	4	_____	_____
CHEM 151	Engineering Chemistry	4	_____	_____
CHEM 151L	Engineering Chemistry Lab	1	_____	_____

**Basic Science:** 3 semester hours. Choose from the following:

- GEOL 103 Weather & Climate
  - GEOL 104 Oceanography
  - GEOL 105 Geology of Colorado
  - GEOL 107 Natural Hazards & Environmental Geology
  - GEOL 108 Water, People & Environment
  - GEOL 111/111L Principles of Physical Geology (4-cr)
  - GEOL 113/113L Field-Based Intro to Physical Geol (4-cr)
  - GEOL 250 Environmental Geology
  - ENVS 101 Introduction to Environmental Science
  - BIOL 102/102L Plant & Animal Biodiversity (4-cr)
  - BIOL 105/105L Attributes of Living Systems (4-cr)
  - BIOL 209/209L Human Anatomy & Physiology (4-cr)
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**English:** 3 semester hours

ENGL 325	Writing for Engineers	3	_____	_____
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**Basic Engineering:** 22 semester hours

CIVE 127	Engineering Drawing	3	_____	_____
CIVE 212	Introduction to Geomatics	3	_____	_____
CIVE 313	Theoretical Fluid Mechanics	3	_____	_____
ENGR 101	Introduction to Engineering	1	_____	_____
ENGR 140	1st-Year Engr Projects	3	_____	_____
ENGR 261	Statics and Structures	3	_____	_____
ENGR 263	Mechanics of Solids	3	_____	_____
ENGR 343	Dynamics	3	_____	_____

**CU Civil Engineering Courses:** 39 semester hours

CVEN 3227	Probability & Statistics	3	_____	_____
CVEN 3246	Intro to Construction	3	_____	_____
CVEN 3256	Constr Equip & Methods	3	_____	_____
CVEN 3323	Hydraulic Engineering	3	_____	_____
CVEN 3414	Fund of Environmental Engr	3	_____	_____
CVEN 3424	Water & Wastewater Treat	3	_____	_____
CVEN 3525	Structural Analysis	3	_____	_____
CVEN 3708	Geotechnical Engineering	3	_____	_____
CVEN 4333	Engineering Hydrology	3	_____	_____
CVEN 4545	Steel Design	3	_____	_____
CVEN 4897	Professional Issues	2	_____	_____
CVEN 4899	CE Design Project	4	_____	_____
MCEN 3012	Thermodynamics	3	_____	_____

**ELECTIVE COURSES:**

**Humanities and Social Sciences:** 15 semester hours

9 semester hours Lower Division Humanities & Social Science  
 SOCI 120 Technology & Society 3 \_\_\_\_\_

6 semester hours Upper Division Humanities & Social Science  
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**Technical Electives:** 12 semester hours (6 hours CVEN and 6 hours upper division math, science, or engineering courses).

CVEN \_\_\_\_\_  
 CVEN \_\_\_\_\_

**RECOMMENDED SEQUENCE OF COURSEWORK:**

(Courses may have prerequisites or may only be offered during the fall or spring semesters)

**Freshman Year**

FALL SEMESTER		
MATH 135	Engineering Calculus I	4
CHEM 151	Engineering Chemistry	4
CHEM 151L	Engineering Chemistry Lab	1
ENGR 101	Introduction to Engineering	1
CIVE 127	Engineering Drawing for CE	3
SOCI 120	Technology & Society	3
TOTAL Semester hours		16

SPRING SEMESTER		
MATH 136	Engineering Calculus II	4
PHYS 131	Fundamental Mechanics	4
PHYS 131L	Fundamental Mechanics Lab	1
ENGR 140	1 <sup>st</sup> Year Engineering Projects	3
CSCI 130	Intro to Engineering Computing	4
TOTAL Semester hours		16

**Sophomore Year**

FALL SEMESTER		
MATH 253	Engineering Calculus III	4
PHYS 132	Electromagnetism & Optics	4
ENGR 261	Statics & Structures	3
CIVE 212	Introduction to Geomatics	3
	Basic Science*	3
TOTAL Semester hours		17

SPRING SEMESTER		
MATH 236	Diff Equations & Linear Algebra	4
CIVE 313	Theoretical Fluid Mechanics	3
ENGR 343	Dynamics	3
ENGR 263	Mechanics of Solids	3
	H&SS Elective (Lower-Division)	3
TOTAL Semester hours		16

**Junior Year**

FALL SEMESTER		
CVEN 3414	Fundamentals of Environmental Engr	3
CVEN 3246	Introduction to Construction	3
CVEN 3525	Structural Analysis	3
CVEN 3708	Geotechnical Engineering	3
	H&SS Elective (Lower-Division)	3
TOTAL Semester hours		15

SPRING SEMESTER		
CVEN 3227	Probability, Statistics, and Decision	3
CVEN 3256	Construction Equipment & Methods	3
CVEN 3323	Hydraulic Engineering	3
MCEN 3012	Thermodynamics	3
ENGL 325	Writing for Engineers	3
TOTAL Semester hours		15

**Senior Year**

FALL SEMESTER		
CVEN 4333	Engineering Hydrology	3
CVEN 4545	Steel Design	3
CVEN 4897	Professional Issues in Civil Engr	2
	CVEN Technical Elective	3
	General Technical Elective	3
	H&SS Elective (Upper-Division)	3
TOTAL Semester hours		17

SPRING SEMESTER		
CVEN 3424	Water & Wastewater Treatment	3
CVEN 4899	CE Design Project	4
	CVEN Technical Elective	3
	General Technical Elective	3
	H&SS Elective (Upper-Division)	3
TOTAL Semester hours		16

Black = CMU courses, blue = CU courses (students must have a minimum of 45 CU credits by graduation)

\*Basic Science courses include: GEOL 103 Weather and Climate, GEOL 104 Oceanography, GEOL 105 Geology of Colorado, GEOL 107 Natural Hazards and Environmental Geology, GEOL 108 Water, People and Environment, GEOL 111/111L Principles of Physical Geology (4cr), GEOL 113/113L Field-Based Intro to Physical Geology (4-cr), GEOL 250 Environmental Geology, ENVS 101 Introduction to Environmental Science, BIOL 102/102L Plant and Animal Biodiversity (4-cr), BIOL 105/105L Attributes of Living Systems (4-cr), BIOL 209/209L Human Anatomy and Physiology (4-cr). Classes with a lab component must be taken concurrently.

### Acceptable Course Substitutions

MATH 151 (5) for MATH 135 (4)  
MATH 152 (5) for MATH 136 (4)  
MCEN 3021 (3) for CIVE 313 (3)  
CHEM 131 (4) & CHEM 132 (4) for CHEM 151 (4)  
CHEM 131L (1) & CHEM 132L (1) for CHEM 151L (1)

### AP Credit

An AP score of 5 is required on Physics C: Mechanics to receive credit for PHYS 131 & 131L. This is a higher score than CMU requires.

### Humanities & Social Science Electives

See: <http://www.coloradomesa.edu/engineering/documents/HSSAcceptableClasses-September2019Update.pdf>

### General Technical Electives

CMU 300- and 400-level courses in the following subjects are considered General Technical Electives: CHEM, ENGR, MATH, PHYS.

CU 3000- and 4000-level courses in the following subjects are considered General Technical Electives: CVEN, MCEN. Also EMEN 4100 and EMEN 4800.

### CVEN Technical Electives

4000-level CVEN courses not otherwise required for the major are considered CVEN Technical Electives.

### Grade Requirements

The minimum passing grade for prerequisite and co-requisite classes in the BSCE curriculum is a C-. This includes courses completed outside the program (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 to graduate from the CU Boulder College of Engineering.

### Free Electives

College-level coursework accepted by CU Boulder not used otherwise to satisfy BSCE 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:

- courses completed more than 10 years prior to transfer
- 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 coursework
- credits earned in physical education activity courses
- courses or programs identified as college orientation