

Bachelor of Science in Mechanical Engineering

Curriculum Flowchart

PARTNERSHIP PROGRAM COMPUTER SCIENCE & ENGINEERING

Western	Year 1	Fall	MATH 151 (4) Calculus 1 (PR: ACT math 27, SAT math 630, ALEKS 76, or MATH 141)	PHYS 190 (3) General Physics 1 (PR/CR: MATH 151, PHYS 185)	PHYS 185 (1)* Laboratory Physics 1 (PR/CR: PHYS 190)	CHEM 121 (3) General Chemistry for Engineers (PR: ACT math 23, SAT math 560, ALEKS 61, or MATH 140)	ENG 102 (3) Academic Writing (Free Elective)	HWTR 100 (1) Headwaters (Free Elective)
		Spring	MATH 251 (4) Calculus 2 (PR: MATH 151)	PHYS 191 (3) General Physics 2 (PR: PHYS 190 PR/CR: PHYS 186)	PHYS 186 (1)^ Laboratory Physics 2 (PR/CR: PHYS 191)	ENGR 131 (3)^ Introduction to Engineering Design (PR/CR: MATH 141)	ENGR 197 (3) Intro to Engineering Computing	Humanities & Social Science (3) Lower Division
Year 2	Fall	MATH 252 (4) Calculus 3 (PR: MATH 251)	PHYS 250 (3) Statics (PR: PHYS 191, MATH 251)	ENGR 161 (3) Computer-Aided Design (PR: MATH 151)	ENGR 162 (1) Fabrication (CR: ENGR 161)	ENGR 224 (3) Materials Science (PR: CHEM 121, PHYS 190)	Math/Science Foundation (3)	
	Spring	MATH 358 (4)^ Differential Equations w/ Linear Algebra (PR: MATH 251)	ENGR 251 (3) Dynamics (PR: PHYS 250)	ENGR 265 (1) Engineering as a Profession (PR: ENGR 131)	ENGR 335 (3) Fluid Mechanics (PR: MATH 251, PHYS 250)	ENGR 363 (3) Mechanics of Solids (PR: MATH 252, PHYS 250)	ENG 302 (3) Technical Writing (PR: ENG 102)	
CU Boulder	Year 3	Fall	MCEN 3012 (3)* Thermodynamics 1 (PR: MATH 251)	MCEN 3017 (3)* Circuits & Electronics (PR: PHYS 191) (PR/CR: MATH 358)	MCEN 3025 (3)* Component Design (PR: ENGR 161, ENGR 162, ENGR 224, ENGR 363)	MCEN 3030 (3)* Computational Methods (PR: CS 191, MATH 358)	Mechanical Technical Elective (3)	COEN 4830 (1)* Career & Professional Readiness (Free Elective)
		Spring	MCEN 3032 (3)^ Thermodynamics 2 (PR: MCEN 3012, ENGR 335, MATH 358)	MCEN 3047 (4)^ Data Analysis & Experimental Methods (PR: PHYS 185, PHYS 186) (CR: ENG 302, MCEN 3030, MCEN 3017)	MCEN 4026 (3)^ Manufacturing Processes & Systems (PR: ENGR 224)	Mechanical Technical Elective (3)	Humanities & Social Science (3) Lower Division	
	Year 4	Fall	MCEN 4045 (3)* ME Design Project 1	MCEN 3022 (3)* Heat Transfer (PR: MCEN 3012, ENGR 335, MATH 358)	MCEN 4043 (3)* System Dynamics (PR: ENGR 251, MCEN 3017) (CR: MCEN 3030)	MCEN 4086 (1)* Writing for Design (CR: MCEN 4045)	General Technical Elective (3)	Humanities & Social Science (3) Lower Division
		Spring	MCEN 4085 (3)^ ME Design Project 2 (PR: MCEN 4045)	General Technical Elective (3)	Humanities & Social Science (3) Upper Division	Humanities & Social Science (3) Upper Division	Free Elective (2)	

Admission to CU Boulder

- Complete a college-level, two-course sequence in calculus w/ grade of "B-" or higher
- Complete one college-level physical science course (calc-based physics &/or college chemistry w/ grade of "B-" of higher
- Maintain a cumulative GPA of 3.0 or higher

The minimum passing grade for prerequisite and co-requisite classes specifically for mechanical engineering majors is a C-.

Key
 PR = Pre-requisite
 CR = Co-requisite
 * = Fall only course
 ^ = Spring only course

Must be taken before ME Design
 Can be taken any semester pending completion of any pre/co-requisites
 Can be taken as a pre- or co- requisite for ME Design. Must take one of MCEN 3047, 3022 or 4043 before ME Design
 ME Design Sequence
 Can be taken as a pre-requisite or co-requisite to ME Design