

Course Plan

2017-2018



**BOISE STATE
UNIVERSITY**

Bachelor of Science in Mechanical Engineering

FIRST YEAR

FIRST SEMESTER

CHEM 111	College Chemistry (DLN)	3 cr
CHEM 111L	College Chemistry Lab (DLN)	1 cr
ENGL 101	English Composition	3 cr
ENGR 120	Introduction to Engineering <i>OR</i>	
ENGR 130†	Intro to Engineering Applications	3 cr
UF 100	Intellectual Foundations	3 cr
MATH 170	Calculus I (DLM)	4 cr
TOTAL CREDITS		17 cr

SECOND SEMESTER

CS 117*	Introduction to C++	3 cr
ENGL 102	English Composition	3 cr
MATH 175	Calculus II	4 cr
PHYS 211	Mechanics, Waves and Heat (DLN)	4 cr
PHYS 211L	Mechanics, Waves and Heat Lab (DLN)	1 cr
TOTAL CREDITS		15 cr

SECOND YEAR

FIRST SEMESTER

PHYS 212	Electricity, Magnetism & Optics	4 cr
PHYS 212L	Electricity, Magnetism & Optics Lab	1 cr
MATH 333	Differential Equations and Matrix Theory	4 cr
ENGR 210	Engineering Statics	3 cr
UF 200	Civic and Ethical Foundations	3 cr
ME 271*	Introduction to Computation for Engineers	1 cr
TOTAL CREDITS		16 cr

SECOND SEMESTER

MATH 275	Multiple Variable and Vector Calculus	4 cr
ENGR 220	Engineering Dynamics	3 cr
MSE 245	Introduction to Materials Science and Engineering	3 cr
MES 245L	Introduction to Materials Science and Engineering	1 cr
ME 302	Thermodynamics	3 cr
ME 105	Mechanical Engineering Graphics	3 cr
TOTAL CREDITS		17 cr

THIRD YEAR

FIRST SEMESTER

MATH 360	Engineering Statistics <i>OR</i>	
MATH 361†	Probability and Statistics	3 cr
ME 330	Fluid Mechanics	3 cr
ME 331	Fluid Mechanics Lab	1 cr
ME 350	Engineering Mechanics of Materials	3 cr
ENGR 240	Introduction to Circuits	3 cr
ENGL 202	Technical Communication (DLS)	3 cr
TOTAL CREDITS		16 cr

SECOND SEMESTER

ME 380*	Kinematics and Machine Dynamics	3 cr
ME 320	Heat Transfer	3 cr
ME 310	Experimental Methods Lab (CID)	2 cr
ME 352	Machine Design I	3 cr
DLV	Visual and Performing Arts elective	3 cr
TOTAL CREDITS		14 cr

FOURTH YEAR

FIRST SEMESTER

ME 481	Senior Design Project I (FF)	3 cr
ME 424	Thermal and Fluids Systems Design	3 cr
ME 462	Machine Design II	3 cr
ME	ME Program Elective	3 cr
DLL	Literature and Humanities Elective	3 cr
TOTAL CREDITS		15 cr

SECOND SEMESTER

ME 483	Senior Design Project II	3 cr
ME	ME Program Elective	3 cr
TECH	Upper-Division Technical Elective	3 cr
DLS	Social Science Second Field Elective	3 cr
TOTAL CREDITS		12 cr

* This program sequence is the only approved way to complete the structured programming requirement for the ME degree

† In this instance, either course meets the requirement

Boise State Bachelor of Science in Mechanical Engineering – 4 Year Plan

Year	Credits	Course 1	Course 2	Course 3	Course 4	Course 5	Course 6
Year 1	17 credits	CHEM 111 (3) General Chemistry I * CHEM 111L	CHEM 111L (1) General Chemistry Lab I * CHEM 111	MATH 170 (4) Calculus I	ENGR 120 (3) Introduction to Engineering	ENGL 101 (3) Introduction to College Writing	UF 100 (3) Foundations of Intellectual Life
	15 credits	PHYS 211 (4) Physics I with Calculus * MATH 170 * PHYS 211L	PHYS 211L (1) Physics I with Calculus Lab * PHYS 211	MATH 175 (4) Calculus II MATH 170	CS 117 (3) C++ for Engineers MATH 170	ENGL 102 (3) Intro to College Writing and Research	
Year 2	16 credits	PHYS 212 (4) Physics II with Calculus * MATH 175 * PHYS 212L PHYS 211	PHYS 212L (1) Physics II with Calculus Lab * PHYS 212	MATH 333 (4) Differential Equations with Matrix Theory MATH 175	ENGR 210 (3) Engineering Statics MATH 170 PHYS 211	ME 271 (1) Intro to Computations for Engineers CS 117 * PHYS 211	UF 200 (3) Foundations of Ethics and Diversity
	17 credits	ME 302 (3) Thermodynamics I CHEM 111 MATH 175 PHYS 211	ME 105 (3) Mechanical Engineering Graphics MATH 170	MATH 275 (4) Multivariable and Vector Calculus MATH 175	ENGR 220 (3) Engineering Dynamics ENGR 210 MATH 175	MSE 245 (3) Introduction to Materials Science CHEM 111 MATH 170	MSE 245L (1) Introduction to Materials Science Lab * ENGR 245
Year 3	16 credits	ME 330 (3) Fluid Mechanics ENGR 210 MATH 275 MATH 333	ME 331 (1) Fluid Mechanics Lab * ME 330	MATH 360/361 (3) Engineering Statistics MATH 175	ME 350 (3) Engineering Mechanics of Materials ENGR 210 MATH 175	ENGR 240 (3) Introduction to Circuits * MATH 333 ENGR 120 PHYS 211	ENGL 202 (3) Technical Communications
	14 credits	ME 320 (3) Heat Transfer MATH 275 MATH 333 ME 271 ME 302 ME 330	ME 380 (3) Kinematics and Machine Design ENGR 220 MATH 275 MATH 333 ME 271	ME 310 (2) Experimental Methods Lab ENGL 202 ENGR 240 MATH 360/361 ME 331	ME 352 (3) Machine Design I MSE 245/245L MATH 360/361 ME 105 ME 350	FA Elective (3) Foundations of Arts	
Year 4	15 credits	ME 424 (3) Thermal Fluids & Systems Design ME 320 ME 330	ME Elective Program (3)	ME 481 (3) Senior Design Project I * ME 424 * ME 462 ME 310	ME 462 (3) Machine Design II ME 352 ME 380	FH Elective (3) Foundations of Humanities	
	12 credits	ME Elective Program (3)	ME Elective Upper Division Technical (3)	ME 483 (3) Senior Design Project II ME 481		FS Elective (3) Foundations of Social Science Second Field	

Total Credits: 122

Note:

Legend:

COURSE

Course Title

MATH 170

Credits

Pre-Requisite Courses

Note: * Indicates a Co-Requisite course

Color Code:

CORE XYZ

Engineering Fundamentals

ME CORE Course

ME XYZ

Engineering Practice

ME Major Course

Note: Must be admitted to ME Major to register for these courses

ENGR XYZ

Engineering Preparation

ME General Course

F XYZ

University Common Core

Foundational Studies Course