# **MECHANICAL** ENGINEERING 2021/2022 Four-Year Academic Plan

University of Idaho College of Engineering

### Courses in italics are prerequisites

### Courses in bold are co-requisites

\*A grade of C or better is required before registration is permitted in upper-division courses. See course catalog for complete degree requirements and additional information at uidaho.edu/registrar/classes/catalogs.

Last updated 7/29/2021

FRESHMAN FALL			SPRING				
ME 123	Introduction to Mechanical Design (fall only) MATH 143 or 144	3	MATH 175	Calculus II MATH 170	4		
MATH 170	Calculus I C or better in MATH 143 and 144 or sufficient test scores	4	PHYS 211/ 211L	Engineering Physics I with Lab MATH 170 or MATH 170	4		
ENGL 102	College Writing and Rhetoric English 101 or sufficient test scores	3	CHEM 111/ 111L	General Chemistry I with Lab C or better in MATH 170; sufficient test scores;	4		
COMM 101	Fundamentals of Public Speaking	2	*ENGR 210	or permission Engineering Statics	3		
ELECTIVE	American Diversity	3	*ENGR 210	MATH 170	3		
			ELECTIVE	Humanities/Social Science Elective	3		
	Total Credits	15		Total Credits	18		

SOPHOM	ORE FALL			SPRING	
ME 223	Mechanical Design Analysis ME 123, <b>MATH 175</b>	3	ME 301	Computer Aided Design Methods ME 223	3
MSE 201	Elements of Materials Science	3	ENGR 220	Engineering Dynamics ENGR 210	3
PHYS	Engineering Physics II with Lab	4	ENGR 240	Introduction to Electrical Circuits MATH 175, PHYS 211/211L	3
212/212L	PHYS 211/211L; MATH 175 or MATH 175 Ordinary Differential Equations		MATH 275	Calculus III MATH 175	3
MATH 310	ATH 310 MATH 175 (MATH 275 recommended) 3		MATH 330	Linear Algebra MATH 175 recommended, <b>MATH 160 or 170</b>	3
ENGR 350	Engineering Mechanics of Materials ENGR 210, MATH 175, <b>MATH 310</b>	3	ELECTIVE	International Requirement	3
	Total Credits	16		Total Credits	18

JUNIOR FALL			SPRING			
ME 341	Intermediate Mechanics of Materials ME 301 and certification, <b>MSE 201</b>	3	Ν	1E 325	Machine Component Design I ME 341, MSE 201, Spring Only	3
ME 313	Dynamic Modeling of Engineering Systems ME 223, ENGR 220, ENGR 240, MATH 310, <b>MATH 330</b>	3	Ν	1E 345	Heat Transfer ME 322, MATH 310, <b>ENGR 335</b>	3
ME 322		3	N	1E 330	Experimental Methods for Engineers	3
	CHEM 111/111L, PHYS 211/PHYS 211L		PH	IIL 103	L 103 Introduction to Ethics	3
*ENGR 335	Engineering Fluid Mechanics ENGR 210, MATH 275	3	EL	ECTIVE	Technical Elective	3
ECON	ECON 201, 202 or 272	3 or 4		ECTIVE	Technical Elective	3
ELECTIVE	STAT/PHYS/MATH Elective	3		ECTIVE		3
	Total Credits	18/19			Total Credits	18

SENIOR	FALL	
ME 424	Mechanical Systems Design I (fall only) ME 301, ME 313, ME 325, ME 330, ME 345 and certification	3
ME 430	Senior Lab ME 313, ME 330	3
ME 435	Thermal Energy Systems Design ME 345	3
ENGL 317	Technical Writing ENGL 102, Junior standing or permission	3
ELECTIVE	Humanities/Social Science Elective	3
	Total Credits	16

	SPRING	
ME 426	Mechanical Systems Design II (spring only) ME 424	3
ME 416	FE Exam Review Senior standing or permission	1 P/F
ELECTIVE	Technical Elective	3
ELECTIVE	Technical Elective	3
ELECTIVE	Humanities/Social Science Elective	3
	Total Credits	13

**University** of Idaho



## **MECHANICAL ENGINEERING**

Design processes and machines to power industry and manufacture products for everyday use, including renewable fuels, aeronautics, robotics and automation, engines, and nuclear and industrial power generation.

## **ABOUT YOUR DEGREE PATH**

Mechanical Engineering majors study engineering sciences, physical sciences, mathematics, communications, humanities, and social sciences.

Specialized courses in thermal sciences and applied mechanics are available. Develop you individual interests and creative ability through the selection of technical electives.

Our graduates are prepared to enter professional engineering practice and advanced study through our regionally-recognized program of high-quality instruction, integrated design and laboratory experience, and scholarship.

## **MATCH YOUR INTERESTS**

- Hybrid Electric Vehicles
- **Engines and Powertrains**
- **Robotics and Automation**
- **Renewable Energy**
- **Prosthetic Limbs** •
- **3D** Printing
- Aerospace
- ۲ Automotive Systems
- Computer-Aided Design and Simulation
- Entrepreneurship and **Product Development**
- Mechanical Aspects of Biological Systems
- Heating, Ventilating and Air-Conditioning Systems
- Thermodynamics and Combustion
- Materials Selection, Modeling and Testing

### **YOUR DEGREE IS** ACCREDITED

Our undergraduate Mechanical Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

**DEPARTMENT OF MECHANICAL ENGINEERING** 208-885-6579 medept@uidaho.edu uidaho.edu/engr/me