

University of Washington Bothell

Mechanical Engineering Curriculum

AY23/24

Name: _____

Student # _____

Mechanical Engineering: 90 credits		
B ENGR 310: Computational Physical Modeling (or AMATH 301 & STMATH 208)	4	
B ENGR 320: Fundamentals of Material Science (MSE 170 allowed)	4	
B ENGR 321: Materials Engineering Lab	2	
*B ME 221: Statics	4	
*B ME 222: Mechanics of Materials	4	
*B ME 223: Dynamics	4	
B ME 301: Intro Seminar for Mechanical Engineering	1	
B ME 315: Intro to 3D Modeling, Design & Analysis (ME 123 allowed)	4	
B ME 410: Electric Power and Machinery	5	
B ME 481: Citizen Engineer	5	
Thermal Fluid Systems Analysis		
B ME 331: Thermodynamics	4	
B ME 332: Fluid Mechanics	4	
B ME 333: Heat Transfer	4	
B ME 334: Thermal Fluids Lab	2	
Mechanical Systems Design		
B ME 341: Mechanical Systems Design I	4	
B ME 342: Mechanical Systems Design II	4	
B ME 343: Mechanical Systems Design III	5	
Capstone Sequence		
B ENGR 494: Engineering Design & Innovation	3	
B ME 495: Capstone Project in ME I	3	
B ME 496: Capstone Project in ME II	4	

Mechanical Engineering Electives: 16 credits		
	4	
	4	
	4	
	4	

Natural Science: 21 credits		
*B CHEM 143/144: General Chemistry I w/ Lab	6	
*B PHYS 121: Mechanics	5	
*B PHYS 122: Electromagnetism and Oscillatory	5	
B PHYS 123: Waves	5	

Mathematics: 30 credits		
*STMATH 124: Calculus I	5	
*STMATH 125: Calculus II	5	
*STMATH 126: Calculus III	5	
*STMATH 207: Intro to Differential Equations	5	
*STMATH 224: Multivariable Calculus	5	
STMATH 390: Probability & Statistics in Engineering	5	

General education and additional courses: 39 credits		
*B WRIT134: Composition	5	
Additional Writing (W): BWRT135 (or ENGL141, ENGL182, HCDE231, ENGR231)	5	
Any A&H (BIS 121 or equivalent suggested)	5	
Any A&H	5	
Any A&H	1	
Any SSc	5	
Any SSc	5	
CSS 112: Intro to Programming for Scientific Applications	4	
Additional credit as needed to reach 180 minimum for graduation		

B ME policies and notes

A minimum grade of 2.0 is required in each departmental requirement and prerequisite.

Electives - Maximum of 4 credits of BME498/499 can be counted as BME elective credits. Courses in other disciplines require the department's approval.

Diversity, Natural World, and QSR requirements are fulfilled by program requirements.

UW Policies

Residency - 45 out of the final 60 credits must be earned at your home campus.

Cross Campus Enrollment - after earning 15 credits at your home campus, students are able to take up to 15 credits a year at another UW campus.

*Program Prerequisites

The University of Washington Bothell Bachelor of Science in Mechanical Engineering curriculum is designed to meet requirements set forth by the Accreditation Board for Engineering and Technology (ABET). Each student completing the BSME degree will demonstrate mastery of the following competencies as established by ABET:

- a) Ability to apply knowledge of mathematics, science, and engineering.
- b) Ability to design and conduct experiments, as well as to analyze and interpret data.
- c) Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- d) Ability to function on multidisciplinary teams.
- e) Ability to identify, formulate, and solve engineering problems.
- f) Understanding of professional and ethical responsibility.
- g) Ability to communicate effectively.
- h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i) Recognition of the need for, and an ability to engage in life-long learning.
- j) Knowledge of contemporary issues.
- k) Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.