

Mechanical Engineering (BESA Concentration)

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BESA Mechanical Engineering Concentration

(108 units minimum)

Mathematics & Science Prerequisites

		Units
21-120	Differential and Integral Calculus -First-year (Gen Ed; prerequisite: 21-090)	10
21-122	Integration and Approximation -First-year (Gen Ed)	10
21-254	Linear Algebra and Vector Calculus for Engineers	11
21-260	Differential Equations	9
15-110	Principles of Computing -(Gen Ed)	10
or 15-112	Fundamentals of Programming and Computer Science	
33-141	Physics I for Engineering Students -First-year (Gen Ed)	12
33-142	Physics II for Engineering and Physics Students - First-year	12

Note: The BESA Gen Ed Science and Technology requirement can be filled with either 15-110 or 15-112. Students may start taking MechE Courses upon completion of Calculus I, Calculus II and Physics I.

Mechanical Engineering Courses (7 courses, 63 units)

24-101	Fundamentals of Mechanical Engineering -First-year; co-req: 21-120, 33-141	12
xx-xxx	2nd Introduction to Engineering course, student's choice	12
24-203	TechSpark: Machine Shop Principles -Sophomore year	3
24-251	Electronics for Sensing and Actuation - Sophomore year	4
24-261	Mechanics I: 2D Design -Fall, Sophomore year; prereq: 21-122, 33-121/33-141/33-151	10
24-262	Mechanics II: 3D Design -Spring, Sophomore year; prereq: 33-141/33-151, 24-261	10
24-370	Mechanical Design: Methods and Applications - Fall, Junior year; prereq: 24-203, 24-262	12

Electives (45 units minimum)

Choose 5 elective courses. Each course should be a minimum of 9 units. At least 3 courses should be from the following MechE courses and 2 of the courses may be ENG with prerequisites in consultation with the concentration advisor.

24-221	Thermodynamics -Fall; prereq: 21-122, 24-101, 33-121/33-141/33-151	10
24-231	Fluid Mechanics -Spring; prereq: 21-122, 33-141/33-151	10
24-291/381	Environmental Systems on a Changing Planet - Fall	9/12
24-292	Renewable Energy Engineering -Spring; prereq: 33-141	9
24-3xx	24-300 or above	