

***Bachelor of Science in Mechanical Engineering Curriculum
(BSME)***

Sample Schedule:

Autumn		Winter		Spring	
First Year					
ENGR 1611 - Intro to Engineering Design	4	ENGR 1622 - Intro to Mechatronic Systems I	4	ENGR 1632 – Intro to Mechatronic Systems II	4
FSEM 1111 - First Year Seminar	4	MATH 1952 - Calculus II	4	MATH 1953 – Calculus III	4
MATH 1951 - Calculus I	4	PHYS 1211 - University Physics I	5	WRIT 1133 - Writing and Research	4
COMP 1451 - Engineering Programming	4	WRIT 1122 - Academic Writing	4	PHYS 1212 – University Physics II	5
		ENGR 1201 – Career Readiness I	1		
	16 QH		18 QH		17 QH
Second Year					
CHEM 1010 - General Chemistry	3	ENME 2520 - Dynamics I w/ Lab	4	ENME 2530 – Dynamics II	3
CHEM 1240 - General Chemistry Lab	1	ENME 2710 – Engr. Thermodynamics I	3	ENME 2720 – Engr. Thermodynamics II	3
ENME 2510 – Statics	4	MATH 2070 - Intro to Diff. Equations	4	MATH 2080 - Calculus of Several Variables	4
PHYS 1214 - Univ Physics III for Engineers	4	Math-Sci/UCC	4	Math-Sci/UCC	4
Math-Sci/UCC	4	ENGR 2201 – Career Readiness II	1		
	16 QH		16 QH		14 QH
Third Year					
ENEE 2012 - Circuits I w/ Lab	4	ENGR 2610 – Engineering Integration I	3	ENGR 2610 – Engineering Integration II	3
ENME 2651 – Fluids I	3	ENME 2661 – Fluids II /Heat Transfer I	3	ENME 2410 – Materials Science	4
ENME 2541 - Mechanics of Materials	3	ENME 3511 – Machine Design	3	ENME 2540 – System Dynamics	3
ENGR 2910 – Engineering Econ and Ethics	3	Eng / Math-Sci / UCC.	4	ENME 2671 – Heat Transfer II w/Lab	4
Eng / Math-Sci / UCC	4	ENGR 3201 – Career Readiness III	1		
	17 QH		14 QH		14 QH
Fourth Year					
ASEM 2XXX – Advance Seminar*	4	ENGR 3323 – Engineering Design Project II	3	ENGR 3333 – Engineering Design Project III	3
ENGR 3313 – Engineering Design Project I	2	ENME 2810 – Mech Engr. Laboratory	3	ENME 3810 – Mech Engr Capstone Laboratory	3
Eng / Math-Sci / UCC	4	Eng / Math-Sci / UCC	4	Eng / Math-Sci / UCC	3/4
Eng / Math-Sci / UCC	4	OOOO – Open Elective	3	OOOO – Open Elective	4/3
		ENGR 3203 – Career Readiness IV	1		
	14 QH		14 QH		13 QH
Required Total Hours					
					183 QH

Engineering Electives – Three courses of 3000 level or higher engineering (ENGR, ENME, ENCE, ENEE, ENBI).

UCC – Two AI-Society and two SI-Society courses

Open Electives – Any course 1000 level or above. Only needed to reach 183 credits.

Math/Sci Electives - 7-credits of math or science courses beyond those required. Must be courses that could be taken by a NSM major (PHYS, MATH, CHEM, BIOL), usually 2000 level or higher.

Approved Math-Sci Courses (subject to participating department course offerings):

Biology

BIOL 1010 - Physiological Systems w/ BIOL 1020 - Physiological Systems Lab; BIOL 1011 - Evolution, Heredity and Biodiversity w/ BIOL 1021 - Evolution, Heredity and Biodiversity Lab; BIOL 2450 - Human Anatomy; BIOL 2090 - Biostatistics; BIOL 2120 - Cell Structure and Function w/ BIOL 2121 - Cell Structure & Function Lab; BIOL 3250 - Human Physiology

Chemistry

CHEM 2011 - Analysis Equilibrium Systems w/ CHEM 2041 - Analysis Equilibrium Systems Lab; CHEM 2451 - Organic Chemistry I w/ CHEM 2461 - Organic Chemistry Lab I; CHEM 2452 - Organic Chemistry II w/ CHEM 2462 - Organic Chemistry Lab II; CHEM 2453 - Organic Chemistry III w/ CHEM 2463 - Organic Chemistry Lab III; CHEM 3610 - Physical Chemistry I; CHEM 3620 - Physical Chemistry II

Math

MATH 2060 - Elements of Linear Algebra; MATH 3080 - Introduction to Probability; MATH 3090 - Mathematical Probability; MATH 3851 - Functions Complex Variable

Physics

PHYS 2251 - Modern Physics I; PHYS 2252 - Modern Physics II w/ PHYS 2260 - Modern Physics Lab; PHYS 2259 - Uncertainty and Error Analysis; PHYS 2300 – Physics of the Body; PHYS 2340 - Medical Imaging Physics; PHYS 2350 – Radiology and Nuclear Medicine; PHYS 3510 - Analytical Mechanics I; PHYS 3711 - Optics I; PHYS 2051 - Bio-Astronomy of Solar Systems; PHYS 2052 - Stellar Physics; PHYS 2053 - Galaxies and Cosmology; PHYS 2061 - Telescopes and Instrumentation; PHYS 2062 - Astronomy with Digital Cameras; PHYS 2051 – Astrobiology; PHYS 2400 – Intro to Quantum Computing; PHYS 2610 – Physics of the Climate

Note: Other course offerings may be allowed; please see the department chair for approval of courses not on this list.