

Mechanical Engineering B.S.M.E. with Aerospace Concentration

B.S.M.E. with Aerospace Concentration Eight-Semester Plan

First Year	Units	
	Fall	Spring
ENGL 10103 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
CHEM 14103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	3	
MATH 24004 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) ¹	4	
GNEG 11101 Introduction to Engineering I	1	
Select one of the following to satisfy General Education Outcome 4.2:	3	
HIST 20003 History of the American People to 1877 (ACTS Equivalency = HIST 2113)		
HIST 20103 History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123)		
PLSC 20003 American National Government (ACTS Equivalency = PLSC 2003)		
GNEG 11201 Introduction to Engineering II	1	
PHYS 20304 University Physics I (ACTS Equivalency = PHYS 2034) (Satisfies General Education Outcome 3.4)	4	
MATH 25004 Calculus II	4	
ENGL 10303 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)	3	
Freshman Science Elective, select one of the following:	4	
ASTR 20003 Survey of the Universe (ACTS Equivalency = PHSC 1204 Lecture) & ASTR 20001 Survey of the Universe Laboratory (ACTS Equivalency = PHSC 1204 Lab)		
BIOL 10103 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture) & BIOL 10101 Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)		
BIOL 24103 Human Physiology (ACTS Equivalency = BIOL 2414 Lecture) & BIOL 24101 Human Physiology Laboratory (ACTS Equivalency = BIOL 2414 Lab)		
CHEM 14203 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture) & CHEM 14201 University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)		

GEOL 11103 Physical Geology (ACTS Equivalency = GEOL 1114 Lecture) & GEOL 11101 Physical Geology Laboratory (ACTS Equivalency = GEOL 1114 Lab)
 PHYS 20504 University Physics III
 PHYS 35404 Optics
 PHYS 36103 Modern Physics & PHYS 3610V Modern Physics Laboratory

Year Total: 14 16

Second Year	Units	
	Fall	Spring
MATH 26004 Calculus III	4	
PHYS 20404 University Physics II (ACTS Equivalency = PHYS 2044 Lecture) (Satisfies General Education Outcome 3.4)	4	
MEEG 20003 Statics	3	
MEEG 21031 Computer-aided Design	1	
MEEG 23003 Introduction to Materials	3	
MATH 25804 Elementary Differential Equations		4
MEEG 20103 Dynamics		3
MEEG 21003 Mechanical Design and Manufacturing		3
MEEG 24003 Thermodynamics		3
MEEG 27003 Computer Methods in Mechanical Engineering		3
Year Total:	15	16

Third Year	Units	
	Fall	Spring
ELEG 39003 Electric Circuits and Machines	3	
ECON 21003 Principles of Macroeconomics (ACTS Equivalency = ECON 2103) (Satisfies General Education Outcome 3.3) or ECON 21403 Basic Economics: Theory and Practice	3	
MEEG 30103 Mechanics of Materials	3	
MEEG 31103 Fundamentals of Vibrations	3	
MEEG 32002 Mechanical Engineering Laboratory I	2	
MEEG 35003 Mechanics of Fluids	3	
MEEG 32203 Introduction to Mechatronics		3
Humanities State Minimum Core Elective (Select a course which satisfies General Education Outcomes 3.2 and 5.1) ²		3
MEEG 32102 Mechanical Engineering Laboratory II		2
MEEG 41003 Machine Element Design		3
MEEG 44103 Heat Transfer		3
Aerospace Technical Science Elective		3
Year Total:	17	17

Fourth Year	Units	
	Fall	Spring
MEEG 41802 Creative Project Design I	2	

MEEG 41302 Professional Engineering Practices	2	
MEEG 42002 Mechanical Engineering Laboratory III	2	
MEEG 44803 Thermal Systems Analysis and Design	3	
Fine Arts State Minimum Core Elective (Satisfies General Education Outcome 3.1) ³	3	
Aerospace Technical Science Elective	3	
MEEG 41902 Creative Project Design II (Satisfies General Education Outcome 6.1)		2
Social Sciences State Minimum Core Elective (Satisfies General Education Outcome 3.3) ⁴		3
Social Sciences State Minimum Core Elective (Satisfies General Education Outcomes 3.3 and 4.1) ⁵		3
Aerospace Technical Science Elective		3
Aerospace Technical Science Elective		3
Year Total:	15	14

Total Units in Sequence: **124**

¹ Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 24004.

² The Humanities Elective courses which satisfy General Education Outcomes 3.2 and 5.1 include: CLST 10003, CLST 100H3, CLST 10103, HUMN 112H4, PHIL 20003, PHIL 20003, PHIL 200H3, PHIL 21003.

³ The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include: ARCH 10003, ARHS 10003, COMM 10003, DANC 10003, LARC 10003, MUSC 10003, MUSC 100H3, MUSC 10103, MUSC101H3, MUSC 13303, THTR 10003, THTR 10103, or THTR 101H3.

⁴ The Social Sciences Elective courses which satisfy General Education Outcome 3.3 include: AGECE 11003, AGECE 21003, ANTH 10203, COMM 10203, ECON 21003, ECON 22003, ECON 21403, EDST 20003, HDFS 14003, HDFS 24103, HDFS 26003, HIST 11193, HIST 111H3, HIST 11293, HIST 112H3, HIST 20003, HIST 20103, HIST 20903, HUMN 111H4, HUMN 211H4, INST 28103, INST 281H3, PLSC 20003, PLSC 20103, PLSC 21003, PLSC 28103, PLSC 281H3, PSYC 20003, RESM 28503, SOCI 10103, SOCI 101H3, or SOCI 20103.

⁵ The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 4.1 include: ANTH 10203, COMM 10203, HDFS 14003, HDFS 24103, HIST 11193, HIST 111H3, HIST 11293, HIST 112H3, HIST 20903, HUMN 111H4, HUMN 211H4, INST 28103, INST 281H3, PLSC 20103, PLSC 28103, PLSC 281H3, RESM 28503, SOCI 10103, SOCI 101H3, or SOCI 20103.

Note, courses cannot be counted twice in degree requirements.