

Bachelor of Science in Mechanical Engineering for Full Time Students Four Year Study Plan as of Academic Year 2024/2025

FRESHMAN YEAR (35 Credit Hours)

FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hrs	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
ALIS 1211	Introduction to Islamic culture	2	2	0	PRFC/PRFW/FR EE 0061 or its equivalent	PHEH 1112	Healthy Behaviors and management	1	1	0	PHEH 1111
PHEH 1111	Active Living Lifestyle	1	1	0	PRFC/PRFW/FR EE 0061 or its equivalent	COMM 1312	Writing and Research	3	3	0	COMM 1311
COMM 1311	Written Communication	3	3	0	PRFC/PRFW/FR EE 0061 or its equivalent	UNIV 1212	Critical Thinking & Problem Solving	2	2	0	UNIV 1211
UNIV 1211	Professional Development and Competencies	2	2	0	PRFC/PRFW/FR EE 0061 or its equivalent	MATH 1423	Calculus II	4	4	1	MATH 1422
MATH 1422	Calculus I	4	4	1	PRFM 0022	CHEM 1421	Chemistry for Engineers I	4	3	3	PRFM 0022
PHYS 1421	Physics for Engineers I	4	3	3	PRFM 0022	GEEN 2311	Engineering Mechanics I: Statics	3	3	0	PHYS 1421
GEEN 1211	Intro to Engineering	2	2	0	PRFM 0022						
Total		18	17	4		Total		17	16	4	

SOPHOMORE YEAR (35 Credit Hours)

FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hrs	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
ASSE 2111	Learning Outcome Assessment I	1	1	0	Sophomore Standing	MEEN 2311	Materials Engineering	3	3	0	GEEN 2311 CHEM 1421
COMM 2311	Oral Communication	3	3	0	COMM 1312	GEEN 2313	Thermodynamics I	3	3	0	MATH 1423 CHEM 1421
UNIV 1213	Leadership And Teamwork	2	2	0	UNIV 1212	MATH 2332	Ordinary Differential Equations	3	3	1	MATH 1324
MATH 1324	Calculus III	3	3	1	MATH 1423	MEEN 2313	Solid Mechanics	3	3	0	MEEN 2312
PHYS 1422	Physics for Engineers II	4	3	3	PHYS 1421 MATH 1422	ALIS 1212	The Social System in Islam	2	2	0	ALIS 1211
GEEN 2211	Engineering Computing	2	1	3	MATH 1423 GEEN 1211						
MEEN 2312	Engineering Mechanics II: Dynamics	3	3	0	GEEN 2311	COMM 2312	Technical & Professional Communication	3	3	0	COMM 2311
Total		18	16	7		Total		17	16	4	

Bachelor of Science in Mechanical Engineering for Full Time Students
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JUNIOR YEAR (34 Credit Hours)

FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
MEEN 3394	Computer Aided Design / Manufacturing	3	3	0	MEEN 2313	GEEN 3314	Electric Circuits and Electronics	3	2	3	PHYS 1422 & Junior Standing
GEEN 3311	Intro to Fluid Mechanics	3	3	0	GEEN 2313	ASSE 3211	Learning Outcome Assessment II	2	2	0	ASSE 2111 & Junior Standing
MEEN 3311	Manufacturing Processes	3	3	0	MEEN 2311	MEEN 3432	Computational Methods	4	3	3	GEEN 2211 MATH 2332
MEEN 3101	Machine Shop Practice and Safety	1	0	3	MEEN 2313	MEEN 3333	Heat Transfer	3	3	0	GEEN 3311
MEEN 3322	Thermodynamics II	3	3	0	GEEN 2313	MEEN 3395	Mechanical Vibrations	3	3	0	MEEN 3391
MEEN 3391	Design Of Mechanisms	3	3	0	MEEN 2312						
ALIS 2211	Linguistic Comm. Skills	2	2	0	ALIS 1212	MEEN 3111	Thermofluids & Energy Lab	1	0	3	GEEN 3311
Total		18	16	6		Total		16	12	12	

SUMMER OF JUNIOR YEAR (3 Credit Hours)

Course Number	Course Title	Credit Hours	Pre-requisite
MEEN 3301	Internship	3	8 weeks (320 hours) full time End of Junior Year (90 student credit hours)

SENIOR YEAR (32 Credit Hours)

FIRST "FALL" SEMESTER						SECOND "SPRING" SEMESTER					
Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite	Course Number	Course Title	Credit Hours	Contact Hours		Pre-requisite
			Lec	Lab					Lec	Lab	
MEEN 4392	Feedback Control	3	2	3	MEEN 3395 MEEN 3432 GEEN 3314	ALIS 2212	The Biography of Prophet Mohammad	2	2	0	ALIS 2211
MEEN 4393	Machine Design	3	3	0	MEEN 3394 MEEN3311	MEEN 4311	Principles of HVAC	3	2	3	MEEN 3322 MEEN 3333
MEEN 4396	Mechanical Engineering Senior Design I	3	2	3	MEEN 3301 MEEN 3333	MEEN 4397	Mechanical Engineering Senior Design II	3	3	0	GEEN 4311 MEEN 4396
GEEN 4311	Engineering Economy	3	3	0	MEEN 3301	Social Science	Social Science Elective	3	3	0	Select one from list
MEEN 4322	Power Generation	3	3	0	MEEN 3322 MEEN 3333	MEEN XXXX	ME Tech. Elective II	3	3	0	Select from list.
MEEN XXXX	ME Tech. Elective I	3	3	0	Select from list.						
Total		18	15	9		Total		14	12	6	

TOTAL DEGREE CREDIT HOURS = 139

SOCIAL SCIENCE ELECTIVES			
Course Number	Course Title	Credit Hours	Pre-requisites
ECON 1311	Introduction to Macroeconomics	3	None
ECON 1312	Introduction to Microeconomics	3	None
FREN 1311	Introduction to French Language	3	None
FURS 1311	Introduction to Futures Skills	3	None
FUTR 1311	Introduction to Futures Studies	3	None
GEGR 1311	World Regional Geography	3	None
HIST 1311	World Civilizations	3	None
PSYC 1311	Introduction to Psychology	3	None
SERV 1311	Introduction to Service Learning and Volunteering	3	None
SPAN 1311	Introduction to Spanish Language	3	None
SUST 1311	Introduction to Sustainability	3	None
SYST 1311	Introduction to Systems Thinking	3	None
BSTW 1311	Behavioral Sciences in 3D World	3	None
DANT 1311	Digital Anthropology	3	None

MECHANICAL ENGINEERING TECHNICAL ELECTIVES			
Course Number	Course Title	Credit Hours	Pre-requisites
MEEN 4312	Fluid Mechanics	3	GEEN 3311: Introduction to Fluid Mechanics MEEN 3322: Thermodynamics II
MEEN 4315	Principles of Building Energy Analysis	3	MEEN 3322: Thermodynamics II MEEN 3333: Heat Transfer
MEEN 4331	Internal Combustion Engines	3	MEEN 3322: Thermodynamics II MEEN 3333: Heat Transfer
MEEN 4332	Turbomachinery	3	MEEN 3322: Thermodynamics II MEEN 3333: Heat Transfer
MEEN 4341	Corrosion Engineering	3	MEEN 3322: Thermodynamics II MEEN 2311: Materials Engineering MEEN 3333: Heat Transfer
MEEN 4344	Materials in Design	3	MEEN 3311 Manufacturing Processes MEEN 4393 Machine Design
MEEN 4351	Intermediate Dynamics	3	MEEN 3395: Mechanical Vibrations
MEEN 4394	Advanced Control Systems	3	MEEN 4392: Feedback Control