

MECHANICAL ENGINEERING

BACHELOR OF SCIENCE (BS. ENGM)

CORE Requirements	Credits	Foundational Science and Mathematics Requirements	Credits	Mechanical Engineering Requirements	Credits
CORE 090 First Year Exp.	1	PHYS 113 Physics for Sc & Eng I	3	PHYS 241 Statics	3
CORE 100 Lib Arts Seminar	3	PHYS 113L Phy for Sc & Eng I Lab	1	PHYS 242 Mechanics of Solids	3
CORE 110 Effective Writing	3	PHYS 114 Physics for Sc & Eng II	3	PHYS 350 Thermo/Stat. Mech.	3
CORE 115 or 116 Oral Comm.	3	PHYS 114L Phy for Sc & Eng II Lab	1	CS 111 Programing for Science & Eng	2
CORE 131 or 133 Civilization	3	CHEM 113 Gen. Chem. I	3	CS 111L Prog for Science & Eng Lab	1
CORE 140 or 141-145 Forgn.	3	CHEM 113L Gen. Chem. I Lab	1	ENGR 150 Engineering Seminar	2
CORE 150-159 Soc. Sci. ¹	3	CHEM 114 Gen. Chem. II	3	ENGR 250 System Design & Analysis	3
CORE 160-169 Literature	3	CHEM 114L Gen. Chem. II Lab	1	ENGR 250L Sys Design & Analysis Lab	1
CORE 170-179 The Arts	3	MATH 129 Calculus I	4	ENGR 320 Fluid Mechanics	3
CORE 180-189 Amer. Studies ¹	3	MATH 130 Calculus II	4	ENGR 320L Fluid Mechanics Lab	.5
CORE 190-199 GlobalStudies ¹	3	MATH 231 Calculus III	4	ENGR 330 Project Mgmt & Eng Econ	3
CORE 250-259 Syst. Theology	3	MATH 237 Math Meth. for Phys. Sci.	3	ENGR 350 Engineering Materials	3
CORE 260-269 Mor. Theology	3	MATH 238 Differential Equations	3	ENGR 350L Engineering Materials Lab	.5
CORE 280 Philosophy I	3			ENGR 360 Probability & Eng Statistics	3
CORE 281-289 Philosophy II	3			ME 200 Intro to Mechanical Engineering	3
				ME 200L Intro to Mech Engineering Lab	.5
				ME 320 Manufacturing Systems	3
				ME 320L Manufacturing Systems Lab	1
				ME 340 Dynamics	3
				ME 340L Dynamics Lab	.5
				ME 360 Heat Transfer	3
				ME 360L Heat Transfer Lab	1
				ME 380 Mechatronics	3
				ME 380L Mechatronics Lab	1
				ME 400 Mechanical Design	3
				ME 400L Mechanical Design Lab	1
				ME 420 System Dynamics	3
				ME 420L System Dynamics Lab	1
				ME 440 Senior Design	3
				ME 440L Senior Design Lab	1
				ME 480 Senior ME Seminar	1
				Mechanical Engineering Elective	3
	43		34		66

Total Credits = 143

¹Students are required to take CORE 150, CORE 180 **OR** CORE 190 to fulfill the Interdisciplinary CORE requirement.

- If a student takes CORE 150, then choose from 181 – 188 to fulfill the 18x requirement AND from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 180, then choose from 151 – 158 to fulfill the 15x requirement AND from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 190, then choose from 151 – 158 to fulfill the 15x requirement AND from 181 – 188 to fulfill the 18x requirement.

Mechanical Engineering students are eligible to sit for industry certification exams based on the completion of the following courses:

- ENGR 330: Proj. Mgmt & Eng Econ: Certified Associate in Project Management (CAPM)[®] - Project Management Institute
- ME 480 Senior ME Seminar: Fundamentals of Engineering – Mechanical (NCEES)

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SUGGESTED SEQUENCE – 4 YEAR PROGRAM

- Use the information below as a guide when selecting courses.
- Refer to the reverse side in order when selecting major courses, major electives, core courses, and free electives when applicable.
- Consult your Academic Advisor prior to course registration.
- Refer to the King’s College Catalog and/or website for course titles and descriptions.
- Choose one course from each CORE category as listed on the reverse side.
 - CORE courses may be taken in any order approved by the academic advisor with the following conditions:
 - CORE 100 and CORE 110 should be taken in the first year whenever possible.
 - CORE 115 (or 116) should be taken within the first two years whenever possible.
 - For students selecting a Foreign Language (CORE 14x), every effort should be made to register for that language in the first available semester at King’s.

1 st Year - Fall		cr.	1 st Year - Spring		cr.
CHEM 113 General Chemistry I		3	CHEM 114 General Chemistry II		3
CHEM 113L General Chemistry I Lab		1	CHEM 114L General Chemistry II Lab		1
PHYS 113 Physics for Scientists & Engineers I		3	PHYS 114 Physics for Scientists & Engineers II		3
PHYS 113L Physics for Scientists & Eng I Lab		1	PHYS 114L Physics for Scientists & Eng II Lab		1
MATH 129 Calculus I		4	MATH 130 Calculus II		4
ENGR 150 Engineering Seminar		2	CORE		3
CORE 090 First Year Experience		1	CORE		3
		15			18*
2 nd Year - Fall			2 nd Year - Spring		
ME 200 Intro to Mechanical Engineering		3	ENGR 250 System Design & Analysis		3
ME 200L Intro to Mechanical Engineering Lab		.5	ENGR 250L System Design & Analysis Lab		1
MATH 231 Calculus III		4	ENGR 350 Engineering Materials		3
MATH 237 Math Meth. for Phys. Sciences		3	ENGR 350L Engineering Materials Lab		.5
CS 111 Programming for Science & Eng		2	PHYS 242 Mechanics of Solids		3
CS 111L Programming for Science & Eng Lab		1	MATH 238 Differential Equations		3
PHYS 241 Statics		3	CORE		3
		16.5	CORE		3
					19.5*
3 rd Year - Fall			3 rd Year - Spring		
ENGR 320 Fluid Mechanics		3	ME 360 Heat Transfer		3
ENGR 320L Fluid Mechanics Lab		.5	ME 360L Heat Transfer Lab		1
ENGR 330 Project Mgmt & Eng Econ		3	ME 340 Dynamics		3
ME 320 Manufacturing Systems		3	ME 340L Dynamics Lab		.5
ME 320L Manufacturing Systems Lab		1	ENGR 360 Probability & Engineering Statistics		3
PHYS 350 Thermodynamics		3	CORE		3
CORE		3	CORE		3
CORE		3			
		19.5*			16.5
4 th Year - Fall			4 th Year - Spring		
ME 400 Mechanical Design		3	ME 480 Senior ME Seminar		1
ME 400L Mechanical Design Lab		1	ME 440 Senior Design		3
ME 380 Mechatronics		3	ME 440 Senior Design Lab		1
ME 380 Mechatronics Lab		1	ME 420 System Dynamics		3
Mechanical Engineering Elective		3	ME 420L System Dynamics Lab		1
or			CORE		3
CORE			or		
CORE		3	Mechanical Engineering Elective		
CORE		3	CORE		3
CORE		3	CORE		3
		20*			18*

Total Credits Required for Graduation = 143

* Students are encouraged to take a summer course to relieve the credit load during this semester