

Kennesaw State University  
Mechanical Engineering Department

Name \_\_\_\_\_ ID# \_\_\_\_\_ Email \_\_\_\_\_

**2018-2019 Catalog (Check List) Requirements for the BSME Degree**

Term	Designation	Number	Course Title (or approved substitution)	Credit Hours	Pre-requisites and {Co-requisites}	Grade	
FALL	ENGL	1101	Composition I	3	None		
	EDG	1211	Engineering Graphics I	3	None		
	ME	1001	Introduction to Mechanical Engineering	2	None		
	CHEM	1211	General Chemistry I	3	{MATH 1112 or MATH 1113 or MATH 1190}		
	CHEM	1211L	General Chemistry I Laboratory	1	Can be taken with or after CHEM 1211		
	<b>MATH</b>	<b>1190</b>	Calculus I	4	MATH 1112 or MATH 1113		
Spring	ENGL	1102	Composition II	3	ENGL 1101		
	ECON	1000	Contemporary Economic Issues	2	None		
	MATH	2202	Calculus II	4	MATH 1190		
	<b>PHYS</b>	<b>2211</b>	Principles of Physics I	3	MATH 1190		
	<b>PHYS</b>	<b>2211L</b>	Principles of Physics Laboratory I	1	Can be taken with or after PHYS 2211		
			Core C1 (Literature of the World)		ENGL 1102		
Fall	ME	1311	MATLAB for Engineers with Applications	3	Math 1190, {ME 1001}		
	MATH	2203	Calculus III	4	MATH 2202		
	<b>ENGR</b>	<b>2214</b>	Engineering Mechanics Statics	3	PHYS 2211, PHYS 2211L		
	PHYS	2212	Principles of Physics II	3	MATH 2202, PHYS 2211		
	PHYS	2212L	Principles of Physics Laboratory II	1	Can be taken with or after PHYS 2212		
Spring	COM	1100	Human Communication (Recommended)	3	None		
	MATH	2306	Ordinary Differential Equations	3	MATH 2202		
	EE	2301 or 2305	Circuit Analysis I	4	PHYS 2211, PHYS 2211L For EE 2305: PHYS 2212, PHYS 2212L		
	ENGR	3122	Engineering Mechanics Dynamics	3	ENGR 2214, MATH 2202		
	<b>ENGR</b>	<b>3131</b>	Strength of Materials	3	ENGR 2214, MATH 2202		
Fall	<b>ENGR</b>	<b>3132</b>	Strength of Materials Lab	1	Can be taken with or after ENGR 3131		
	ME	3101	Materials Science and Engineering	3	PHYS 2211, CHEM 1211		
	<b>Engineering Standing is required for ME and ENGR courses listed below:</b>						
	ENGR	3125	Machine Dynamics & Vibrations	3	ME 1311, ENGR 3122		
	<b>ENGR</b>	<b>3343</b>	Fluid Mechanics	3	ENGR 2214		
	<b>ENGR</b>	<b>3345</b>	Fluid Mechanics Laboratory	1	Can be taken with or after ENGR 3343		
	<b>ME</b>	<b>3410</b>	Thermodynamics	3	ENGR 2214		
Spring	MATH	2332	Probability and Data Analysis	3	MATH 1190		
	<b>ME</b>	<b>3201</b>	Product Realization	2	ENGR 2214, EDG 1211 or SYE 2100		
	ME	3701	Manufacturing Engineering	3	ENGR 3131, ME 3101		
	ME	3501	Dynamic Systems & Control Theory	3	ENGR 3125, MATH 2306		
	ME	4501	Vibrations & Controls Lab	1	ENGR 3125, {ME 3501}		
	ME	4141	Machine Design I	3	ENGR 3131		
	<b>ME</b>	<b>4250</b>	Computer Aided Engineering	3	ENGR 3131, ENGR 3343, EDG 1211		
<b>ME</b>	<b>3440</b>	Heat Transfer	3	ME 3410, ENGR 3343			
ENGR	4402	Engineering Ethics	1	None			

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Fall	STS	1101	Science, Technology, and Society <i>(Recommended)</i>	3	None		
	ENGR	3325	Engineering Economic Analysis	3	MATH 1190		
	POLS	1101	American Government	3	None		
	<b>ME</b>	<b>4201</b>	Senior Design I	1	ME 3201, ME 3440, ME 4250		
	ME	4403	Heat Transfer and Thermodynamics Lab	1	ME 3440		
			Core E3 (World History)				
			Math or Science Elective				
Spring	<b>ME</b>	<b>4202</b>	Senior Design II	3	ME 4201, ME 4141		
			Core C2 (Arts and Cultures of the World)				
			Core E2 (U.S. History)				
	<b>Select two Technical Electives from the courses listed below:</b>						
	ME	3133	Composite Mechanics	3	ENGR 3131		
	ME	3398	Internship	1-4	90 credit hours and permission of the instructor		
	ENGR	3501	Fundamentals of Nuclear Engineering	3	MATH 2202, { <i>PHYS 2212, PHYS 2212L</i> }		
	ENGR	3502	Radiation Detection & Measurement	3	ENGR 3501		
	MTRE	3710	Mechatronics Engineering Fundamentals	4	(ENGR 2710 or MATH 3260), MTRE 2610, EE 2301		
	ISYE	3801	Aerodynamics	3	MATH 2202		
	ISYE	3802	Aircraft Design & Performance	3	ISYE 3801		
	ISYE	3803	Fundamentals of Avionics	3	ISYE 3801		
	ME	4400	Directed Study	1-4	Approval of instructor and department chair		
	ME	4490	Special Topics in Mechanical Engineering	1-4	Approval of the instructor and department chair		
	ENGR	4501	Nuclear Power Generation	3	ENGR 3501		
	ENGR	4502	Radiation Protection & Health Physics	3	ENGR 3501		
	ENGR	4503	Nuclear Fuel Cycle	3	ENGR 3501		
ISYE	4801	Aircraft Propulsion	3	ISYE 3801			
ISYE	4802	Helicopter Theory	3	ISYE 3801			
ISYE	4803	Aeronautics Senior Design Project	3	ISYE 3802, (ISYE 4801 or ISYE 4802)			
<b>Degree Program Total</b>				<b>130</b>			

NOTES:

- Shows the critical path; important courses that students should take in a timely manner.
- All first-year full-time students entering Kennesaw State University with fewer than 15 semester hours are required to complete a First-Year Seminar (KSU 1101 , KSU 1111 , KSU 1121 , and KSU 1200) or enroll in a Learning Community and complete all courses that comprise it.
- Some MATH or PHYS classes may be approved for math or science electives by the department chair.
- Some ENGR, EE, MTRE, or ISYE courses may be approved for technical electives by the department chair.
- Program is exempt from WELL 1000 course requirement.