

# Mechanical Engineering



Catalog Term: Fall 2020

Total Crd Hrs: 128

Last Updated: Jan 2020

		Hrs		Hrs		Hrs		Hrs		Hrs		Hrs	Total Hrs
Freshman Fall	<b>ENGL 101</b> College English I Pre-req: See Course Catalog with "C" or better	3	<b>MATH 242</b> Calculus I Pre-req: See Course Catalog	5	<b>CHEM 211 &amp; L</b> General Chemistry I Pre-req: See Course Catalog	5	<b>IME 222</b> Engineering Graphics Pre-req: Math 123 with "C" or better	2	<b>IME 222 L</b> Engineering Graphics Lab Pre-req: Math 123 with "C" or better Co-req:IME 222	1			16
Freshman Spring	<b>ENGL 102</b> College English II Pre-req: ENGL 101 See Course Catalog	3	<b>MATH 243</b> Calculus II Pre-req: MATH 242 with "C" or better	5	<b>PHYS 313</b> Physics for Scientist I Co-req: MATH 243 with "C" or better	4	<b>PHYS 315</b> Physics for Scientist I Lab Pre-req: MATH 243 Co-req: PHYS 313 with a "C" or better	1	<b>General Education</b> H/FA/S&BS <i>See Notes *</i>	3	<b>Engineering +</b> Requirement 1 of 3 <i>See Notes **</i>		16
Sophomore Fall	<b>AE 223</b> Statics Pre-req: PHYS 313 Co-req: MATH 243 with "C" or better	3	<b>MATH 344</b> Calculus III Pre-req: MATH 243 with "C" or better	3	<b>PHYS 314</b> Physics for Scientist II Pre-req: MATH 243 and PHYS 313 with "C" or better	4	<b>ME 250</b> Materials Engineering Pre-req: MATH 242 and CHEM211 with "C" or better	3	<b>ME 251</b> Materials Engineering Lab Co-req: ME 250 with "C" or better	1	<b>COMM 111</b> Public Speaking Pre-req: See Course Catalog	3	17
Sophomore Spring	<b>AE 333</b> Mechanics of Materials Pre-req: AE 223 Pre-req with CC: MATH 344 with "C" or better	3	<b>MATH 555</b> Differential Equations I Pre-req: MATH 243 with "C" or better	3	<b>ME 398</b> Thermodynamics I Pre-req: MATH 243 and PHYS 313 with "C" or better	3	<b>ME 325</b> Numerical Methods Pre-req: MATH 243 & PHYS 313 with "C" or better	3	<b>ME 335</b> Dynamics Pre-req: AE 223 and MATH 344 with "C" or better	3	<b>General Education</b> H/FA/S&BS <i>See Notes *</i>	3	18
Junior Fall	<b>PHIL 385</b> Engineering Ethics Pre-req: Junior or senior standing	3	<b>EE 282 &amp; L</b> Circuits I Pre-req with CC: MATH 243 With "C" or better	4	<b>ME 521 &amp; L</b> Fluid Mechanics Pre-req:ME398, MATH555,ME335 with "C" or better	3	<b>ME 475</b> Integrated Design and Manufacturing Pre-req: ME 250, ME 251, AE333 with "C" or better	3	<b>ME 339</b> Design of Machinery Pre-req: IME 222 Pre-req with CC: ME335 with "C" or better	3	<b>Engineering +</b> Requirement 2 of 3 <i>See Notes **</i>		16
Junior Spring	<b>ME 439</b> Mechanical Engineering Design I Pre-req: ME250, ME251, AE333, MATH555 Pre-req with CC: ME 475 with "C" or better	3	<b>ME 522</b> Heat Transfer Pre-req:ME 325, ME521, PHYS314 with "C" or better	3	<b>ME 533 &amp; L</b> Mechanical Engineering Lab Pre-Req:AE333,EE282,ME325, ENGL102, COMM111,PHYS315 Pre-req with CC: ME522 with "C" or better	3	<b>Thermal Elective</b> <i>See Notes *</i> Pre-req: See Course Catalog	3	<b>Technical Elective</b> <i>See Notes *</i> Pre-req: See Course Catalog	3	<b>General Education</b> H/FA/S&BS <i>See Notes *</i>	3	18
Senior Fall	<b>ME 541</b> Mechanical Engineering Design II Pre-req: ME339, ME 439, ME475 with "C" or better	3	<b>ME 625</b> Applications in Thermal Engineering Pre-req: ME 521, ME522 Pre-req with CC: ME533 with "C" or better	3	<b>Mechanical Design Elective</b> <i>See Notes *</i> Pre-req: See Course Catalog	3	<b>Thermal Design Elective</b> <i>See Notes *</i> Pre-req: See Course Catalog	3	<b>Natural Science/General Education</b> Elective <i>See Notes *</i>	3	<b>Engineering +</b> Requirement 3 of 3 <i>See Notes **</i>		15
Senior Spring	<b>Mechanical Elective</b> <i>See Notes *</i> Pre-req: See Course Catalog	3	<b>ME 659</b> Mechanical Control Systems Pre-req: EE282, MATH 555 with "C" or better	3	<b>ME 633 &amp; L</b> Mechanical System Lab Pre-req: ME 522, ME533 with "C" or better	3	<b>ME 662</b> Senior Capstone Design LAST Semester ONLY Pre-req: ME541,ME522 with "C" or better Pre-req with CC: ME633, ME659 with a passing grade	3					12

**Notes:** All major courses and pre-requisite courses need a "C" or better. Review your *catalog term/degree/graduation* requirement before enrolling in a class

**Pre-req** means the course **must** be taken as a prior condition for enrolling in the next course. For pre-req courses the grade requirement is a "C" or better.

**Co-req** means the course **must** be taken simultaneously with the other course listed as a co-requisite.

**Pre-req with CC** means the course can be completed as a pre-req, before taking the listed course, OR it can also be taken at the same time with the other course listed

\* Courses must be from an approved list. Must check with advisor, based on student's catalog requirement

\*\* **ENG+** activities need Chair's pre-approval, and course must be from an approved list ([wichita.edu/eng+](http://wichita.edu/eng+))