Mechanical Engineering (Total Credit Hours: 128)

Catalog Term: Fall 24

Last Updated: 7/24/24

	First year			Sophomore year			
FALL		SPRING		FALL		SPRING	
ENGL 100* <u>OR</u> ENGL 101* (English 1)		ENGL 102* (English 2) P: ENGL 100 or 101 with 'C-' or better		COMM 111* (Public Speaking)		General Education* Social & Behavioral Science	
P: see catalog	3		3		3		3
MATH 242 (Calculus 1) P: see catalog	5	MATH 243 (Calculus II) P: MATH 242 with 'C' or better	5	MATH 344 (Calculus 3) P: MATH 243 with 'C' or better	3	MATH 555 (Differential Equations) P: MATH 243 with 'C' or better	3
CHEM 211 & L (General Chemistry 1) C: see catalog	5	PHYS 313 (Physics for Scientists I) C: MATH 243 with 'C' or better	4	PHYS 314 (Physics for Scientists II) P: MATH 243, PHYS 313 with 'C' or better	4	ME 398 (Thermodynamics 1) P: MATH 243 and PHYS 313 with 'C' or better	3
IME 222 (Engineering Graphics) P: MATH 123 or equivalent with 'C' or better	2	PHYS 315 (Physics I Lab) P: MATH 242 with 'C' or better C: PHYS 313	1	ME 250 (Materials Engineering) P: CHEM 211 and MATH 242 with 'C' or better	3	ECE 282 &L (Circuits 1) PCC: MATH 243 with 'C' or better	4
IME 222 L (Engineering Graphics Lab) P: MATH 123 or equivalent with 'C' or better	1	General Education* First Year Seminar	3	ME 251 (Materials Engineering Lab) C: ME 250	1	AE 333 (Mechanics of Materials) P: AE 223 PCC: MATH 344 with 'C' or	3
C: IME 222		Engineering+ requirement 1 of 3**		AE 223 (Statics) P: PHYS 313 PCC: MATH 243 with 'C' or better	3	better ME 335 (Dynamics for ME Engineers) P: AE 223 and MATH 344 with 'C' or better	3
Semester Credit Hours	16		16		17		19
Junior year				Senior year			
FALL		SPRING		FALL		SPRING	
PHIL 385* (Engineering Ethics)		General Education*		General Education*		General Education*	1
Juniors or Seniors only	2	Arts & Humanities	2	Social & Behavioral Science	2	Arts & Humanities	2
	3	Arts & Humanities ME 475 & L (Integrated Design & Mfg) P: ME 250, ME 251, AE 333 with 'C' or better PCC: ME 439	3		3		3
Juniors or Seniors only ME 325 (Numerical Methods) P: MATH 555 and ECE 282	3 3	ME 475 & L (Integrated Design & Mfg) P: ME 250, ME 251, AE 333 with 'C' or better	3 3	Social & Behavioral Science ME 541 (Mech Engineering Design II) P: ME 339, ME 439.	3 3	Arts & Humanities Thermal/Fluids/Energy/ Environmental Elective^	3
Juniors or Seniors only ME 325 (Numerical Methods) P: MATH 555 and ECE 282 with 'C' or better ME 339 (Design of Machinery) P: IME 222 & ME335	3	ME 475 & L (Integrated Design & Mfg) P: ME 250, ME 251, AE 333 with 'C' or better PCC: ME 439 ME 522 (Heat Transfer) P: ME 325, ME 521 and PHYS 314	3	Social & Behavioral Science ME 541 (Mech Engineering Design II) P: ME 339, ME 439. PCC: ME 475 with 'C' or better ME 659 (Mechanical Control Systems) P: ECE 282 and MATH 555	3	Arts & Humanities Thermal/Fluids/Energy/ Environmental Elective^ P: see catalog & audit ME 633 & L (ME Systems Lab) P: ME 522 and ME 533	3
Juniors or Seniors only ME 325 (Numerical Methods) P: MATH 555 and ECE 282 with 'C' or better ME 339 (Design of Machinery) P: IME 222 & ME335 with 'C' or better ME 521 & L (Fluid Mechanics) P: ME 398, MATH 555, ME 335 with 'C' or better ME 439 (ME Design 1) P: ME 250, ME 251, AE 333,	3	ME 475 & L (Integrated Design & Mfg) P: ME 250, ME 251, AE 333 with 'C' or better PCC: ME 439 ME 522 (Heat Transfer) P: ME 325, ME 521 and PHYS 314 with 'C' or better ME 533 & L (ME Lab) P: AE 333, ECE 282, ME 325, ENGL 102, COMM 111, PHYS 315 PCC: ME 522	3	Social & Behavioral Science ME 541 (Mech Engineering Design II) P: ME 339, ME 439. PCC: ME 475 with 'C' or better ME 659 (Mechanical Control Systems) P: ECE 282 and MATH 555 OR ECE 383 with 'C' or better Thermal Design Elective^	3	Arts & Humanities Thermal/Fluids/Energy/ Environmental Elective^ P: see catalog & audit ME 633 & L (ME Systems Lab) P: ME 522 and ME 533 with 'C' or better ME 662 (Senior Capstone Design) P: PHIL 385, ME 475, ME 522, ME 541 With C' or better PCC: ME 633, ME 659	3
Juniors or Seniors only ME 325 (Numerical Methods) P: MATH 555 and ECE 282 with 'C' or better ME 339 (Design of Machinery) P: IME 222 & ME335 with 'C' or better ME 521 & L (Fluid Mechanics) P: ME 398, MATH 555, ME 335 with 'C' or better ME 439 (ME Design 1)	3	ME 475 & L (Integrated Design & Mfg) P: ME 250, ME 251, AE 333 with 'C' or better PCC: ME 439 ME 522 (Heat Transfer) P: ME 325, ME 521 and PHYS 314 with 'C' or better ME 533 & L (ME Lab) P: AE 333, ECE 282, ME 325, ENGL 102, COMM 111, PHYS 315 PCC: ME 522 with 'C' or better Technical Open Elective^	3	Social & Behavioral Science ME 541 (Mech Engineering Design II) P: ME 339, ME 439. PCC: ME 475 with 'C' or better ME 659 (Mechanical Control Systems) P: ECE 282 and MATH 555 OR ECE 383 with 'C' or better Thermal Design Elective^ P: see catalog & audit Mech Design Elective^	3	Arts & Humanities Thermal/Fluids/Energy/ Environmental Elective^ P: see catalog & audit ME 633 & L (ME Systems Lab) P: ME 522 and ME 533 with 'C' or better ME 662 (Senior Capstone Design) P: PHIL 385, ME 475, ME 522, ME 541 With C' or better PCC: ME 633, ME 659	3

<u>Check all degree/grade/graduation/pre-requisite & co-requisite requirements with your course catalog term requirements</u> <u>and degree work audit</u>.

All major courses and pre-requisite courses **need a "C" or better**. Grades of C- or below do not meet pre-requisite or minimum grade requirements. Review your catalog term/degree/graduation requirements before enrolling in a class.

Pre-requisite (P) 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-requisite (C) means the course must be taken simultaneously with the other course listed as a co-requisite.

Pre-requisite with CC (PCC) 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

*General Education Electives Courses must be from an approved list. Must check catalog requirement and degree audit for options.

**Engineering+ activities need Chair's pre-approval and course must be from an approved list (wichita.edu/engr+)

^Technical Electives should be chosen with faculty advisor

General Education (27 credit hours). Check your catalog term, degree work audit, and with your advisor

Math & Natural Science (30 credit hours). Check your catalog term, degree work audit, and with your advisor

Major and Electives (71 credit hours). Check your catalog term, degree work audit, and with your advisor

E+ (0-3 credit hour options). Check your catalog term, degree work audit, and with your advisor

Total 128 credit hours for student with catalog term of fall 2018 and after.