

Product Design and Manufacturing Engineering

Catalog Term: Fall 2025

Total credit hours: 128

FRESHMAN			
FALL	Hr	SPRING	Hr
ENGL 101 * College English I Pre-req: See Course Catalog	3	ENGL 102 * College English II Pre-req: ENGL 101 with "C" or better	3
MATH 242 Calculus I Pre-req: MATH 111 & 123 with "C" or better or MATH 112 with "C" or better	5	MATH 243 Calculus II Pre-req: MATH 242 with "C" or better	5
CHEM 211 + 211L General Chemistry I Co-req: MATH 111	5	PHYS 313 + 315 Physics for Scientist I & Lab Co-req: MATH 243 with "C" or better	5
IME 222 + IME 222L Engineering Graphics & Lab Pre-req: MATH 123 or equivalent with "C" or better	3	General Education* First-Year Seminar* Note a	3
Total Hours	16	Total Hours	16

SOPHOMORE			
FALL	Hr	SPRING	Hr
COMM 111 * Public Speaking	3	MATH 555 Differential Equations Pre-req: MATH 243 with "C" or better	3
IME 258 + IME 258L Manufacturing Methods I Pre-req: MATH 123 & IME 222 both with "C" or better (Offered Fall and Spring only)	4	PHYS 314 + 316 Physics for Scientist II & Lab Pre-req: MATH 243 with "C" or better & PHYS 313 (Offered Fall and Spring only)	5
AE 223 Statics Pre-req: PHYS 313 with "C" or better, Co-req: MATH 243	3	IME 255 * Engineering Economy Coreq: MATH 242 (Offered Fall and Spring only)	3
IME 254 Engineering Probability and Statistics Pre-req: MATH 242 with "C" or better (Offered Fall and Spring only)	3	AE 333 Mechanics of Materials Pre-req: AE 223 with "C" or better, Co-req: MATH 344 or MATH 451 or MATH 555	3
ME 250 + ME 251 Materials Engineering & Lab Pre-req: CHEM 211 & MATH 242 both with "C" or better	4	MATH 451 Computational Mathematics Using MATLAB Pre-req: MATH 243 with "C" or better	3
Total Hours	17	Total Hours	17

JUNIOR			
FALL	Hr	SPRING	Hr
PHIL 385 Engineering Ethics Pre-req: Junior or senior standing	3	IME 553 Production Systems Pre-req: IME 254 with "C" or better, Co-req: IME 255 (Offered Fall and Spring only)	3
ECE 282 + ECE 282L Circuits I Co-req: MATH 243	4	IME 558 + IME 558L Manufacturing Methods II Pre-req: IME 258 & ME 250 with "C" or better (Offered Spring only)	4
IME 425 Kinematic and Dynamic Design Pre-req: IME 222, IME 258, and PHYS 313 with "C" or better (Offered Fall only)	3	IME 625 Robust Product Design Pre-req: AE 333 & IME 425 with "C" or better (Offered Spring only)	3
IME 554 Statistical Quality Control Pre-req: IME 254 (Offered Fall only)	3	IME 761 Robot Programming and Applications Pre-req: IME 561 with "C" or better (Offered Spring only)	3
IME 561 Applied Control Systems Pre-req: MATH 555 with "C" or better or Instructor Consent (Offered Fall only)	3	IME 788 Rapid Prototyping and 3D Printing Pre-req: Instructor Consent & IME 258 + Lab with "C" or better (Offered Spring only)	3
Engineer+ Requirement (1 of 3) See notes		Engineer+ Requirement (2 of 3) See notes	
Total Hours	16	Total Hours	16

SENIOR			
FALL	Hr	SPRING	Hr
General Education* Arts & Humanities (not PHIL) Note a	3	General Education* Institutionally Designated/Diversity Note a	3
General Education* Social/Behavioral Science Recommend ECON 201 Note a	3	General Education* Social/Behavioral Science (not ECON) Note a	3
IME 590 Industrial Engineering Design I Pre-req: IME 553 with "C" or better, Department Consent; & Co-req: PHIL 385 (Offered Fall and Spring only)	3	IME 690 Industrial Engineering Design II Pre-req: IME 590 with "C" or better and Department Consent; & Co-req: CHEM 211 (Offered Fall and Spring only)	3
Technical Elective Note b	3	Technical Elective Note b	3
Technical Elective Note b	3		
Engineer+ Requirement (3 of 3) See notes			
Total Hours	15	Total Hours	12

SUMMER	Hr
IME 676 Aircraft Manufacturing and Assembly Pre-req: IME 258 with "C" or better (Offered Summer only)	3

Notes: Students admitted after fall 2007 must fulfill the Engineer+ requirements.

* May be available as an online or hybrid class.

Last Updated: 3/12/2024

All incoming freshman are required to take one First-Year Seminar as part of their General Education program. Students who are exempt from First-Year Seminar requirements may take an additional GE elective.

a. Courses must be from an approved list which appears in the Schedule of Courses and/or the community college Transfer Guides. www.wichita.edu/academics/generaleducation

b. Check with Advisor for specific courses to fulfill electives.

www.wichita.edu/ENGR+