Name: _____ Exp. Grad.: Fall _____ / Spring_____

Mechanical Engineering
Suggested Curriculum Course Plan for students entering Fall 2024 – Spring 2025

Semester 1		Semester 2		Semester 3		Semester 4	
Course (cr. Hr.)	**X**	**Course (cr. Hr.)**	**X**	**Course (cr. Hr.)**	**X**	**Course (cr. Hr.)**	**X**
Writing I*: *ENGL 101* (4)*		Calculus II: *MATH 152* (4)		Technical Communication: *ENGR 110* (4)		Differential Equations: *MATH 271* (3)	
Calculus I: *MATH 151* (4)		General Chemistry II & Lab: *CHEM 106* (3) & *CHEM 106L* (1)		Calculus III: *MATH 253* (4)		Circuit Theory I & Lab: ENGR 220 (4) & ENGR 220L (0)	
General Chemistry I & Lab: *CHEM 105* (3) & *CHEM 105L* (1)		Physics I & Lab: *PHYS 125* (4) & *PHYS 125L* (0)		Physics II & Lab: *PHYS 126* (4) & *PHYS 126L* (0)		Dynamics: *MECH 212* (3)	
Introduction to Engineering: *ENGR 101* (2)		Computer Aided Design: *ENGR 102* (2)		Structure and Property of Materials: CEMS 214 (3)		Mechanics of Materials: *MECH 241* (3)	
Engineering Foundations II & Lab: *ENGR 117* (2) & *ENGR 117L* (0)		Computer Aided Engineering: *ENGR 104* (2)		Statics: *MECH 211* (3)		Undergraduate Seminar: *ENGR 360* (0)	
First-Year Seminar: *ENGR 160* (0)		First-Year Seminar: *ENGR 160* (0)		Undergraduate Seminar: *ENGR 360* (0)		General Education Elective (4)	
		Common Ground: *UNIV 101* (1)					
Total (16)		**Total (17)**		**Total (18)**		**Total (17)**	

* ENGL 101 if required otherwise General Education elective (2-4).

Semester 5		Semester 6		Semester 7		Semester 8	
Course (cr. Hr.)	**X**	**Course (cr. Hr.)**	**X**	**Course (cr. Hr.)**	**X**	**Course (cr. Hr.)**	**X**
Engineering Economics: *ENGR 306* (2)		Linear Algebra: *MATH 371* (4)		Senior Capstone Group Project: *ENGR 490 (2)*		Senior Capstone Group Project: *ENGR 490 (2)*	
Undergraduate Seminar: *ENGR 360* (0)		Engineering Statistics: *ENGR 305* (3)		Manufacturing: *MECH 366* (3) & *MECH 366L* (0)		Thermal Sciences Lab: *MECH 327 (2)*	
Thermodynamics I: *MECH 320* (3)		Engineering Design: *ENGR 395* (2)		Introduction to Finite Element Analysis *MECH 417 (3)*		MECH Elective (3)	
Fluid Mechanics I: *MECH 324* (3)		Thermodynamics II: *MECH 321* (3)		MECH Elective (3)		Technical Elective (3)	
Mechanics of Materials Laboratory: *MECH 343* (2) & *MECH 343L* (0)		Heat Transfer: *MECH 326* (3)		Undergraduate Seminar: *ENGR 360 (0)*		Undergraduate Seminar: *ENGR 360 (0)*	
Kinematics and Dynamics of Machinery: *MECH 362* (3)		Machine Design I: *MECH 364 (3)*		General Education Elective (4)		Wellness (2)	
General Education Elective (2)		Undergraduate Seminar: *ENGR 360* (0)		Fitness (1)			
Total (15)		**Total (18)**		**Total (16)**		**Total (12)**	

Total Credits: 129

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Definitions of Electives for MEGR (9 total credits):

6 Credits - MEGR Specific Electives which may include:

MECH 415, MECH 422, MECH 424, MECH 434, MECH 435, MECH 438, MECH 448, MECH 486, RNEW 310, RNEW 322, RNEW 431, RNEW 432, PHYS 421, PHYS 423, ENGR 484, CEMS 438, CEMS 446, any non-required MECH 4xy course, or ENGR 385/Internship if pre-approved by the Dean.

3 Credits - Technical Electives which may include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, and non-MECH Topics courses unless approved by the Dean. (B) One of FIN 348 **or** MGMT 328, (C) COOP 385 or or ENGR 385/Internship, (D) MECH Topics unless used as MECH Elective.

Requirements:

1. AU Global Perspective
2. AU Wellness & Physical Education: Well (ATHT 111, 190, 215, 222, BIOL 105, 120, DANC 120, 200, 222, 223, 224, 226, PSYC 251, 322, 351, WELL 100, 101, WGST 351, PFIT: Varsity sport for one season, physical fitness test, any course with PFIT designation which includes some Equestrian, Dance, and ROTC courses.
3. SOE Minimum Credit Requirement of 128 credits
4. SOE GPA requirement of 2.0 and no more than 7 credits of D or D+ in engineering courses.
5. SOE Seminar requirement
6. SOE General Education Requirement of 60 credits comprising: Quantitative Reasoning, Humanities (minimum of six credits with at least two different acronyms, Natural Science, Social Science (minimum of three credits), AU Wellness, Written Communication, and General/Arts (maximum of eight credits).
7. Defense of Capstone Poster & submission of approved Thesis. (ENGR 490 2+2 with the same instructor).

Complete SOE requirements are available in the AU Undergraduate Catalog 2024-2025. https://alfred.edu/academics/undergrad-majors-minors/catalog.cfm

Degree Audit, including What-If, is available via Degree Works. https://my.alfred.edu/degreeworks/index.cfm

Special cases are not covered by this Suggested Curriculum Course Plan; these may include testing out of courses via SAT score. AP exam, etc., double/dual majors, minors, transfer credits, etc.

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