

Name: _____

Exp. Grad.: Fall ____ / Spring ____

Renewable Energy 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*: <i>ENGL 101 (4)*</i>		Calculus II: <i>MATH 152 (4)</i>		Technical Communication: <i>ENGR 110 (4)</i>		Differential Equations: <i>MATH 271 (3)</i>	
Calculus I: <i>MATH 151 (4)</i>		General Chemistry II & Lab: <i>CHEM 106 (3) & CHEM 106L (1)</i>		Calculus III: <i>MATH 253 (4)</i>		Computer Science I: <i>CSCI 156 (4)</i> or Software Engineering: <i>RNEW 303 (4)</i>	
General Chemistry I & Lab: <i>CHEM 105 (3) & CHEM 105L (1)</i>		Physics I & Lab: <i>PHYS 125 (4) & PHYS 125L (0)</i>		Physics II & Lab: <i>PHYS 126 (4) & PHYS 126L (0)</i>		Circuit Theory I & Lab: <i>ENGR 220 (4) & ENGR 220L (0)</i>	
Introduction to Engineering: <i>ENGR 101 (2)</i>		Computer Aided Design: <i>ENGR 102 (2)</i>		Renewable Energy: <i>RNEW 201 (3)</i>		Engineering Statistics: <i>ENGR 305 (3)</i>	
Engineering Foundations II & Lab: <i>ENGR 117 (2) & ENGR 117L (0)</i>		Computer Aided Engineering: <i>ENGR 104 (2)</i>		Undergraduate Seminar: <i>ENGR 360 (0)</i>		Dynamics: <i>MECH 212 (3)</i>	
First-Year Seminar: <i>ENGR 160 (0)</i>		First-Year Seminar: <i>ENGR 160 (0)</i>		General Education Elective (2)		Undergraduate Seminar: <i>ENGR 360 (0)</i>	
		Common Ground: <i>UNIV 101 (1)</i>					
Total (16)		Total (17)		Total (17)		Total (17)	

*ENGL 101 if required otherwise ENGR 110 or student choice of GenEd (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: <i>ENGR 306 (2)</i>		Engineering Design: <i>ENGR 395 (2)</i>		Senior Capstone Group Project: <i>ENGR 490 (2)</i>		Senior Capstone Group Project: <i>ENGR 490 (2)</i>	
Circuit Theory II & Lab: <i>ELEC 321 (4) & ELEC 321L (0)</i>		Heat Transfer: <i>MECH 326 (3)</i>		Fuel Cell Principles & Technology: <i>RNEW 310 (3)</i>		Wind Energy: <i>RNEW 431 (3)</i>	
Thermodynamics I: <i>MECH 320 (3)</i>		Mechatronics: <i>MECH 354 (3)</i>		Power System Operation and Economics: <i>RNEW 355 (3)</i>		Solar Energy Systems: <i>RNEW 432 (3)</i>	
Fluid Mechanics: <i>MECH 324 (3)</i>		Control Systems: <i>MECH 422 (3)</i>		Electric Machinery: <i>RNEW 468 (3)</i>		Technical Elective (3)	
Industrial Control via Microcontroller: <i>MECH 435 (3)</i>		Technical Elective (3)		Undergraduate Seminar: <i>ENGR 360 (0)</i>		Undergraduate Seminar: <i>ENGR 360 (0)</i>	
Signals & Systems: <i>RNEW 322 (3)</i>		Undergraduate Seminar: <i>ENGR 360 (0)</i>		General Education Elective (4)		Fitness (1)	
Undergraduate Seminar: <i>ENGR 360 (0)</i>		General Education Elective (4)		Wellness (2)			
Total (18)		Total (18)		Total (17)		Total (12)	

Total Credits: 132

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Definitions of Electives for RNEW (6 credit required total):

6 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.