

General Engineering B.S. with Aeronautics Minor

For students entering Fall 2024

First Year - Fall Semester

Course	Title	Credits
CHEM 121/L CORE course 9	General Chemistry I / CORE 9 NatSci	4
MATH 121 CORE course 8	Calculus I / CORE 8 Quant	3
ENGR 101 CORE course 1	Engineering CORE 1 (Foundations)	3
AVI 110	Private Pilot Theory	3
AVI 111	Private Pilot Flight Lab I	1
CORE course 3	WRIT 102, Research Writing	3
ENGR192	Freshman Engineering Seminar	0

Total 17

First Year - Spring Semester

Course	Title	Credits
CHEM122	General Chemistry II	4
MATH122	Calculus II	3
PHYS121	General Physics I	4
ENGR102	Introduction to Engineering II	1
AVI 112	Private Pilot Flight Lab II	2
CORE course 2	FTAE 105, Intro to Franciscan Theology	3
ENGR193	Freshman Engineering Seminar	0

Total 17

Second Year - Fall Semester

Course	Title	Credits
MATH221	Calculus III	3
PHYS122/L	General Physics II	4
ENGR210/L	Programming for Eng (1 hr lec, 2 hr lab)	2
ENGR201	Engineering Statics	3
ENGR250	Solid Modeling and CAD	3
CORE course 5	History	3
ENGR292	Sophomore Engineering Seminar	0

Total 18

Second Year - Spring Semester

Course	Title	Credits
MATH306	Differential Equations I	3
ENGR202	Engineering Dynamics	3
ENGR315/L	Mechanics of Materials	3
ENGR325/L	Fundamentals of Electrical Eng (2hr L)	4
ENGR279	Sophomore Engr. Design for Service	2
CORE course 11	Religion or Philosophy	3
ENGR293	Sophomore Engineering Seminar	0

Total 18

Third Year - Fall Semester

Course	Title	Credits
MATH322	Linear Algebra	3
ENGR301/L	Fluid Mechanics	4
ENGR321	Applied Engr. Thermodynamics	3
ENGR350	Materials Science	3
ECON 101 CORE course 4	Economics / CORE II, Civic responsibility	3
ENGR392	Junior Engineering Seminar	0

Total 16

Third Year - Spring Semester

Course	Title	Credits
ENGR335	Engineering Instrumentation (1 lect 1 lab)	1
ENGR375	Heat Transfer	3
ENGR379	Junior Engr. Design for Service	3
ENGR435/L	Control Theory	4
ENGR497	Capstone Design Proposal	1
CORE course 7	Literature	3
ENGR393	Junior Engineering Seminar	1

Total 16

Senior Year - Fall Semester

Course	Title	Credits
ENGR427	Power/Thermal Systems Lab	1
ENGR415	Senior Lab	3
ENGR445	Mechanisms, Linkages, and Design of Machine Elements	3
CORE course 6	Social Science (Human Geography if approved)	3
CORE course 13	Ethics	3
CORE course 10	Language / Culture	3
ENGR492	Senior Engineering Seminar	0

Total 16

Senior Year - Spring Semester

Course	Title	Credits
ENGR498 CORE course 15	Capstone Design / CORE 15 (needs approval)	3
ENGR407 CORE course 14	Sustainability in Engineering Design / CORE III / CORE 14	3
CORE course 12	Fine Arts	3
ENGR425	Advanced Thermal and Fluid Systems	3
ENGR493	Senior Engineering Seminar	0

Total 12

16	Courses for CORE curriculum
	Courses for the minor

Total credits 130

Requirements: (16 credits)

- [ENGR 425 - Advanced Heat Transfer and Fluid Mechanics](#)
- [ENGR 435 - Control Theory](#)
- [ENGR 445 - Mechanisms, Linkages and Design of Machine Elements](#)
- [AVI 110 - Private Pilot Theory](#)
- [AVI 111 - Private Pilot Flight Lab I](#)
- [AVI 112 - Private Pilot Flight Lab II](#)

Credits in the General engineering central requirements =	87
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Credits in the CORE curriculum	
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Credits in the Minor = 16	
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Total credits =	130
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