ENGINEERING PHYSICS

AEROSPACE SYSTEMS DESIGN CONCENTRATION

KU SCHOOL OF ENGINEERING
The University of Kansas

Information appearing in this guide is subject to change. Please talk with your departmental adviser about degree requirements on a regular basis.

freshman year – fall		hours
AE 245	Introduction to Aerospace Engineering	3
CHEM 150	Chemistry for Engineers**	5
ENGL 101	Composition (or any KU Core GE 2.1)	3
MATH 125[H]	Calculus I	4
PHSX 150	Seminar in Phys., Astr., & Engineering Physics	.5
	TOTAL HOURS	15.5

freshman year – spring		
EECS 138	Introduction to Computing	3
ENGL 102[H]	Critical Reading & Writing (or any KU Core GE 2.1)	3
MATH 126[H]	Calculus II	4
PHSX 211	General Physics I, and	4
PHSX 216	General Physics I Laboratory	1
-or-		
PHSX 213	General Physics I Honors	5
	TOTAL HOURS	15

sophomore year – fall		
AE 345	Fluid Mechanics	3
CE 301	Statics & Dynamics	5
MATH 127[H]	Calculus III	4
MATH 290[H]	Elementary Linear Algebra	2
PHSX 212	General Physics II, and	3
PHSX 236	General Physics II Laboratory	1
-or-		
PHSX 214	General Physics II Honors	4
	TOTAL HOURS	18

sophomore year – spring		
AE 445	Aircraft Aerodynamics	3
ME 312	Basic Engineering Thermodynamics	3
CE 310	Strength of Materials	4
MATH 220[H]	Applied Differential Equations, or …	
MATH 320	Elementary Differential Equations	3
PHSX 313	General Physics III	3
PHSX 316	Intermediate Physics Lab	1
	TOTAL HOURS	17

junior year – fall		hours
AE 507	Aerospace Structures I	3
AE 545	Fundamentals of Aerodynamics	5
AE 550	Dynamics of Flight I	3
EPHX 521	Mechanics I	3
	KU Core Elective* [H]	3
	TOTAL HOURS	17

junior year – spring		
AE 421	Computer Graphics	4
AE 551	Dynamics of Flight II	4
AE 572	Fundamentals of Jet Propulsion	3
EPHX 536	Electronic Circuit Measurement & Design (s), or …	
AE 508	Aerospace Structures II (a)	3-4
	TOTAL HOURS	14-15

senior year – fall		
AE 521	Aerospace Systems Design I (a), or …	
AE 560	Spacecraft Systems (s)	3-4
EPHX 516	Physical Measurements	4
EPHX 531	Electricity & Magnetism	3
	KU Core Electives* [H]	6
	TOTAL HOURS	16-17

senior year – spring		
EPHX 536	Electronic Circuit Measurement & Design (a), or …	
AE 523	Space Systems Design, (s)	4
EPHX 601	Design of Physical & Electronic Systems	4
	KU Core Electives* [H]	6
	TOTAL HOURS	14

CURRICULUM NOTES

(a) Aircraft track

(s) Spacecraft track

* Students must ensure the electives they choose fulfill all remaining KU Core requirements.

**CHEM 130[H] can be substituted for CHEM 150.

[H] Honors equivalent course is available.

ENGINEERING PHYSICS: AEROSPACE SYSTEMS

KU CORE DISTRIBUTION

CRITICAL THINKING & QUANTITATIVE LITERACY

GE 1.1 CRITICAL THINKING: PHSX 211

GE 1.2 QUANTITATIVE LITERACY: MATH 125

COMMUNICATION

GE 2.1 WRITTEN COMMUNICATION:
MEET VIA KU CORE REQUIREMENTS

GE 2.2 ORAL COMMUNICATION:
MEET VIA KU CORE REQUIREMENTS

BREADTH OF KNOWLEDGE

GE 3H ARTS & HUMANITIES:
1 COURSE FROM KU CORE LIST

GE 3N NATURAL SCIENCES: CHEM 150

GE 3S SOCIAL SCIENCES:
MEET VIA KU CORE REQUIREMENTS

CULTURE & DIVERSITY

AE 4.1 DIVERSITY IN UNITED STATES:
MEET VIA KU CORE REQUIREMENTS

AE 4.2 GLOBAL AWARENESS:
MEET VIA KU CORE REQUIREMENTS

SOCIAL RESPONSIBILITY & ETHICS

AE 5 ETHICS & SOCIAL RESPONSIBILITY:
PHSX 216, 316 AND EPHX 516 (pending approval)

INTEGRATION & CREATIVITY

AE 6 CAPSTONE: PHSX / EPHX 601

ENGINEERING PHYSICS SPECIFIC GENERAL EDUCATION REQUIREMENTS: When not specified visit kucore.ku.edu/courses for approved courses and activities.