

ENGINEERING PHYSICS

CHEMICAL SYSTEMS CONCENTRATION

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
CHEM 170 ^H Chemistry for Chemical Sciences**	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
KU Core Electives* ^H	3
TOTAL HOURS	15.5

freshman year – spring

CHEM 175 ^H Chemistry for Chemical Sciences II*	5
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	17

sophomore year – fall

C&PE 121 Introduction to Computers in Engineering	3
C&PE 211 Material & Energy Balances	3
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	16

sophomore year – spring

CHEM 330 ^H Organic Chemistry I	3
C&PE 221 Chemical Engineering Thermodynamics I	3
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
KU Core Electives* ^H	3
TOTAL HOURS	16

junior year – fall

	hours
CHEM 530 Introduction to Physical Chemistry	3
C&PE 511 Momentum Transfer	3
C&PE 512 Process Engineering Thermodynamics II	3
C&PE 522 Economic Appraisal of C&PE Projects	2
EPHX 521 Mechanics I	3
TOTAL HOURS	14

junior year – spring

C&PE 521 Heat Transfer	3
C&PE 523 Mass Transfer	4
C&PE 524 Kinetics & Reactor Design	3
EPHX 536 Electronic Circuit Measurement & Design	4
KU Core Electives* ^H	3
TOTAL HOURS	17

senior year – fall

C&PE 613 Chemical Engineering Design I	4
C&PE 615 Introduction to Process Dynamics & Control	3
C&PE 616 Chemical Engineering Lab I	3
EPHX 516 Physical Measurements	4
EPHX 531 Electricity & Magnetism	3
TOTAL HOURS	17

senior year – spring

C&PE 623 Chemical Engineering Design II	2
EPHX 511 Introductory Quantum Mechanics	3
EPHX 601 Design of Physical and Electronic Systems	4
KU Core Electives* ^H	6
TOTAL HOURS	15

ENGINEERING PHYSICS: CHEMICAL 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 170
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.

CURRICULUM NOTES

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

**CHEM130^H/135^H can be substituted for CHEM 170/175.

^H Honors equivalent course is available.