

CURRICULUM GUIDE

Physics, B.S. (Engineering Physics Concentration)

2023-2024

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The schedule below is an **EXAMPLE** of how you can arrange your class schedule.

Please consult your advisor for specific changes that may need to be made.

	Fall Semester		Spring Semester	
Freshman Year	SCO 100P 6 CHE 111 (fulfills Gen. Ed. 4) CHE 111L § 6 MAT 234 (fulfills Gen. Ed. 2) Gen. Ed. 1A (ENG 101) Gen. Ed. 4 (Nat. Sci.) (AST 335 recommended)	1 3 1 4 3 3	CHE 112 CHE 112L MAT 244 PHY 201 Gen. Ed. 1B (ENG 102)	3 1 4 5 3
	TOTAL	15	TOTAL	16
Sophomore Year	MAT 254 MAT 353 PHY 202 Gen. Ed. 1C (Oral Comm.)	4 3 5 3	CSC 174 PHY 211 PHY 221 Gen. Ed. 3B (Humanities) Free Elective	3 4 3 3 2-3
	TOTAL	15	TOTAL	15-16
Junior Year	EET 252 PHY 302 PHY 310 PHY 375 Gen. Ed. 5A (History)	3 4 3 3 3	PHY 460 PHY 315 PHY 406 Gen. Ed. 5B (Soc. & Behav. Sci.)	4 4 3 3
	TOTAL	16	TOTAL	14
Senior Year	† Restricted Elective Gen. Ed. 6 (Diversity) Free Elective (upper division) Free Elective (upper division) Free Elective (upper division)	3-4 3 3 3 3	Gen. Ed. 6 (Diversity) Gen. Ed. 3A (Arts) Free Elective (upper division) Free Elective (upper division)	3 3 4 3
	TOTAL	15-16	TOTAL	13
TOTAL HOURS TO DEGREE COMPLETION				120

* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division PHY courses. MAT 122, 234, and/or 244; CHE 111/111L; EET 251, 252 and/or 257. See University catalog for details.
§ A preparatory course in mathematics may be required before admission to MAT 234.

Upper division courses: All students are required to have a minimum of 42 hrs. upper division (300-level or above) courses distributed throughout major/Supporting/Gen Ed/Free Electives categories. If 300-level classes are taken for Gen. Ed., they can be used to fulfill the 42 hours instead of upper division free electives.

Refer to the University Catalog at <http://www.catalogs.eku.edu/> regarding University and General Education Requirements.

Course Number	Course Name
GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
SCO 100P	Student Success Seminar for Physics (1)
CORE COURSE REQUIREMENTS (21)	
PHY 201	University Physics I (5)
PHY 202	University Physics II (5)
PHY 211	Intermediate Physics (4)
PHY 302	Modern Physics (4)
PHY 406	Advanced Physics Laboratory (3)
ENGINEERING PHYSICS REQUIREMENTS (20-21)	
PHY 221	Statics (3)
PHY 310	Theoretical Methods in Physics (3)
PHY 315	Electrical Circuits (4)
PHY 375	Engineering Thermodynamics (3)
PHY 460	Classical Mechanics (4)
† PLUS THREE (3) HOURS selected from (restricted elective):	
* CSC 185	Discrete Structures I (3)
* EET 253	Microprocessor Control Systems (3)
* EET 257	Circuits and Electronic Devices (3)
* EET 351	Programmable Logic Controllers (3)
PHY 303	Introduction to Laser Physics (3)
PHY 402	Physical Optics (3)
PHY 410	Independent Study in Physics (1-6)
PHY 411	Special Topics in Physics: ____ (1-6)
PHY 412	Directed Research in Physics: ____ (1-6)
STA 270	Applied Statistics I (4)
SUPPORTING COURSE REQUIREMENTS (23)	
* 6 CHE 111	General Chemistry I (3)
{ * CHE 111L	General Chemistry Lab I (1)
{ * CHE 112	General Chemistry II (3)
{ * CHE 112L	General Chemistry Lab II (1)
† CSC 174	Intro. to Programming for Science and Engineering (3)
EET 252	Digital Electronics (3)
6 MAT 234	Calculus I (4)
MAT 244	Calculus II (4)
MAT 254	Calculus III (4)
MAT 353	Differential Equations (3)
Bracketed items must be taken concurrently	
‡ or any approved programming language course.	
FREE ELECTIVES (18-19)	

6 Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement. Courses used to fulfill Gen. Ed. 4 must have different prefixes.