

CURRICULUM GUIDE
Physics, B.S. (General Physics Concentration)
2018-2019

Website: www.physics.eku.edu
 Email Contact: anthony.blose@eku.edu

Department of Physics & Astronomy
 521 Lancaster Ave.
 3140 New Science Bldg.
 Richmond, KY 40475
 859-622-1521

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	1	CHE 112	3
	⁶ CHE 111 (fulfills Gen. Ed. 4)	3	CHE 112L	1
	CHE 111L	1	MAT 244 <u>or</u> 244H	4
	§ ⁶ MAT 234 <u>or</u> 234H (fulfills Gen. Ed. 2)	4	PHY 201	5
	Gen. Ed. 1A (ENG 101)	3	Gen. Ed. 1B (ENG 102)	3
	Gen. Ed. 4 (Nat. Sci.) (AST 335 recommended)	3		
	TOTAL	15	TOTAL	16
Sophomore Year	MAT 254 <u>or</u> 254H	4	CSC 174 <u>or</u> 190	3
	MAT 353	3	PHY 211	4
	PHY 202	5	Gen. Ed. 3A (Arts)	3
	Gen. Ed. 1C (Oral Comm.)	3	Gen. Ed. 3B (Humanities)	3
			Gen. Ed. 5B (Soc. & Behav. Sci.)	3
TOTAL	15	TOTAL	16	
Junior Year	PHY 302 or 302W	4	PHY 406 or 406W (ACCT)	3
	PHY 310	3	PHY 460	4
	† PHY Elective (upper division)	3	Gen. Ed. 6 (Diversity)	3
	Gen. Ed. 5A (History)	3	Free Elective (upper division)	3
			Free Elective	3
TOTAL	13	TOTAL	16	
Senior Year	PHY 421	3	PHY 422	3
	PHY 456	4	PHY 470 (ACCT)	3
	Gen. Ed. 6 (Diversity)	3	Free Elective (upper division)	3
	Free Elective (upper division)	3	Free Elective	4
	Free Elective	3		
TOTAL	16	TOTAL	13	
TOTAL HOURS TO DEGREE COMPLETION		120		

Course Number	Course Name
GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
SCO 100P	Student Success Seminar in 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 or PHY 302W	Modern Physics (writing intensive) (4)
PHY 406 or PHY 406W	Advanced Physics Laboratory (writing intensive) (3)
GENERAL PHYSICS CONCENTRATION REQUIREMENTS (23)	
PHY 310	Theoretical Methods in Physics (3)
PHY 421	Electricity and Magnetism I (3)
PHY 422	Electricity and Magnetism II (3)
PHY 456	Statistical and Thermal Physics (4)
PHY 460	Classical Mechanics (4)
PHY 470	Quantum Mechanics (3)
† PLUS THREE (3) HOURS selected from any PHY course numbered 300 or above, except PHY 506.	
SUPPORTING COURSE REQUIREMENTS (20)	
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 <u>or</u> CSC 190	Introduction to FORTRAN (3) Object-Oriented Programming I (3)
⁶ MAT 234 <u>or</u> ⁶ MAT 234H	Calculus I (4) Honors Calculus I (4)
MAT 244 <u>or</u> MAT 244H	Calculus II (4) Honors Calculus II (4)
MAT 254 <u>or</u> MAT 254H	Calculus III (4) Honors Calculus III (4)
MAT 353	Differential Equations (3)
Bracketed items must be taken concurrently.	
‡ or any departmentally approved programming language course.	
FREE ELECTIVES (19)	

* **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. See University catalog for details.
 § A preparatory course in mathematics may be required before admission to MAT 234.

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.

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. All baccalaureate degree seeking students who enter the University are required to successfully complete one writing intensive course following completion of the ENG 102, ENG 105, or HON 102/103. Writing intensive courses are designated with the suffix "W" following the course prefix and number (e.g. HUM 300W).

Applied Critical & Creative Thinking (ACCT) Requirement: Physics majors will select one of the following: PHY 349, 349 A-N, 406, 406W, 410, 470, HON 420, a program-approved Leadership Experience, or a program-approved Study Abroad experience. (Credit hours are incorporated into program requirements.)