

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses and milestones designated as critical (in boldface and shaded areas) must be completed in the semester listed to ensure a timely graduation.

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester One: [14-15 Credit Hours]				
MATH 12002 Analytic Geometry and Calculus I	5			Fulfills Kent Core Mathematics and Critical Reasoning; enrollment based on placement tests; prerequisites: MATH 11010 and 11022 may be bypassed with sufficient background
PHY 12000 Introductory Physics Seminar	1			
US 10097 Destination Kent State: FYE	1			Not required for transfer students with 25 credits
Foreign Language (Elementary I)	4-5			
Kent Core Requirement	3			See Kent Core Summary on page 2
Semester Two: [14-15 Credit Hours]				
MATH 12003 Analytic Geometry and Calculus II	5			
PHY 23101 General University Physics I	5			Fulfills Kent Core Basic Sciences
Foreign Language (Elementary II)	4-5			
Semester Three: [15-17 Credit Hours]				
MATH 32051 Mathematical Methods in Physical Sciences I	4	■		
PHY 23102 General University Physics II	5			Fulfills Kent Core Basic Sciences
Foreign Language (Intermediate I)	3-5			
Kent Core Requirement	3			See Kent Core Summary on page 2
Semester Four: [16-18 Credit Hours]				
MATH 32052 Mathematical Methods in the Physical Sciences II	4	■		
PHY 36001 Introductory Modern Physics	3	■		
Foreign Language (Intermediate II)	3-5			
Kent Core Requirement	6			See Kent Core Summary on page 2
Semester Five: [15 Credit Hours]				
PHY 30020 Intermediate Physics Laboratory	2	■		Fulfills writing-intensive course requirement; see note 1 on page 2
PHY 35101 Classical Mechanics	4	■		
PHY 36002 Applications of Modern Physics	3	■		
Kent Core Requirement	3			See Kent Core Summary on page 2
General Elective (upper division)	3	■		
Semester Six: [15 Credit Hours]				
Kent Core Requirement	9			See Kent Core Summary on page 2
PHY Elective (upper division)	3	■		See note 2 on page 2
General Elective (upper division)	3	■		
Semester Seven: [15 Credit Hours]				
PHY 40020 Advanced Physics Laboratory	2	■		Fulfills writing-intensive course requirement; see note 1 on page 2
PHY 45201 Electromagnetic Theory	4	■		
Kent Core Requirement	6			See Kent Core Summary on page 2
General Elective (upper division)	3	■		

Critical requirements are boldface in shaded areas

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester Eight: [17 Credit Hours]				
PHY Electives (upper division)	5	■		See note 2 below
General Elective (lower or upper division)	12	■		Number of credits required depends on meeting minimum 121 credit hours and minimum 42 upper-division credit hours

Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours	Minimum Kent Core Hours	Diversity Course Global / Domestic	Writing-Intensive	Minimum Major GPA	Minimum Overall GPA
121	42	42*	Kent Core or General Electives	PHY 30020 or PHY 40020	2.0	2.0

* The above hours include an additional Kent Core course each in Basic Sciences and Social Sciences as required by the College of Arts and Sciences for its BA programs. In addition to the Kent Core, the college requires for all its BA programs a minimum 14 credit hours of a foreign language.

Kent Core Summary

Kent Core Categories	Important Notes	Remaining Credit Hours
Additional (6 credit hours) <i>Must be selected from two Kent Core categories</i>	May fulfill global diversity requirement	6
Basic Sciences (9-10 credit hours) <i>Must include one laboratory</i>	Fulfilled in this major with PHY 23101 and PHY 23102; includes additional course as required by the college for its BA programs	0
Composition (6-8 credit hours) <i>ENG 11002, 11011, 21011; HONR 10197, 10297</i>	Enrollment based on placement test	6-8
Humanities and Fine Arts (9 credit hours) <i>Minimum one course from humanities in Arts and Sciences category and minimum one course from fine arts category</i>	May fulfill global diversity requirement	9
Mathematics and Critical Reasoning (3-5 credit hours)	Fulfilled in this major with MATH 12002	0
Social Sciences (9 credit hours) <i>Must be selected from two curricular areas</i>	Includes additional course as required by the college for its BA programs; may fulfill diversity requirement	9

Note 1: Students must earn a minimum C (2.0) grade in either PHY 30020 Intermediate Physics Laboratory or PHY 40020 Advanced Physics Laboratory to fulfill the writing-intensive requirement.

Note 2: Physic (PHY) electives (8 credit hours): with advisor's permission, students may replace 3 credit hours of physics electives with PHIL 41035 Philosophy of Science or ENG 20002 Introduction to Technical Writing.

Additional Notes for the Physics major:

- The following courses fulfill **may not** count towards the major:

PHY 11030 Seven Ideas that Shook the Universe	3	PHY 21430 Frontiers in Astronomy	3
PHY 21040 Physics in The Entertainment and the Arts	3	PHY 24001 Astronomy	3
PHY 21041 Physics in The Entertainment and the Arts Laboratory	1		

- Credit is not granted for both the PHY 13001/PHY 13002 and the PHY 23101/PHY 23102 series.

Kent Core

Students must complete a minimum 36 credit hours of the Kent Core. Certain courses required in programs and in student's major field may also fulfill the Kent Core. Honors equivalents shall satisfy the Kent Core. None of the courses on the Kent Core list may be taken with a pass/fail grade. Visit www.kent.edu/catalog/kent-core for course list.



Diversity Course Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the Kent Core. The second course may be taken as a second Kent Core, within a major or minor, or as a general elective; or, with dean's approval, by completing one semester of study in another country. Visit www.kent.edu/catalog/diversity for course list.

Writing-Intensive Course Requirement

Students must complete a one-course writing-intensive requirement in their major and earn minimum C (2.00) grade.

Visit www.kent.edu/catalog/wic for course list.

Upper-Division Requirement

Students must complete a minimum 39 upper-division (numbered 30000 to 49999) credit hours of coursework. Programs in the College of Arts and Sciences require a minimum of 42 hours of upper-division coursework.

Foreign Language

Visit www.kent.edu/catalog/foreign-languages for course list.

