Roadmap: Integrated Science – Physics - Bachelor of Science in Education

[EH-BSE-ISCI-PHY] College of Education, Health and Human Services School of Teaching, Learning and Curriculum Studies Catalog Year: 2012-2013

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.

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Course Subject and Title	Credit Hours	Upper Div.	Min. Grade	Major GPA	Important Notes	
Semester One: [15 Credit Hours]						
CHEM 10060 General Chemistry I	4		С			
CHEM 10062 General Chemistry Laboratory I	1		С		Fulfills Kent Core Basic Sciences	
MATH 11010 Algebra for Calculus	3				Fulfills Kent Core Mathematics and Critical Reasoning	
PSYC 11762 General Psychology	3				Fulfills Kent Core Social Sciences and domestic diversity requirement	
US 10097 Destination Kent State: FYE	1				Not required of transfer students with 25 hours	
Kent Core Requirement	3				See Kent Core Summary on page 2	
Semester Two: [14 Credit Hours]			1	1		
Note: pass Praxis I Reading (score 174), Writing (scor	e 172) and	Mathe	matics	s (score	e 174)	
CULT 29535 Education in a Democratic Society	3		С			
CHEM 10061 General Chemistry II	4		С	-	Fulfille March Orace Desite Online and	
CHEM 10063 General Chemistry Laboratory II	1		С		Fulfills Kent Core Basic Sciences	
MATH 11022 Trigonometry	3				Fulfills Kent Core Mathematics and Critical Reasoning	
SOC 12050 Introduction to Sociology	3				Fulfills Kent Core Social Sciences and domestic diversity requirement	
Semester Three: [17 Credit Hours]			1	1		
PHY 23101 General University Physics I	5		С		Fulfills Kent Core Additional	
CHEM 20481 Basic Organic Chemistry I	4		С			
MATH 12002 Analytical Geometry and Calculus I	5				Fulfills Kent Core Additional	
Kent Core Requirement	3				See Kent Core Summary on page 2	
Semester Four: [17 Credit Hours]			1	I		
MATH 12003 Analytic Geometry and Calculus II	5		С			
PHY 23102 General University Physics II	5		С			
BSCI 10110 Biological Diversity	4		С		Fulfills Kent Core Basic Sciences	
PHIL 11001 Introduction to Philosophy	3				Fulfills Kent Core Humanities and global diversity cours requirement	
Semester Five: [17 Credit Hours]						
Requirement: minimum 2.750 cumulative GPA require	d by end c	of term	; minin	num 2.	600 major GPA	
BSCI 10120 Biological Foundations	4		С		Fulfills Kent Core Basic Sciences	
EPSY 29525 Educational Psychology	3		С			
GEOL 11040 Earth Dynamics	3		С			
GEOL 11041 Earth Dynamics Laboratory	1		С		Fulfills Kent Core Basic Sciences	
PHY 21430 Frontiers in Astronomy	3		С			
Kent Core Requirement	3				See Kent Core Summary on page 2	
Semester Six: [15 Credit Hours]						
Requirement: apply online and be accepted for Advan major GPA	ced Study	by the	secor	nd Frid	ay of the term; 2.750 cumulative GPA; minimum 2.600	
PHY 30020 Intermediate Physics Laboratory	2		С			
GEOG 41073 Conservation of Natural Resource	3		С			
GEOL 11042 Earth History	3		С		Fulfills Kent Core Basic Sciences	
GEOL 11043 Earth History Laboratory	1		С			
SPED 23000 Introduction to Exceptionalities	3		С		Fulfills domestic diversity course requirement	
Kent Core Requirement	3				See Kent Core Summary on page 2	

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Critical requirements are boldface in shaded areas

Course Subject and Title		Upper Div.	Min. Grade	Major GPA	Important Notes
Semester Seven: [12 Credit Hours]			1		
Requirement: apply for student teaching; minimum 2.750) cumul	ative G	PA; m	inimun	•
ADED 32142 Principles of Teaching Adolescents	3		С		Fulfills writing-intensive course requirement; offered in fall only
ITEC 19525 Educational Technology	3		С		
CI 47330 Reading and Writing in Adolescence	3		С		
GEOG 31062 Fundamentals of Meteorology	3		С		
Semester Eight: [16 Credit Hours]					
Requirement: minimum 2.750 cumulative GPA; minimum	2.600 r	najor (BPA		
ADED 32277 Teaching Science in Secondary Schools	3		С		Offered in spring only
BSCI 30140 Cell Biology	4		С		
BSCI 30156 Elements of Genetics	3		С		
MATH 10041 Elementary Probability and Statistics or MATH 30011 Basic Probability and Statistics	3				
PHY 36001 Introduction Modern Physics I	3		С		
Semester Nine: [13-14 Credit Hours]					
Requirement: apply for graduation; minimum 2.750 cum	ulative (SPA; m	ninimu	n 2.600	0 major GPA
ADED 42277 Topics in Secondary School Science	3		С		
ADED 42292 Field Work Practicum	3		С		Fulfills experiential learning requirement
CHEM 40567 Basic Concepts of Physical Chemistry	4		С		
PHY 32511 Electronics or PHY 36002 Applications of Modern Physics	3-4		С		
Semester Ten: [12 Credit Hours]					
Requirement: minimum 2.750 cumulative GPA; minimum	2.600 r	najor (BPA		
ADED 42357 Secondary Student Teaching	9		S		Fulfills experiential learning requirement
ADED 49525 Inquiry into Professional Practice	3	-	С		

Graduation Requirements Summary

Minimum	Minimum Upper-	Minimum	Global / Domestic	Writing-	Experiential	Minimum	
Total Hours	Division Hours	Kent Core Hours	Diversity Course	Intensive	Learning	Major GPA	Overall GPA
148	39	36	PHIL 11001 / SPED 23000	ADED 32142	ADED 42292 and 42357	2.600	2.750

Kent Core Summary

Kent Core Categories	Important Notes	Remaining Credit Hours
Composition (6-8 credit hours) ENG 11002, 11011, 21011; HONR 10197, 10297	Enrollment based on placement test; a grade of C must be earned for both courses	6-8
Mathematics and Critical Reasoning (3-5 credit hours)	Fulfilled in this major MATH 11010 or MATH 11022	0
Humanities and Fine Arts (9 credit hours) Minimum one course from humanities in Arts and Sciences and minimum one course from fine arts	3 credit hours are fulfilled in this major with PHIL 11001	6
Social Sciences (6 credit hours) Must be selected from two curricular areas	Fulfilled in this major PSYC 11762 and SOC 12050	0
Basic Sciences (6-7 credit hours) Must include one laboratory	Fulfilled in the major with BSCI 10110 and 10120; CHEM 10060, 10061, 10062 and 10063; GEOL 11040 and 11041	0
Additional (6 credit hours) Must be selected from two Kent Core categories	Fulfilled in this major with MATH 12002 and PHY 23101	0

Special Notes for Degree/Major:

- 1. Pass Praxis II "Principles of Learning and Teaching" and specialty test.
- 2. Apply for teaching license (pick up licensure packet in 304 White Hall).



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 <u>www.kent.edu/catalog/diversity</u> 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 <u>www.kent.edu/catalog/wic</u> for course list.

Experiential Learning Requirement

To provide students with direct engagement in learning experiences that promote academic relevance, meaning and an understanding of real-world issues, students must complete this requirement at Kent State, either as a for-credit course or as a non-credit, non-course experience approved by the appropriate faculty member. Visit <u>www.kent.edu/catalog/elr</u> 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.

