PURDUE UNIVERSITY

Science Education- Earth Space Science Concentration

College of Science

SCI-EDU-BS
Code: SIED Conc: ESSE
129 Credits

Departmental/Program Major Courses

Required Science Education Core Courses (24-30 Credits)

Required Chemistry Selective Courses (4-5 credits):

(4-5) CHM 11500 General Chemistry or CHM 12300 General Chemistry for Engineers I or CHM 12500 Introduction to Chemistry I ***(satisfies Science Selective for core and CHED, ESSE, PHED Concentration Requirement)***

OR

(5) CHM 12901 General Chemistry With A Biological Focus **(satisfies BIED Concentration Requirement)**

Required Computing Option (3-4 credits):

(3-4) CS 15800 C Programming or CS 17700 Programming With Multimedia Objects **(satisfies CHED Concentration requirement)**

OR

(3-4) CS 15800 C Programming or CS 17700 Programming With Multimedia Objects or CS 18000 Problem Solving and Object-Oriented Programming **(satisfies BIED, PHED Concentration requirement)**

OR

(4) CS 17700 Programming With Multimedia Objects **(satisfies ESSE Concentration requirement)**

Required Calculus Selective Courses (6-10 credits):

(3) MA 16010 Applied Calculus I ***(satisfies Quantitative Reasoning for core/satisfies BIED Concentration only)***

(3) MA 16020 Applied Calculus II ***(satisfies Quantitative Reasoning for core/satisfies BIED Concentration only)***

OR

(4-5) MA 16100 Plane Analytic Geometry And Calculus I or MA 16500 Analytic Geometry And Calculus I ***(satisfies Quantitative Reasoning for core and BIED, CHED, ESSE, PHED Concentration requirement)***

(4-5) MA 16200 Plane Analytic Geometry And Calculus II or MA 16600 Analytic Geometry And Calculus II ***(satisfies Quantitative Reasoning for core and (satisfies Quantitative Reasoning for core and BIED, CHED, ESSE, PHED Concentration requirement)***

Required Physics Selective Courses (8 credits):

(4) PHYS 17200 Modern Mechanics ***(satisfies Science Selective for core/BIED,CHED, ESSE, PHED Concentrations)***

(4) PHYS 27200 Electric and Magnetic Interactions or PHYS 24100 Electricity and Optics AND PHYS 25200 Electricity and Optics Laboratory ***(satisfies Science Selective for core//BIED,CHED, ESSE, PHED Concentrations)***

(4) PHYS 23300 Physics For Life Sciences I **(satisfies BIED Concentration)**

(4) PHYS 23400 Physics For Life Sciences II **(satisfies BIED Concentration)**

Required Statistics Selective Courses (3 credits):

(3) STAT 30100 Elementary Statistical Methods **(satisfies CHED, ESSE, PHED Concentrations)**

OR

(3) STAT 50300 Statistical Methods For Biology **(satisfies BIED Concentration)**

Educational Program Course Requirements (36 credits) Professional Education GPA Average ≥ 3.00 – no grade lower than C-

(3) EDCI 27000 Introduction To Educational Technology And Computing

(3) EDCI 20500 Exploring Teaching As A Career

(3) EDCI 28500 Multiculturalism And Education ***(satisfies Behavior/Social Science for University Core) (satisfies Language III/Culture/Diversity Option)***

(3) EDPS 23500 Learning And Motivation ***(satisfies Behavior/Social Science for University Core) (satisfies General Education IIn***

(3) EDPS 26500 The Inclusive Classroom ***(satisfies Behavior/Social Science for University Core)***

(1) EDST 20010 Educational Policies and Laws

(2) EDPS 32700 Assessment Literacy

(3) EDCI 30900 Reading in Middle and Secondary School

(3) EDCI 42400 Physical Science In The Secondary Schools ***(satisfies Multidisciplinary Experience)*** **– for CHED, ESSE, and PHED Concentrations OR** EDCI 42100 The Teaching of Biology in Secondary School ***(satisfies Multidisciplinary Experience)*** **– for BIED**

(2) EDCI 42800 Teaching Science In The Middle And Junior High School

(10) EDCI 49800 Supervised Teaching (***Meets Teambuilding and Collaboration Experience***

Other Departmental /Program Course Requirements (24-27)

_____	Within Major	Calculus I Option – Select from MA 16100, MA 16500 ***(satisfies Quantitative Reasoning for core)*** [cc]
_____	Within Major	Calculus II Option – Select from MA 16200, MA 16600 ***(satisfies Quantitative Reasoning for core)***
_____	(3-4)	ENGL 10600 or ENGL 10800 - ***(satisfies Written Communication and Information Literacy for core)***
_____	(3-4)	Language I Option* ***(Select courses COULD satisfy Human Cultures Humanities for core)***
_____	(3-4)	Language II Option* ***(Select courses COULD satisfy Human Cultures Humanities for core)***
_____	Within Ed Program	Language III/Culture/Diversity Option* ***(Select courses COULD satisfy Human Cultures Humanities for core)***
_____	(3-6)	Technical Writing Option and Technical Presenting Option ***(Select courses COULD satisfy Oral Communication for core)***
_____	Within Major	Laboratory Science I Option ***(satisfies Science Selective for core)***
_____	Within Major	Laboratory Science II Option ***(satisfies Science Selective for core)***
_____	(3)	General Education I Option ***(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)***
_____	(3)	General Education II Option ***(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)***
_____	Within Ed Program	General Education II Option ***(Select courses COULD satisfy Human Culture Behavioral/Social Science or Humanities for core)***
_____	Within Major	STAT 30100 Statistics ***(satisfies Information Literacy Selective for core)***
_____	Within Major	Computing Option
_____	Within Ed Program	Teambuilding and Collaboration Experience*
_____	(3)	Great Issues Option
_____	Within Ed Program	Multidisciplinary Experience* ***(Select courses COULD satisfies Science, Technology, and Society Selective for core)***
_____	(3)	UCC Science, Technology & Society

*Requirement may be met with a zero credit experiential learning option. See your advisor for more information

Earth Space Science Concentration (39 credits) Overall GPA for Earth Space Science Concentration courses with the Departmental/Program Major Courses must be ≥ 2.5

_____	Within Dept/Program	CHM 11500 General Chemistry or CHM 12500 Intro to Chemistry I or CHM 12300 General Chemistry For Engineers I
_____	(4)	CHM 11600 General Chemistry or CHM 12600 Intro to Chemistry II or CHM 12901 General Chemistry With A Biological Focus or CHM 13600 General Chemistry Honors
_____	(Within Dept/Program	PHYS 17200 Mechanics or PHYS 22000 General Physics or PHYS 21800 General Physics
_____	Within Dept/Program	PHYS 27200 Electricity and Magnetism or PHYS 22100 General Physics or PHYS 21900 General Physics or or (PHYS 24100 Electricity&Optics and PHYS 25200 Electricity&Optics Laboratory)
_____	(3)	EAPS 11200 Earth through Time or EAPS 10900 Dynamic Earth or EAPS 31900 Exploring Earth through Time
_____	(3)	EAPS 11800 Introduction to Earth Science (fall)
_____	(1)	EAPS 13700 First Year Seminar in EAPS (spring) – waived if not taken during first year
_____	(4)	EAPS 24300 Earth Materials (fall) ***(also satisfies Science Selective for University Core)***
_____	(3)	EAPS 39000 Field Methods (spring)
_____	(3)	EAPS 35300 Surface Processes (fall)
_____	(3)	EAPS 35400 Plate Tectonics (spring)
_____	(3)	EAPS/ASTR Elective ***(could satisfy Science, Technology & Society for University Core)***
_____	(3)	EAPS/ASTR Elective
_____	(3)	EAPS/ASTR Elective
_____	(6)	EAPS 49000 Geology Field Experience (summer) or 3XXXX Field Geology

Electives (0-10 credits)

( ) _____ ( ) _____ ( ) _____ ( ) _____ ( ) _____

University Core Requirements

Human Cultures Humanities	☐ _____	*Science, Technology & Society elective*	☐ _____
Human Cultures Behavioral/Social Science	☐ _____	*Written Communication*	☐ _____
Information Literacy	☐ _____	*Oral Communication*	☐ _____
Science Selective	☐ _____	*Quantitative Reasoning*	☐ _____
Science Selective	☐ _____		

Note: This degree is intended to give students many options. Students need to consult with a College of Science Academic Advisor regarding requirements.

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The student is ultimately responsible for knowing and completing all degree requirements.

(Degree Works) MyPurduePlan is knowledge source for specific requirements and completion

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Science Education – Earth Space Science Concentration

Suggested Arrangement of Courses:

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
3	EAPS 11800^ * Intro Earth Sci	fall only	3	EAPS 11200 ^* Earth through Time or EAPS 10900^ * Dyn Earth or 31900 –Exploring Earth through Time	spring only
5	MA 16100^ * Calculus I	ALEKS score	1	EAPS 13700^ Fr. Seminar	
4	CHM 11500^ * Chemistry I	Calc co-req or ALEKS	5	MA 16200^ * Calculus II	MA 161
4	ENGL 10600*(1st or 2nd sem) English		4	CHM 11600^ * Chemistry II	CHM 115
			3	General Education I Option	
16			**16**		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4	EAPS 24300^*(fall only) Earth Materials	MA 161, CHM	3	EAPS 35400 Plate Tectonics	Calc/phys/geology
4	PHYS 17200 or 22000^ * Physics		4	PHYS 27200 or 22100 Physics	
3	EDCI 20500 Teaching as a Career		3	EDPS 23500 Learning & Motivation .	
3	EDCI 28500 Multiculture & Educ		3	EDPS 26500 Inclusive Classroom	
			3	COM 21700 Tech Comm	
14			**16**		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	EAPS 35300 Surface Processes	EAPS 24300	3	EAPS 39000 Field Methods	EAPS 35300
3	STAT* Statistics		3	EAPS/ASTR Elective	
4	C S Computer Programming	CALC	3	Great Issues Option*	
1	EDST 20010 Educ Policies & Law		3	Language II Option	
2	EDPS 32700 Assessment Literacy	EDPS 235	3	EDCI 27000 Educ Tech & Computing	
3	Language I Option				
16			**15**		
6 credits - EAPS 49000 Geology Field Experience (Summer)					

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	EDCI 42400 Teaching Earth/Physical Science		2	EDCI 42800 Teaching Science (GATE B)	
3	EAPS/ASTR Elective		3	EDCI 30900 Reading	
3	EAPS/ASTR Elective		10	EDCI 49800 Supervised Teaching	
3	Science, Technology, Society (STS) or Free Elective				
3	General Education II Option				
15			**15**		

*Satisfies a University Core Requirement

Students must earn a "C-" or better in all required ^ courses.

129 semester credits (minimum) required for Bachelor of Science degree.

2.0 Graduation GPA required for Bachelor of Science degree.

2.0 average in EAPS major classes required to graduate.

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