## **General Science / Secondary Education**

Bachelor of Science (BS.GENSC(SEC))

<b>Core Requir</b>	ements		Credits	Notes/Instructions
College Sem.	Quest for Meaning	CSEM 100	3	†A student may be
Communication & Creative Expression	Writing Oral Communication Literature The Arts	ENGL 110 <sup>†</sup> COMM 101 ENGL 140-149 ARTS 100-149	3 3 3 3	
Citizenship	History Intercultural Global Connections	HIST 100-149 FREN/GERM/SPAN 100-level or Study Abroad <sup>††</sup> ECON 150-199; GEOG 150-199; HIST 150-199; PS 150-199; SOC 150-199	3 3 3	
Quantitative & Scientific Reasoning	SBM Quantitative Reasoning SBM Scientific Endeavor SBM Science in Context Human Beh. & Soc. Inst	MATH 120 <sup>†</sup> or higher level NSCI 100 NSCI 171-199 ECON 111, 112; GEOG 101, 102; PS 101, PSYC 101, SOC 101	- - - 3	
Wisdom, Faith, & the Good Life	Introduction to Phil. Phil. Investigations Theology & Wisdom Theology & the Good Life	PHIL 101 PHIL 170-199; MSB 287 THEO 150-159 THEO 160-169	3 3 3 3	Abroad experience.  SBM = Satisfied Ry  Major requirement  listed below.
		Total Core Credits	39	

Major Requirements	Credits	Major Requirements	Credits	Secondary Education Requirements	Credits
Take two of the		Track Course*	3 - 4	EDUC 202	3
following with labs:		Track Course*	3 – 4	EDUC 231	1
BIOL 113 <sup>2</sup>		Track Course*	3 – 4	EDUC 232	1
BIOL 113L		Track Course*	3 – 4	EDUC 235 <sup>3</sup>	3
BIOL 210 <sup>PR</sup>	8	Track Course*	3 – 4	EDUC 240 <sup>3</sup>	3
BIOL 210L	credits	Track Course*	3 – 4	EDUC 270 <sup>3</sup>	3
BIOL 213 <sup>PR</sup>		Track Course**	3 – 4	EDUC 299⁴	0
BIOL 213L		Track Course**	3 – 4	EDUC 302 <sup>3, 4</sup>	3
CHEM 113 <sup>2</sup>	3	(Track Course**)	(3 – 4)	EDUC 305 <sup>3, 4</sup>	3
CHEM 113L	1			EDUC 350 <sup>3,4</sup>	3
CHEM 114 <sup>PR</sup>	3			EDUC 366 <sup>3, 4</sup>	3
CHEM 114L	1			EDUC 440 <sup>4</sup>	3
PHYS 111 or 113	3			EDUC 467 <sup>3, 4</sup>	7
PHYS 111L or 113L	1			EDUC 468 <sup>3, 4</sup>	2
PHYS 112 <sup>PR</sup> or 114 <sup>PR</sup>	3				
PHYS 112L <sup>PR</sup> or 114L <sup>PR</sup>	1				
MATH 125 & 128					
OR	8			Other Requirements	
MATH 129 & 130				HCE 101 Holy Cross Exp.	1
Total Minimum Maj	or Credits		60**	Total Sec Ed / Other Credits	42

Minimum Credits Required for Graduation = 141

*A student majoring in General Science must choose one of the following Tracks (minor concentrations) below:							
	**Elective courses in	Science and/or Math to a	ccumulate a minimum of	60 credits in Science and M	ath.		
<b>NOTE:</b> Some courses required for certain minor programs will have prerequisites that must be fulfilled.							
Biology	Chemistry	Mathematics	Neuroscience	<b>Environmental Science</b>	Physics		
BIOL 370	CHEM 241	MATH 126	PSYC 101	ENST 201	PHYS 231		
BIOL 490	CHEM 242	MATH 129	NEUR 211	ENST 202	PHYS Elective*		
3 <sup>rd</sup> Foundational BIOL	CHEM 243	MATH 130	NEUR 212 One of t	One of the following:	PHYS Elective*		
(113, 210, 213 + Lab)	CHEIVI 243	IVIATH 130		One of the following:	PHT3 Elective		
BIOL Elective*	CHEM 493	MATH 237	NEUR 310	ENST 490	PHYS Elective*		
BIOL Elective*	CHEM 494	MATH Capstone	NEUR 480	ENST 491	MATH 129		
BIOL Elective*	CHEM Elective*	Plus one (1) of the	Plus two (2) of the	ENST 499	MATH 130		
*Minimum of Four (4)	*One chemistry	following:	following:	Plus three (3) of the	Plus one (1) of the following:		
BIOL electives	elective, excluding	MATH 231	NEUR 342	following:	MATH 231		
approved by the	CHEM 351.	MATH 238	NEUR 346	ENST 200	MATH 237		
departmental advisor.			NEUR 348	ENST 355	*Three PHYS elective courses		
			NEUR 349	ENST 401 (A-L)	numbered 300 or higher with		
			NEUR 390	ENST 410	lab if offered		

## **General Science / Secondary Education**

## Suggested Sequence

A suggested course sequence of degree requirements is listed below. Refer to the college catalog for course titles, descriptions, and prerequisites. Always consult your Academic Advisor when planning and scheduling your classes.

Fall	Credits	Spring	Credi
♦BIOL 113 <sup>2</sup> or BIOL 213	3	◆BIOL 210 <sup>PR</sup> Organisms & Their Ecosystems	3
♦BIOL 113L or BIOL 213L	1	◆BIOL 210L <sup>PR</sup> Organisms & Their Ecosystems Lab	1
CHEM 113 <sup>2</sup> General Chemistry I	3	CHEM 114 <sup>PR</sup> General Chemistry II	3
CHEM 113L General Chemistry I Lab	1	CHEM 114L <sup>PR</sup> General Chemistry II Lab	1
MATH 128 <sup>2</sup> Statistics or 129 <sup>2</sup> Calculus I	4	MATH 125 <sup>2</sup> Calculus I or MATH 130 Calculus II	4
Core Course <sup>1</sup>	3	Core Course <sup>1</sup>	3
HCE 101 Holy Cross Experience	1		
, ,	16		15
Fall	Credits	Spring	Cred
Track Course*	3 - 4	Track Course*	3 - 4
Track Course*	3 - 4	Track Course*	3 - 4
Core Course <sup>1</sup>	3	Core Course <sup>1</sup>	3
EDUC 202 Educ. Philos., Ethics, Issues & Trends	3	EDUC 240 <sup>3</sup> Sec. Multicult., Linguistic & Inst. Meth.	3
EDUC 235 <sup>3</sup> Sec. Development, Cognition, & Learn	3	EDUC 270 <sup>3</sup> Introduction to Special Education	3
EDUC 231 Technology Module I	1	EDUC 299 <sup>4</sup>	0
<i>-</i>	15-17		15-
Admission to Candidacy (Complete and return "App	lication for Teacher Edu	cation Program Candidacy" to Education Administrative	
Assistant no sooner than the completion of 48 credit	ts and no later than 65 c	redits)	
Fall	Credits	Spring	Cred
♦PHYS 111 or 113 General Physics I	3	PHYS 112 or 114 General Physics II	3
♦PHYS 111L or 113L General Physics I Lab	1	PHYS 112L or 114L General Physics II Lab	1
Track Course*	3 - 4	 Track Course*	3 -
Core Course <sup>1</sup>	3	Core Course <sup>1</sup>	3
Core Course <sup>1</sup>	3	Core Course <sup>1</sup>	3
EDUC 305 <sup>3,4</sup> Assessment I	3	Core Course <sup>1</sup>	3
EDUC 232 Technology Module II	1		
	16-17		16-
Fall	Credits	Spring	Cred
Track Course*	3 - 4	Track Course*	3 -
Core Course <sup>1</sup>	3	Track Course*	3 -
Core Course <sup>1</sup>	3	Core Course <sup>1</sup>	3
Core Course <sup>1</sup>	3	EDUC 366 <sup>3, 4</sup> Methods For Teaching Diverse Learners	3
EDUC 302 <sup>3,4</sup> Secondary Science Methods	3	EDUC 350 <sup>3,4</sup> Secondary Classroom Management	3
·	15-17		15-
Fall	Credits		
EDUC 467 <sup>3, 4</sup> Observation & Student Teach. (Sec.)	7	Students who wish to finish in four (4) years	
EDUC 468 <sup>3, 4</sup> Student Teaching Seminar	2	(including Student Teaching)	
EDUC 440 <sup>4</sup> Inclusive Education	3	MUST take summer courses.	
Take Praxis II			
	12		
	12		

## NOTES

The standard semester course load is five courses consisting of 15 – 17 credits. A student may take 18 credits if the science lab puts them over 17 credits (for more information about credit loads, please see the college catalog). Students are encouraged to take some Core courses during the summer months to help "lighten" their course load during a semester. All Secondary Teacher Certification candidates must complete six credits of college level mathematics and six credits of college level English:

MATH: 125, 128 ENGL: 110. 140-149

The Pennsylvania Department of Education requires secondary teachers to have a degree in the content area for certification. Students seeking secondary certification must meet with his/her specific content area department for content area courses required for the degree. The Education Division is not responsible for content area or Core courses for secondary certification candidates.

 $<sup>^{1}\</sup>mbox{Choose}$  one course from each of the Core Requirements listed on the reverse side.

<sup>&</sup>lt;sup>2</sup> Course may satisfy both a Major and a Core requirement. BIOL 113 and CHEM 113 satisfy the Scientific Endeavor and Science in Context Core requirement. MATH 125 will satisfy the Quantitative Reasoning Core requirement.

<sup>&</sup>lt;sup>3</sup> Updated Child Abuse & Criminal Record & FBI Clearances REQUIRED for EDUC 235, EDUC 240, EDUC 270, EDUC 302, EDUC 305, EDUC 350, EDUC 366, EDUC 440, EDUC 467, and EDUC 468.

<sup>&</sup>lt;sup>4</sup> EDUC 299 Basic Skills is a pre-requisite for all 300 and 400 level education courses. In order to register for this course, you must take and pass all basic skills tests. A student will be required to change their major after their sophomore year if EDUC 299 is not passed.

PR Course has a prerequisite – check college catalog.

Students considering the Physics track should take PHYS 113, 113L, 114, & 114L during their freshman year in exchange for the Biology courses.