Chemistry / Secondary Education

Bachelor of Arts (BS.CHEM(SEC))

Core Requirements				Credits	Notes/Instructions
College Sem.		Quest for Meaning	CSEM 100	3	†A student may be required to take ENGL 105 and/or MATH 100 based on placement exams administered prior to their first semester at King's College. ENGL 105 and MATH 100 are 3-credit courses and will count as free electives. †† The Intercultural Competence requirement can be satisfied by taking a 100-level language class for 3 credits or participating in an approved Study Abroad experience. (See college catalog for more information) **SBM** = Satisfied By Major requirement and credits listed below.
Communication & Creative Expression		Writing	ENGL 110†	3	
		Oral Communication	COMM 101	3	
		Literature	ENGL 140-149	3	
		The Arts	ARTS 100-149	3	
Citizenship		History	HIST 100-149	3	
		Intercultural	FREN/GERM/SPAN 100-level or Study Abroad††	3	
		Global Connections	ECON 150-199; GEOG 150-199; HIST 150-199; PS 150-199; SOC 150-199	3	
Quantitative & Scientific Reasoning	SBM	Quantitative Reasoning	MATH 120† or higher level	-	
	SBM	Scientific Endeavor	NSCI 100	-	
	SBM	Science in Context	NSCI 171-199	-	
		Human Beh. & Soc. Inst	ECON 111, 112; GEOG 101, 102; PS 101, PSYC 101, SOC 101	3	
Wisdom, Faith, & the Good Life		Introduction to Phil.	PHIL 101	3	
		Phil. Investigations	PHIL 170-199; MSB 287	3	
		Theology & Wisdom	THEO 150-159	3	
		Theology & the Good Life	THEO 160-169	3	
			Total Core Credits	**39**	

	Major Requirements	Credits
	CHEM 113[2]	3
	CHEM 113L	1
	CHEM 114[2,PR]	3
	CHEM 114L[PR]	1
	CHEM 241[PR]	3
	CHEM 241L[PR]	1
	CHEM 242[PR]	3
	CHEM 242L[PR]	1
	CHEM 243[PR]	3
	CHEM 243L[PR]	2
	CHEM 244[PR]	3
	CHEM 244L[PR]	2
	CHEM 351[PR]	1
	CHEM 357[PR]	3
	CHEM 357L[PR]	2
	CHEM 358[PR]	3
	CHEM 358L[PR,*]	2
	CHEM 471[PR]	3
	CHEM 493[PR]	1
	CHEM 494[PR]	1
	Total Major Credits	**42**

	Major Requirements	Credits
	MATH 129[2]	4
	MATH 130[PR]	4
	MATH 237[PR]	3
	MATH 238[PR]	3
	PHYS 113[CR]	3
	PHYS 113L	1
	PHYS 114[PR]	3
	PHYS 114L[PR]	1
	Other Requirements	
	HCE 101 Holy Cross Exp.	1
	Total Major and Other Credits	**23**

	Secondary Education Requirements	Credits
	EDUC 202	3
	EDUC 231	1
	EDUC 232	1
	EDUC 235[3]	3
	EDUC 240[3]	3
	EDUC 270[3]	3
	EDUC 299[4]	**0**
	EDUC 302[3, 4]	3
	EDUC 305[3, 4]	3
	EDUC 350[3,4]	3
	EDUC 366[3, 4]	3
	EDUC 440[4]	3
	EDUC 467[3, 4]	7
	EDUC 468[3, 4]	2
	Total Secondary Education Credits	**38**

Total Credits Required for Graduation = 142

***** CHEM 358L may be replaced by a semester of research (CHEM 396, CHEM 397, CHEM 496, CHEM 497)

NOTE: All Secondary Teacher Certification candidates must complete six credits of college level mathematics and six credits of college level English:

Math Courses	MATH 129	MATH 130
English Courses	ENGL 110	ENGL 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.

See reverse side for a suggested sequence

Chemistry / 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 2022	Credits		Spring 2023	Credits
	CHEM 113[2] General Chemistry I	3		CHEM 114[PR] General Chemistry II	3
	CHEM 113L General Chemistry I Lab	1		CHEM 114L[PR] General Chemistry II Lab	1
	MATH 129[2] Analytic Geometry & Calculus I	4		MATH 130[PR] Analytic Geometry & Calculus II	4
	PHYS 113[2,CR] Physics for Scientists & Engineers I	3		PHYS 114[PR] Physics for Scientists & Engineers II	3
	PHYS 113L Physics for Sci. & Eng. I Lab	1		PHYS 114L Physics for Sci. & Eng. II Lab	1
	Core Course[1]	3		Core Course[1]	3
	HCE 101 Holy Cross Experience	1			
		16			**15**
	Summer **	**Credits**			
	Fall 2023	**Credits**		**Spring 2024**	**Credits**
	CHEM 241[PR] Organic Chemistry I	3		CHEM 242[PR] Organic Chemistry II	3
	CHEM 241L[PR] Organic Chemistry I Lab	1		CHEM 242L[PR] Organic Chemistry II Lab	1
	MATH 238[PR] Differential Equations	3		MATH 237[PR] Math. Methods for the Phys. Sci.	3
	Core Course[1]	3		Core Course[1]	3
	EDUC 202 Educ. Philos., Ethics, Issues & Trends	3		EDUC 240[3] Sec. Multicult., Linguistic & Inst. Meth.	3
	EDUC 235[3] Sec. Development, Cognition, & Learn	3		EDUC 270[3] Introduction to Special Education	3
	EDUC 231 Technology Module I	1		**EDUC 299[4]**	**0**
		17			**16**
	Admission to Candidacy (Complete and return "Application for Teacher Education Program Candidacy" to Education Administrative Assistant no sooner than the completion of 48 credits and no later than 65 credits)				
	Summer **	**Credits**			
	Fall 2024	**Credits**		**Spring 2025**	**Credits**
	CHEM 243[PR] Analytical Chemistry	3		CHEM 244[PR] Instrumental Analysis	3
	CHEM 243L[PR] Analytical Chemistry Lab	2		CHEM 244L[PR] Instrumental Analysis Lab	2
	CHEM 357[PR] Physical Chemistry I	3		CHEM 358[PR] Physical Chemistry II	3
	CHEM 357L[PR] Physical Chemistry I Lab	2		CHEM 358L[PR] Physical Chemistry II Lab	2
	CHEM 351[PR] Technological Competency	1		EDUC 305[3,4]Assessment I	3
	Core Course[1]	3		Core Course[1]	3
	EDUC 232 Technology Module II	1			
	Core Course[1]	3			
		18			**16**
	Summer **	**Credits**			
	Fall 2025	**Credits**		**Spring 2026**	**Credits**
	CHEM 471[PR] Advanced Inorganic Chemistry	3		CHEM 494[PR] Senior Colloquium II	1
	CHEM 493[PR] Senior Colloquium I	1		EDUC 350[3,4] Secondary Classroom Management	3
	EDUC 302[3,4] Secondary Science Methods	3		EDUC 366[3, 4] Methods For Teaching Diverse Learners	3
	Core Course[1]	3		Core Course[1]	3
	Core Course[1]	3		Core Course[1]	3
	Core Course[1]	3		Core Course[1]	3
		16			**16**
	Fall	**Credits**			
	EDUC 467[3, 4] Observation & Student Teach. (Sec.)	7			
	EDUC 468[3, 4] Student Teaching Seminar	2			
	EDUC 440[4] Inclusive Education	3			
	Take Praxis II				
		12			

Total Credits Required for Graduation = 142

** Students are encouraged to take some Core courses during the summer months to help "lighten" their course load during a semester.

[1]Choose one course from each of the Core Requirements listed on the reverse side.

[2] Course may satisfy both a Major and a Core requirement. MATH 129 satisfies the Quantitative Reasoning Core requirement; CHEM 113 and PHYS 113 satisfies the Scientific Endeavor and Science in Context Core requirements.

[3] 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.[4] **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.