Environmental Chemistry

Bachelor of Science (BS.ENVCHEM)

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(s) and credit(s) 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	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	
	SBM	Phil. Investigations	PHIL 170-199 **(PHIL 172)**	-	
		Theology & Wisdom	THEO 150-159	3	
		Theology & the Good	THEO 160-169	3	
			Total Core Credits	**36**	

	Major Requirements	Credits		Major Requirements	Credits		Electives[3] / Other Requirements	Credits
	CHEM 113[2]	3		BIOL 113[2]	3		HCE 101 Holy Cross Exp.	1
	CHEM 113L	1		BIOL 113L	1		Free Elective[3]	3
	CHEM 114[PR]	3		BIOL 210[PR]	3			
	CHEM 114L[PR]	1		BIOL 210L[PR]	1			
	CHEM 241[PR]	3		MATH 129[2] (MATH 125)	4			
	CHEM 241L[PR]	1		MATH 128	4			
	CHEM 242[PR]	3		CE 350	3			
	CHEM 242L[PR]	1		PHIL 172	3			
	CHEM 243[PR]	3		ENST 200	3			
	CHEM 243L[PR]	2		ENST 201	1			
	CHEM 244[PR]	3		ENST 201L	1			
	CHEM 244L[PR]	2		ENST 202	3			
	CHEM 351	1		ENST 202L	1			
	CHEM 493	1		ENST 410	3			
	CHEM 494	1		ENVCHEM Elective*	3-5			
	PHYS 111[CR]	3		ENVCHEM Elective*	3-5			
	PHYS 111L	1		ENVCHEM Elective*	2-3			
	PHYS 112[PR]	3						
	PHYS 112L[PR]	1						
	Total Major Credits	**37**		**Total Major Credits**	**42-44**		**Total Elective / Other Credits**	**4**

Total Credits Required for Graduation = 121 - 126

*In addition to the Major Sequence requirements, an Environmental Chemistry Major must also complete a minimum of three (3) upper-level courses from the following list. Courses with an [ACS] designation are necessary for American Chemical Society (ACS) Certification.

NOTE: *It may be necessary to use the "Free Elective in the Spring of Senior year for one of the below to obtain ACS certification). Always consult with your Environmental Chemistry Advisor when choosing ENCH Major Electives.*

ENVCHEM Electives* (Environmental Chemistry Major Electives) - must choose 3:					
[ACS]CHEM353/BIOL 353	Biochemistry	3	ENST 330	Environmental Education	4
[ACS]CHEM353L/BMB 353L	Advanced Biochemical Techniques	2	ENST 360	Environmental Law	3
[ACS]CHEM 357 & 357L	Physical Chemistry I with Lab	5	ENST 370	Environmental Seminar	3
[ACS]CHEM 471 & 471L	Advanced Inorganic Chemistry with Lab	5	ENST 420	Ecotoxicology	3
[ACS]CHEM 474	Biogeochemistry	3	ENST 450	Water Quality Analysis	4

General Information:

A student must earn a minimum of 120 credit hours to be awarded the baccalaureate degree. The number of credit hours required for graduation may be higher in certain major programs **or** if the student elects to pursue a second major. Beyond the requirements of the Core Curriculum and of a student's chosen major program, the balances of the credit hours required for graduation are "free electives." To complete the minimum 120 credit hours to earn a bachelor's degree in four years, a student needs to complete a minimum of 30 credits by the end of each academic year (freshman, sophomore, junior, and senior).

See reverse side for a suggested sequence

Effective 07/01/25

Environmental Chemistry

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. To be considered full-time, a student must take between 12 - 18 credits each semester. For more information about credit loads, please see the college catalog.

	Fall	Credits		Spring	Credits
	CHEM 113[2] General Chemistry I	3		CHEM 114[PR] General Chemistry II	3
	CHEM 113L General Chemistry I Lab	1		CHEM 114L General Chemistry II Lab	1
	ENST 201 Environmental Science I	3		ENST 202 Environmental Science II	3
	ENST 201L Environmental Science I Lab	1		ENST 202L Environmental Science II Lab	1
	BIOL 113[2] Evolution & Diversity	3		BIOL 210[PR] Organisms & Their Ecosystems	3
	BIOL 113L Evolution & Diversity Lab	1		BIOL 210L Organisms & Their Ecosystems Lab	1
	Core Course[1]	3		Core Course[1]	3
	HCE 101 Holy Cross Experience	1			
		16			**15**
	Summer	**Credits**			
	Fall	**Credits**		**Spring**	**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 129[2] Calc I or MATH 125 Calc I	4		MATH 128 Intro to Statistics & Data Analysis	4
	PHYS 111 Physics for the Life Sciences I	3		PHYS 112[PR] Physics for the Life Sciences II	3
	PHYS 111L Physics for the Life Sciences I Lab	1		PHYS 112L[PR] Physics for the Life Sciences II Lab	1
	Core Course[1] (PHIL 172 Environmental Ethics)	3		Core Course[1]	3
		15			**15**
	Summer	**Credits**			
	Fall	**Credits**		**Spring**	**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 351 Technological Comp	1		ENCH Major Elective	3-5
	ENST 200 Earth Science	3		ENST 410 Env Sample Analysis	3
	Core Course[1]	3		Core Course[1]	3
	Core Course[1]	3			
		15			**14-16**
	Summer	**Credits**			
	Fall	**Credits**		**Spring**	**Credits**
	CHEM 493[4] Senior Colloquium I	1		CHEM 494[4] Senior Colloquium II	1
	ENCH Major Elective*	3-5		ENCH Major Elective*	2-3
	Core Course[1]	3		CE 350 Environmental Engineering	3
	Core Course[1]	3		Core Course[1]	3
	Core Course[1]	3		Core Course[1]	3
	Core Course[1]	3		Free Elective[3]	3
		16-18			**15-16**

Total Credits Required for Graduation = 121-126

NOTES:

[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. BIOL 113 and CHEM 113 satisfy the Scientific Endeavor and Science in Context Core requirement. MATH 129 will satisfy the Quantitative Reasoning Core requirement.

[3] Students may select "free electives" for personal enrichment **OR** for Minor and/or Second Major Requirements.

[4] Senior Integrated Assessment (Fall and Spring Semester of Senior Year)

[PR] Course has a prerequisite – check college catalog.

[CR] Course has a corequisite – check college catalog.