

Environmental Science – Environmental Engineering Track

3+2 Engineering Dual Degree Program with Notre Dame

Bachelor of Science (BS.ENST(EE))

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. SBM = Satisfied By King's Major requirement(s) and credit(s) listed below. (3) To satisfy the King's Core requirements, a student will need to complete two (2) Core requirements at Notre Dame.
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 ³	PHIL 170-199; MSB 287 ³	(3)	
	Theology & Wisdom	THEO 150-159	(3)	
	Theology & the Good Life	THEO 160-169	(3)	
Total Core Credits taken at King's			33	

King's Major Requirements		Credits
ENST 201 Environ Science I		3
ENST 201L Environ Science I Lab		1
ENST 202 ^{PR} Environ Science II		3
ENST 202L ^{PR} Environ Science II Lab		1
ENST 401F Water Quality Analysis		3
ENST 49X Env. Science Capstone		-
ENST Major Elective (6 courses total)		-
CHEM 113 ² Gen. Chem. I		3
CHEM 113L Gen. Chem. I Lab		1
CHEM 114 ^{PR} Gen. Chem. II		3
CHEM 114L ^{PR} Gen. Chem. II Lab		1
CHEM 241 ^{PR} Organic Chem I		3
CHEM 241L ^{PR} Organic Chem I Lab		1
CHEM 242 ^{PR} Organic Chem II		3
CHEM 242L ^{PR} Organic Chem II Lab		1
BIOL 113 Evolution & Diversity		-
BIOL 113L Evol & Diversity Lab		-
BIOL 210 Organisms & Ecosystems		-
BIOL 210L Organisms & Eco Lab		-
PHYS 113 ^{2,CR} Physics for Sci. & Eng. I		3
PHYS 113L Phys. for Sci./Eng. I Lab		1
PHYS 114 ^{PR} Physics for Sci. & Eng. II		3
PHYS 114L ^{PR} Phys. for Sci./Eng. II Lab		1
PHYS 241 ^{PR} Statics		3
ENGR 150 Engineering Seminar		2
ENGR 250 ^{PR} System Design & Analysis		3
ENGR 250L ^{PR} Syst. Design & Analysis Lab		1
MATH 129 Calculus I		4
MATH 130 ^{PR} Calculus II		4
MATH 231 ^{PR} Calculus III		4
MATH 237 ^{PR} Math Meth. for Phys. Sci.		3
MATH 361 ^{PR} Probability & Statistics I		3
CS 111 Programming for Sci. and Eng.		3
CS 111L Prog. for Sci. and Eng. Lab		0
Other Requirements		
HCE 101 Holy Cross Experience		1
Total King's Major and Other Credits		66

Notre Dame's Major Requirements		Credits
CE 20110 Planet Earth		3
CE 21110 Planet Earth Lab		1
CE 20150 Statics		-
CE 20520 Environmental Mineralogy		3
CE 20230 Programming		1
CE 20300 Global Change, Water & Energy		-
CE 20320 Environmental Aquatic Chemistry		3
CE 30125 Computational Methods		3
CE 30300 Intro to Environmental Engineering		3
CE 31300 Intro to Environmental Engineering Lab		1
CE 30320 Water Chemistry & Treatment		3
CE 30455 Environmental Hydrology		3
CE 30460 Fluid Mechanics		3
CE 40300 Geochemistry		3
CE 40341 Biological Process Design		3
CE 40350 Environmental Microbiology		3
CE 40355 Water Disease/Global Health		3
CE 40420 Reactive Transport		3
CE 40450 Hydraulics		3
CE 40460 Groundwater Hydrology		4
CE 40701 Principles of Practice		1
CE 40702 Senior Design		3
ACMS 30440 Probability & Statistics		-
Technical Elective		-
Technical Elective		-
Technical Elective		3
A&L Course (King's Core Course)		3
A&L Course (King's Core Course)		3
Total Notre Dame Credits		62
General Information		
The 3-2 engineering program is a dual degree program. Students spend 3 years at King's College (King's) taking math, science and CORE courses and then transfer to Notre Dame (ND) for 2 years, focusing on engineering courses in their chosen field. Upon successful completion of the program at Notre Dame, students will receive <i>both</i> a B.S. in Environmental Science from King's and a B.S. in Environmental Engineering from Notre Dame. (For more information, refer to the college catalog).		

Total Credits required for Graduation = 161

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3+2 Dual Degree Engineering Program with Notre Dame

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.

King's College			
Fall 2019	Credits	Spring 2020	Credits
CHEM 113 ² Gen. Chem. I	3	CHEM 114 ^{PR} Gen. Chem. II	3
CHEM 113L Gen. Chem. I Lab	1	CHEM 114L ^{PR} Gen. Chem. II Lab	1
ENST 201 Environmental Science I	3	ENST 202 ^{PR} Environmental Science II	3
ENST 201L Environmental Science I Lab	1	ENST 202 ^{PR} Environmental Science II Lab	1
MATH 129 Calculus I	4	ENGR 150 Engineering Seminar	2
Core Course ¹	3	MATH 130 ^{PR} Calculus II	4
HCE 101 Holy Cross Experience	1	Core Course ¹	3
	16		17
Fall 2020	Credits	Spring 2021	Credits
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 ^{PR} Physics for Sci. & Eng. II Lab	1
MATH 231 ^{PR} Calculus III	4	ENGR 250 ^{PR} System Design & Analysis	3
CS 111 Programming for Sci. and Eng.	3	ENGR 250L ^{PR} Syst. Design & Analysis Lab	1
CS 111L Prog. for Sci. and Eng. Lab	0	MATH 237 ^{PR} Math Methods for Phys. Sci.	3
Core Course ¹	3	Core Course ¹	3
Core Course ¹	3	Core Course ¹	3
	17		17
Fall 2021	Credits	Spring 2022	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 361 ^{PR} Probability & Statistics I	3	ENST 401 ^{FPR} Water Quality Analysis	3
Core Course ¹	3	PHYS 241 ^{PR} Statics	3
Core Course ¹	3	Core Course ¹	3
Core Course ¹	3	Core Course ¹	3
	16		16

Notre Dame			
Fall 2022	Credits	Spring 2023	Credits
CE 20111 Planet Earth	3	CE 20320 Environmental Aquatic Chemistry	3
CE 21110 Planet Earth Lab	1	CE 20230 Programming	1
CE 30300 Intro to Environmental Engineering	3	CE 40350 Environmental Microbiology	3
CE 31300 Intro to Environmental Engineering Lab	1	CE 30320 Water Chemistry & Treatment	3
CE 30455 Environmental Hydrology	3	CE 40450 Hydraulics	3
CE 30460 Fluid Mechanics	3	A&L Course (King's Core Course ¹)	3
CE 20520 Environmental Mineralogy	3		
	17		16
Fall 2023	Credits	Spring 2024	Credits
CE 30125 Computational Methods	3	CE 40702 Senior Design	3
CE 40330 Geochemistry	3	CE 40420 Reactive Transport	3
CE 40355 Water Disease/Global Health	3	CE 40341 Biological Process Design	3
CE 40460 Groundwater Hydrology	4	Technical Elective	3
CE 40701 Principles of Practice	1	A&L Course (King's Core Course ¹)	3
	14		15

Total Credits Required for Graduation = 161

Notes:

The 2 course sequence ENST 201/L and ENST 202/L Environmental Science I & II satisfies the Notre Dame requirement for ENVG 20300 Change, Water and Energy
The Biology requirements for the King's Environmental Science major is by taking CE 40341 Biological Process Design and CE 40350 Environmental Microbiology
CHEM 241/L and CHEM 242/L will satisfy two Notre Dame Technical Elective requirements

PHYS 241 satisfies the Notre Dame requirement for CE 20150 Statics

MATH 361 satisfies the Notre Dame requirement for ACMS 30440 Probability & Statistics

CE 40702 Senior Design taken at Notre Dame will satisfy King's ENST 49X Environmental Science Capstone requirement

Any other 30000 or 40000 level ENVG or CE courses taken at Notre Dame will satisfy the six King's Environmental Science Major Elective requirements

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

²Course may satisfy both a Major and a Core requirement. CHEM 113 and PHYS 113 will satisfy the Scientific Endeavor and Science in Context Core requirements.

MATH 129 will satisfy the Quantitative Reasoning Core requirement.

^{PR} Course has a prerequisite – check college catalog.

^{CR} Course has a co-requisite – check college catalog.