

BIOLOGY / SECONDARY EDUCATION

BACHELOR OF SCIENCE (B.S.)

CORE Requirements	Credits	Major Requirements	Credits	Major Requirements	Credits	Secondary Education	Credits
CORE 090 First Yr Exp.	1	BIOL 113	3	CHEM 113	3	EDUC 202	3
CORE 100 Lib Arts Sem.	3	BIOL 113L	1	CHEM 113L	1	EDUC 231	1
CORE 110 Effect Writ.	3	BIOL 210	3	CHEM 114	3	EDUC 232	1
CORE 115 or 116 Oral Comm.	3	BIOL 210L	1	CHEM 114L	1	EDUC 235 ²	3
CORE 131 or 133 Civilization	3	BIOL 213	3	CHEM 241	3	EDUC 240 ²	3
CORE 140 or 141-145 Forgn.	3	BIOL 213L	1	CHEM 241L	1	EDUC 270 ²	3
CORE 150-159 Soc. Sci. ¹	3	BIOL 270 ³	1	CHEM 242	3	EDUC 299⁷	0
CORE 160-164 Literature	3	BIOL 370 ⁴	2	CHEM 242L	1	EDUC 302 ^{2,7}	3
CORE 170-179 The Arts	3	BIOL 470 ⁵	1	MATH 125	4	EDUC 305 ^{2,7}	3
CORE 180-189 Amer. Studies ¹	3	BIOL Elective*	4	MATH 128	4	EDUC 350 ^{2,6,7}	3
CORE 190-199 Global Studies ¹	3	BIOL Elective*	4	PHYS 111	3	EDUC 366 ^{2,7}	3
CORE 250-259 Syst. Theology	3	BIOL Elective*	4	PHYS 111L	1	EDUC 440 ⁷	3
CORE 260-269 Mor. Theology	3	BIOL Elective*	3	PHYS 112	3	EDUC 467 ^{2,7}	7
CORE 280 Philos. I	3	BIOL 490 / RIC ⁶	3	PHYS 112L	1	EDUC 468 ^{2,7}	2
CORE 281-289 Philos. II	3					Total Credits for Secondary Education	38
Total Credits for CORE	43			Total Credits for Major	66		

Total Credits Required for Graduation = 147

*In addition to the Major Sequence requirements, a Biology Major must also complete a minimum of five (5) upper-level courses (minimum of three with lab). In addition, one of these courses must be research intensive (consult with Biology advisor). Biology majors also have the option to choose a major emphasis in Pre-Health, Molecular Biology, or Ecology (see College Catalog).

Biology Electives

BIOL 310 Computer Modeling in Biology & Env. Sci	BIOL 336 Cell Biology	BIOL 416 — Parasitology
BIOL 314 Microbiology	BIOL 349 Animal Behavior	BIOL 420 – Botany
BIOL 323 Genetics	BIOL 350 Vertebrate Embryology	BIOL 430 — Ecology
BIOL 324 Biochemistry	BIOL 355 Comparative Vertebrate Anatomy	BIOL 447 — Physiology
BIOL 326 Immunology	BIOL 380 Neuroendocrinology	BIOL 450 — Molecular Genetics: DNA Science
BIOL 330 Introductory Bioinformatics	BIOL 401 Special Topics in Env. Science	BIOL 456 – Molecular Neuroscience

¹ Students are required to take CORE 150, CORE 180 **OR** CORE 190 to fulfill the Interdisciplinary CORE requirement.

- If a student takes CORE 150, then he/she should choose from 181 – 188 to fulfill the 18x requirement AND from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 180, then he/she should choose from 151 – 158 to fulfill the 15x requirement AND from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 190, then he/she should choose from 151 – 158 to fulfill the 15x requirement AND from 181 – 188 to fulfill the 18x requirement.

² Updated Child Abuse & Criminal Record & FBI Clearances **REQUIRED** for EDUC 235, EDUC 240, EDUC 270, EDUC 302, EDUC 305, EDUC 350, EDUC 366, EDUC 467 and EDUC 468.

³ Sophomore Seminar – Spring Semester of Sophomore Year

⁴ Junior Seminar – Fall or Spring Semester of Junior Year

⁵ Senior Seminar – Spring Semester of Senior Year

⁶ Research requirement: Biology 490 or Biology Elective that is designated as a Research intensive course (RIC)

⁷ 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.

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." **Because of the CORE, Major, and Secondary Education requirements, there are no "Free Electives" for students majoring in Biology/Secondary Education.**

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SUGGESTED SEQUENCE

- Use the information below as a guide when selecting courses.
- Refer to the reverse side when selecting major courses, major electives, core courses, and free electives when applicable.
- Consult your Academic Advisor prior to course registration.
- Refer to the King's College Catalog and/or website for course titles and descriptions.
- Choose one course from each CORE category as listed on the reverse side.
 - CORE courses may be taken in any order approved by the academic advisor with the following conditions:
 - CORE 100 and CORE 110 should be taken in the first year.
 - CORE 115 (or 116) should be taken within the first two years.
 - For students selecting a Foreign Language (CORE 14x), every effort should be made to register for that language in the first semester at King's.

1 st Year - Fall		cr.	1 st Year - Spring		cr.
BIOL 113 Evolution & Diversity		3	BIOL 210 Organisms & Their Ecosystems		3
BIOL 113L Evolution & Diversity Lab		1	BIOL 210L Organisms & Their Ecosystems Lab		1
CHEM 113 General Chemistry I		3	CHEM 114 General Chemistry II		3
CHEM 113L General Chemistry I Lab		1	CHEM 114L General Chemistry II Lab		1
CORE		3	MATH 125 Calculus		4
CORE		3	CORE		3
CORE 090 First Year Experience		1			
		16			15
2 nd Year - Fall			2 nd Year - Spring		
BIOL 213 Cell & Molecular Biology		3	BIOL 270 Sophomore Seminar		1
BIOL 213L Cell & Molecular Biology Lab		1	BIOL Elective*		3
CHEM 241 Organic Chemistry I		3	CHEM 242 Organic Chemistry II		3
CHEM 241L Organic Chemistry I Lab		1	CHEM 242L Organic Chemistry II Lab		1
MATH 128 Intro. to Statistics & Data Analysis		4	CORE		3
EDUC 202 Educ. Philos., Ethics, Issues & Trends		3	EDUC 240 ² Sec. Multicult., Linguistic & Inst. Meth.		3
EDUC 235 ² Sec. Development, Cognition, & Learn.		3	EDUC 270 ² Introduction to Special Education		3
			EDUC 231 Technology Module I		1
			EDUC 299⁷		0
		18			18
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)					
3 rd Year - Fall			3 rd Year - Spring		
PHYS 111 Physics for the Life Sciences I		3	PHYS 112 Physics for the Life Sciences II		3
PHYS 111L Physics for the Life Sciences I Lab		1	PHYS 112L Physics for the Life Sciences II Lab		1
BIOL Elective*		3	BIOL Elective*		3
BIOL 370 ⁴ Junior Seminar		2	BIOL Elective Lab*		1
CORE		3	CORE		3
CORE		3	CORE		3
EDUC 366 ^{2,7} Meth. For Teaching Diverse Sec. Stud.		3	EDUC 305 ^{2,7} Assessment I		3
			EDUC 232 Technology Module II		1
		18			18
4 th Year - Fall			4 th Year - Spring		
BIOL 490 or RIC ⁶ Elective with lab*		4	BIOL 470 ⁵ Senior Seminar		1
CORE		3	BIOL Elective*		3
CORE		3	BIOL Elective Lab*		1
CORE		3	CORE		3
EDUC 302 ^{2,7} Secondary Science Methods		3	CORE		3
			CORE		3
			EDUC 350 ^{2,7} Secondary Classroom Management		3
		16			17
5 th Year - Fall			Students who wish to finish in four (4) years (including Student Teaching) MUST take summer courses.		
EDUC 467 ^{2,7} Observation & Student Teach. (Sec Ed)	7				
EDUC 468 ^{2,7} Student Teaching Seminar	2				
EDUC 440 ⁷ Inclusive Education	3				
Take Praxis II	12				
Total Credits Required for Graduation = 147					

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

Math Courses	MATH 125	MATH 128
English Courses	CORE 110	CORE 16__

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.