

# CHEMISTRY / SECONDARY EDUCATION CERTIFICATION

## BACHELOR OF SCIENCE (B.S.)

CORE Requirements	Credits	Major Requirements	Credits	Major Requirements	Credits	Secondary Education	Credits
CORE 090 First Yr Exp.	1	CHEM 113	3	CHEM 114	3	EDUC 202	3
CORE 100 Lib Arts Sem.	3	CHEM 113L	1	CHEM 114L	1	EDUC 231	1
CORE 110 Effect Writ.	3	CHEM 241	3	CHEM 242	3	EDUC 232	1
CORE 115 or 116 Oral Comm.	3	CHEM 241L	1	CHEM 242L	1	EDUC 235 <sup>2</sup>	3
CORE 131 or 133 Civilization	3	CHEM 243	3	CHEM 244	3	EDUC 240 <sup>2</sup>	3
CORE 140 or 141-145 Forgn.	3	CHEM 243L	2	CHEM 244L	2	EDUC 270 <sup>2</sup>	3
CORE 150-159 Soc. Sci. <sup>1</sup>	3	CHEM 357	3	CHEM 358	3	<b>EDUC 299<sup>3</sup></b>	<b>0</b>
CORE 160-169 Literature	3	CHEM 357L	2	CHEM 358L	2	EDUC 302 <sup>2,3</sup>	3
CORE 170-179 The Arts	3	CHEM 351	1	CHEM 493	1	EDUC 305 <sup>2,3</sup>	3
CORE 180-189 Amer. Studies <sup>1</sup>	3	CHEM 471	3	CHEM 494	1	EDUC 350 <sup>2,3</sup>	3
CORE 190-199 Global Studies <sup>1</sup>	3	MATH 129	4	MATH 130	4	EDUC 366 <sup>2,3</sup>	3
CORE 250-259 Syst. Theology	3	MATH 237	3	MATH 238	3	EDUC 440 <sup>3</sup>	3
CORE 260-269 Mor. Theology	3	PHYS 113	3	PHYS 114	3	EDUC 467 <sup>2,3</sup>	10
CORE 280 Philos. I	3	PHYS 113L	1	PHYS 114L	1	EDUC 468 <sup>2,3</sup>	2
CORE 281-289 Philos. II	3						
Total Credits for CORE	43	Total Credits for Major	64			Total Credits for Secondary Education	41

**Total Credits Required for Graduation = 148**

<sup>1</sup> 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.

<sup>2</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 467 and EDUC 468.

<sup>3</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. Formal application to the Education Department between 48 and 60 credits – failure to complete EDUC 299 by 60 credits will result in the dropping of teacher certification in compliance with PDE regulations.

### 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 Chemistry/Secondary Education.**

# CHEMISTRY / SECONDARY EDUCATION CERTIFICATION

## 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 <sup>st</sup> Year - Fall		cr.	1 <sup>st</sup> Year - Spring		cr.
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
PHYS 113 Physics for Scientists & Engineers I		3	PHYS 114 Physics for Scientists & Engineers II		3
PHYS 113L Physics for Sci. & Eng. I Lab		1	PHYS 114L Physics for Sci. & Eng. II Lab		1
MATH 129 Analytic Geometry & Calculus I		4	MATH 130 Analytic Geometry & Calculus II		4
CORE		3	CORE		3
CORE 090		1	CORE		3
		<b>16</b>			<b>18</b>
2 <sup>nd</sup> Year - Fall			2 <sup>nd</sup> Year - Spring		
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 237 Math. Methods for Physical Sciences		3	MATH 238 Differential Equations		3
CORE		3	CORE		3
EDUC 202 Educ. Philos., Ethics, Issues & Trends		3	EDUC 240 <sup>2</sup> Sec. Multicult., Linguistic & Inst. Meth.		3
EDUC 235 <sup>2</sup> Sec. Development, Cognition, & Learn.		3	EDUC 270 <sup>2</sup> Intro to SPED		3
EDUC 231 Technology Module I		1	<b>EDUC 299<sup>3</sup></b>		<b>0</b>
		<b>17</b>			<b>16</b>
<b>Admission to Candidacy</b> (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 <sup>rd</sup> Year - Fall			3 <sup>rd</sup> Year - Spring		
CHEM 243 Analytical Chemistry		3	CHEM 244 Instrumental Analysis		3
CHEM 243 Analytical Chemistry Lab		2	CHEM 244 Instrumental Analysis Lab		2
CHEM 357 Physical Chemistry I		3	CHEM 358 Physical Chemistry II		3
CHEM 357 Physical Chemistry I Lab		2	CHEM 358 Physical Chemistry II Lab		2
CHEM 351 Chemical Information Science		1	CORE		3
CORE		3	EDUC 305 <sup>2,3</sup> Assessment I		3
EDUC 366 <sup>2,3</sup> Meth. For Teaching Diverse Sec. Stud.		3			
EDUC 232 Technology Module II		1			
		<b>18</b>			<b>16</b>
4 <sup>th</sup> Year - Fall			4 <sup>th</sup> Year - Spring		
CHEM 471 Advanced Inorganic Chemistry		3	CORE		3
CHEM 493 Senior Colloquium		1	CORE		3
CORE		3	CORE		3
CORE		3	CORE		3
CORE		3	EDUC 350 <sup>2,3</sup> Secondary Classroom Management		3
EDUC 302 <sup>2,3</sup> Secondary Science Methods		3	CHEM 494 Senior Colloquium		1
		<b>16</b>			<b>16</b>
5 <sup>th</sup> Year - Fall					
EDUC 467 <sup>2,3</sup> Observation & Student Teach. (Sec Ed)		10			
EDUC 468 <sup>2,3</sup> Student Teaching Seminar		2			
EDUC 440 <sup>3</sup> Inclusive Education		3			
<b>Take Praxis II</b>					
		<b>15</b>			

**Total Credits Required for Graduation = 148**

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

<b>Math Courses</b>	MATH 129	MATH 130
<b>English Courses</b>	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.