

# PHYSICS

## BACHELOR OF SCIENCE (BS.PHYS)

CORE Requirements	Credits	Major Requirements	Credits	Major Requirements	Credits	Free Electives <sup>2</sup>	Credits
CORE 090 First Year Exp.	1	PHYS 113	3	CHEM 113	3	CS 111 <sup>3</sup> w/Lab	3
CORE 100 Lib Arts Sem.	3	PHYS 113L	1	CHEM 113L	1	Free Elective	3
CORE 110 Effect Writ.	3	PHYS 114	3	CHEM 114	3	Free Elective	3
CORE 115 or 116 Oral Comm.	3	PHYS 114L	1	CHEM 114L	1	Free Elective	3
CORE 131 or 133 Civilization	3	PHYS 231	3	MATH 129	4	Free Elective	3
CORE 140 or 141-145 Forgn.	3	PHYS 231L	1	MATH 130	4		
CORE 150-159 Soc. Sci. <sup>1</sup>	3	PHYS 330	3	MATH 231	4		
CORE 160-169 Literature	3	PHYS 350	3	MATH 237	3		
CORE 170-179 The Arts	3	PHYS 371	3	MATH 238	3		
CORE 180-189 Amer. Studies <sup>1</sup>	3	PHYS 440	3				
CORE 190-199 Global Studies <sup>1</sup>	3	PHYS 490	3				
CORE 250-259 Syst. Theology	3	PHYS Elective	3				
CORE 260-269 Mor. Theology	3	PHYS Elective	3				
CORE 280 Philosophy I	3	PHYS Elective <sup>†</sup>	3				
CORE 281-289 Philosophy II	3						
Total Credits for CORE	43	Total Credits for Major		62		Total Credits for Free Electives	15

### Total Credits Required for Graduation = 120

**Physics Electives** - In addition to the Major Sequence requirements, a Physics Major must also complete a minimum of three (3) upper-level PHYS courses numbered 231 or higher. Some elective courses have a required laboratory component. Some courses in MATH or CHEM may be cross-listed as PHYS. Students may choose to take electives in the Fall or Spring semester, as long as the necessary Elective and Core requirements are met.

<sup>†</sup>One Physics Elective can be satisfied with 3-credits of student research.

Physics Electives			
PHYS 241*	PHYS 233* <sup>#</sup>	PHYS 372 <sup>#</sup>	PHYS 340 <sup>#</sup>
PHYS 242*	PHYS 234	PHYS 320 <sup>#</sup>	PHYS 450 <sup>#</sup>
*Required for some 3+2 Engineering students			
<sup>#</sup> Appropriate preparation courses for physics graduate programs			

<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>Students may select “free electives” for personal enrichment **OR** for Minor and/or Second Major Requirements. <sup>3</sup>CS 111 is recommended but not required.

### 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.”

See reverse side for a suggested sequence

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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 available semesters.
    - 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 available semester at King's.

<b>1<sup>st</sup> Year - Fall</b>		<b>cr.</b>	<b>1<sup>st</sup> Year - Spring</b>		<b>cr.</b>
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	
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	
MATH 129 Calculus I	4		MATH 130 Calculus II	4	
CORE	3		CORE	3	
CORE 090 First Year Experience	1				
	<b>16</b>				<b>15</b>
<b>2<sup>nd</sup> Year - Fall</b>			<b>2<sup>nd</sup> Year - Spring</b>		
PHYS 231 Modern Physics	3		MATH 238 Differential Equations	3	
PHYS 231L Modern Physics Lab	1		PHYS Elective or CORE	3	
MATH 231 Calculus III	4		CORE	3	
MATH 237 Math Methods for Phys. Sciences	3		CORE	3	
CORE	3		Free Elective <sup>2</sup>	3	
CORE	3				
	<b>17</b>				<b>15</b>
<b>3<sup>rd</sup> Year - Fall</b>			<b>3<sup>rd</sup> Year - Spring</b>		
PHYS 371 Electricity & Magnetism I	3		PHYS 330 Classical Mechanics	3	
PHYS Elective or CORE	3		PHYS Elective or CORE	3	
CORE	3		CORE	3	
CORE	3		CORE	3	
CS 111 with Lab or Free Elective <sup>2</sup>	3		Free Elective <sup>2</sup>	3	
	<b>15</b>				<b>15</b>
<b>4<sup>th</sup> Year - Fall</b>			<b>4<sup>th</sup> Year - Spring</b>		
PHYS 350 Thermodynamics & Stat. Mechanics	3		PHYS 440 Quantum Mechanics	3	
PHYS Elective or CORE	3		PHYS Elective or CORE	3	
CORE	3		CORE	3	
Free Elective <sup>2</sup>	3		PHYS 490 Senior Seminar	3	
Free Elective <sup>2</sup>	3				
	<b>15</b>				<b>12</b>
<b>Total Credits Required for Graduation = 120</b>					