

PHYSICS

Perhaps you have heard of dark matter, a mysterious substance that permeates the cosmos, and want to figure out what it is. Perhaps you have grown up in awe of the night sky and wondered exactly what makes the stars shine. Or, perhaps you simply wonder why one half of your frozen hot dog stays frozen in a microwave oven and the other half doesn't. Whatever your question, it is likely that physics holds the answer.

Physics is the broadest of the natural sciences, and more than any other, seeks to explain the fundamental workings of the Universe, from subatomic particles to galaxy clusters and everything in between. If you enjoy asking and answering questions about the natural world, a physics major may be the right choice for you.

Physics at King's

The physics major at King's provides students with the necessary foundation of physics and mathematics courses alongside our hallmark liberal arts curriculum. Courses in the physics major will introduce you to the fundamental areas of modern physics, mechanics, electromagnetism, thermodynamics and quantum theory. Beyond this technical knowledge, you will become proficient in the transferable skills of a liberal education: effective communication, moral reasoning, creative thinking, and technological competency.

At King's, our small class sizes within the physics major will ensure that you get the individual instructional and advising attention that you need to master the course material and to prepare for life after graduation. Not only will your instructors know your name, but you will also be encouraged to



participate in faculty-led research projects which provide a distinct advantage when entering the workforce or graduate school. Many of our physics majors pursue one of our specialized tracks in secondary education, physics-business, or one of our affiliated dual-degree engineering programs.

Job Opportunities

The knowledge and skills gained in the physics major at King's have allowed our recent graduates to land jobs in teaching, in graduate programs, and in respected industrial firms including Solar Turbines, Lockheed Martin and Panzitta Enterprises.

To a great extent, your career after graduation will rely more on the techniques and work ethic that you develop as a physics major than on the specific details you learn in classes. In fact, a prospective employer will look at a physics graduate and immediately think of someone who has a good math-

ematical background, someone who has had a lot of practice methodically analyzing complicated problems and trying to come up with logical solutions, someone who has had good experience with computers, and someone who will be able to actually understand a lot of the modern technology that is so central to a lot of businesses today.

With these skills, a degree in physics can land you in a variety of places.

Physics majors go on to work in the:

- Private sector including jobs related to engineering, computing systems and data science
- Government sector at national research labs and the military
- Applied sector including jobs in the areas of forensics, energy and the environment
- Finance and banking industry
- Secondary and higher education systems
- Professional programs like medical school or law school

To learn more about majoring in Physics at King's College, please contact the Office of Admission at 1-888-KINGS PA or admissions@kings.edu.

Physics (120 Credit Hours - General Track)

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.

1 st Year - Fall		1 st Year - Spring	
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 Course	3	Core Course	3
HCE 101 Holy Cross Experience	1		
	16		15
2 nd Year – Fall		2 nd Year – Spring	
PHYS 231 Modern Physics	3	MATH 237 Math Methods for Phys. Sciences	3
PHYS 231L Modern Physics Lab	1	PHYS Elective	3
MATH 231 Calculus III	4	Core Course	3
MATH 238 Differential Equations	3	Core Course	3
Core Course	3	Free Elective	3
	14		15
3 rd Year – Fall		3 rd Year – Spring	
PHYS 371 Electricity & Magnetism I	3	PHYS 330 Classical Mechanics	3
PHYS Elective	3	PHYS Elective	3
Core Course	3	Core Course	3
Core Course	3	Core Course	3
(CS 111 with Lab) or Free Elective	3	Free Elective	3
	15		15
4 th Year – Fall		4 th Year – Spring	
PHYS 350 Thermodynamics & Stat. Mechanics	3	PHYS 440 Quantum Mechanics	3
Core Course	3	PHYS 490 Senior Seminar	3
Core Course	3	Core Course	3
Free Elective	3	Core Course	3
Free Elective	3	Free Elective	3
	15		15
Total Credits Required for Graduation = 120			