



A GUIDE TO STUDYING PHYSICS ABROAD

At the heart of the study of physics is the investigation of connections in the world, between matter and energy, interactions between subatomic particles, and the line between cause and effect. Studying physics abroad can also introduce students to new kinds of connections, between language and culture, heritage and modern day people, and camaraderie with students studying physics in different parts of the world. Studying physics abroad can lead you to state-of-the-art research labs and innovative classrooms, and, outside of school, to new friends, new places, and new experiences. In the strict and calculating field of physics, studying abroad can usher you toward incalculable benefits.

WHY STUDY PHYSICS ABROAD?

When people hear “study abroad,” most think of history or international studies majors taking time to see the world, but a study abroad experience can be just as valuable to physics majors. Many physics majors fear they cannot fit study abroad into their rigorous course schedule, but with foresight and planning – two things every physics student gladly has in their wheelhouse – you can take your education abroad. Physics is a universal subject, and one that has developed a language of its own over the years; this makes it unique in its ability to be studied anywhere, as the basic principles are identical no matter the country in which you choose to study abroad. Physics students, upon graduation, will likely become a part of the international physics study, where scientists all over the world work together to make discoveries and further physics research. Studying physics abroad, even for a short period of time, can increase your ability to communicate with those from other nations, increase your appreciation of those who travel for their work or education, and bestow upon you a well-rounded education.

LOCATIONS

Choosing a location to study physics abroad is often the first step to making plans; many physics students choose English-speaking countries in order to further their education on an international level, unimpeded by a language requirement. A number of the top physics labs in the world are located in the U.K. Studying physics in England the country that gave the world Isaac Newton, can grant you access to laboratories studying astrophysics and planetary physics. Living in London or Manchester specifically can expose you to thousands of years of historical culture of British engineering and science. Scotland, the birthplace of physicist Kelvin, is a fascinating place to delve into the science of thermodynamics while experiencing the Scottish panache for education. Both Sydney and Melbourne are equipped with large-scale universities offering a large variety of physics and math courses. Similarly, Auckland has several facilities that offer top tier education to physics study abroad students.

PROGRAMS & COURSES

Deciding your course schedule while studying physics abroad will depend on how far you are into your major’s curriculum, what courses are offered at the affiliate university or in the study abroad program, and other electives you may be interested in taking. Physics majors generally choose to study physics abroad earlier rather than later in their academic careers, as many universities will have basic modern physics classes, including introductory classes, but some may lack specific upper-level courses desired by particular students.

With those requirements underway, feel free to take a step outside of the box during your semester studying abroad. Many institutions in foreign countries offer courses unique to their area, their history, languages, and literature. Not only can you learn to look at physics from a new perspective while studying abroad, you can also find new worldviews, philosophies, and interests.

BENEFITS

As physics becomes a global science, where active members of the community share ideas, theorems, and breakthroughs in search of common goals, studying abroad can make you a more marketable physicist. This illustrates to employers you have the ability to study a difficult topic in an unfamiliar landscape and improve your communication skills while doing so. When boiled down, physics is all about looking into relationships, from what makes the apple fall from the tree to how time and space interact; investigating your own relationship to the world, from the friendships you'll make to the people who will inspire you during your study abroad experience, can make you a better physicist and a better citizen of the world.

SJU SEMSTER ABROAD PROGRAMS

Please note the list of programs and courses are only listed as a guide and does not guarantee automatic approval of courses counting for SJU academic credit. You will work with both your Academic Advisor and Study Abroad Advisor to determine the program and courses to best meet your needs. All courses **must be approved** by the appropriate SJU Department Chair or Associate Dean prior to studying abroad.

➤ **Lancaster University, England**

- *Sample Courses: Classical Mechanics, Complex Methods, Electric and Magnetic Fields, Functions and Differentiation, Quantum Physics, The Physical Universe, Thermal Properties of Matter, Vector Calculus*

➤ **University College of Cork, Ireland**

- *Sample Courses: Introductory Physics, Classical Mechanics, Intro to Thermodynamics, Experimental Physics I, Quantum Mechanics, Electrostatics & Magnetostatics, Introduction to Astrophysics*

➤ **IFSA-Butler: University of Auckland, New Zealand**

- *Sample Courses: Properties of Matter, Digital Fundamentals, The Geophysical Environment, Classical Physics, Networks & Electronics, Modern Physics, Optics & Electromagnetism*

In addition to Physics Major/Minor courses, you may also be able to take some of SJU's GEP courses while abroad, including but not limited to: Art/Lit, Social Science, Religious Difference & Philosophical Anthropology.

Can't find a program or university on our approved list that appeals to you? You can always petition to attend another study abroad program of your choosing with more information can be found on our [website](#).

NEXT STEPS

- Meet with the Study Abroad Advisor** | Learn about your options
- Meet with your Academic Advisor** | Discuss course selection
- Apply for a passport** | <http://travel.state.gov/passport>
- Apply to study abroad!** | Applications are due to the CIP office by: March 1st for the Fall semester abroad, and October 1st for the Spring semester abroad

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