

Harvard Study Abroad Program in Santiago, Chile: Opportunities for Concentrators Interested in the Sciences

Harvard's David Rockefeller Center for Latin American Studies ([DRCLAS](#)) Regional Office and the Office of International Programs ([OIP](#)) offer an excellent study abroad opportunity for Harvard science concentrators, especially those interested in *astronomy and astrophysics, biology, earth and planetary sciences, engineering sciences, as well as related fields such as environmental sciences and public policy.*

This program is a unique for-credit opportunity for Harvard science concentrators to participate in a Harvard-organized international study abroad program with course work, as well as field work and internship opportunities, in areas that include astronomy, biodiversity, ecology, conservation, climate change, forestry, and environmental policy in the Latin American context. Furthermore, there are opportunities to connect with important collaborative projects with Harvard faculty and Chilean scientific counterparts, especially in the areas of biology, astronomy, forestry, climate change, and public health.

This study abroad program provides a fascinating environment for Harvard students to have a full-immersion experience, studying with Chilean students and living with a Chilean family. Students typically study in the program for one academic semester, but there are possibilities for a full-academic year program as well. The program begins with an intensive Harvard-organized two-week orientation program to help students take full advantage of the educational, professional, cultural, and social opportunities available in Chile. The DRCLAS Regional Office, with a permanent staff in Santiago, facilitates all these opportunities.

The DRCLAS Regional Office is "probably Harvard's most significant external presence, a regional office which services all the University," said Harvard President Lawrence Summers on his March 2004 visit to Santiago. "It has given our students an opportunity to live and learn outside of the United States using a formula that is new to Harvard." See the May-June 2004 Harvard Magazine article titled [Tying Knots: Glimpsing Global Harvard in Chile](#) to get additional information on the work of the DRCLAS Regional Office.

Chile is a Fascinating Laboratory

Chile has a fascinating diversity of climates, terrains, and wildlife, and is one of the most sophisticated environments to study sciences in Latin America. Spanning more than half the length of South America, Chile is home to incredible range of landscapes: from some of the driest deserts and highest volcanoes in the world in northern Chile, to central region's remarkable Mediterranean climate, to the south's native forests and enormous glacier flows of the Antarctic. Harvard students will have opportunities to study about, travel to, and do research and field placements in each of these regions. Chile includes three UNESCO World Biosphere Reserves and three United Nations World Heritage Sites.

Northern Chile also houses many of the world's most important astronomy observatories, including Harvard's observatory partnership at [Las Campanas](#). Chile is also one of the most seismically active countries in the world, as it lies at the juncture of the Nazca and Southern American Plates, and is positioned along the so called Pacific "ring of fire," resulting in numerous active volcanoes.

Central Chile is one of only five Mediterranean-climate regions in the world (the others are southern California, the Mediterranean Basin, South Africa and southwestern Australia). Although these five regions comprise only about 2% of the earth's land area, they account for more than 16% of the world's plant species. Central Chile, where Santiago is located, shares a similar terrain profile with southern California. Both have a coastal range of mountains, a broad central valley and a high mountain range to the east.

Southern Chile is home to a tremendous diversity and extension of forests. Among the most spectacular are forests of pure Araucaria (*Araucaria araucana*), a 60 million-year-old conifer whose fruit forms the dietary basis of the Pehuenche Indians, a mountain tribe of the Mapuche culture. Further south, floral diversity reaches its peak in the Valdivian rainforest, the second largest temperate rainforest in the world. Finally, isolated stands of the endangered Alerce (*Fitzroya cupressoides*) include some of the oldest living beings in the world - at up to 3500 years of age, the Alerce is surpassed in longevity only by California's bristlecone pine.

For many, Chile has also served as a fascinating laboratory for economic and political development as well, in a story that is complex, richly textured and still debated. Today Chile is a stable democracy with one of the strongest economies in Latin America. It has recently signed free trade agreements with the United States, European Union, and numerous Asian countries. There are also wonderful opportunities to complement the study of sciences with coursework in Latin American politics, history, literature, economics, anthropology, and much more in while participating in the study abroad program in Chile.

Studying in Chile

College students enrolled in the Harvard Study Abroad Program can choose from hundreds of courses at Chile's two leading universities, the *Universidad de Chile* (UC) and the *Pontificia Universidad Católica* (PUC). The two universities allow Harvard students to take undergraduate courses, as well as graduate courses, and there are multiple opportunities for field work throughout the country. In addition to "departmental" courses, Harvard students may find opportunities to take courses in "professional schools" (such as medicine, law, architecture, or public health) that in the U.S. would be typically limited to graduate students.

[Pontificia Universidad Católica \(PUC\)](#)

The Catholic University of Chile is a private university with partial public support that has four urban campuses throughout Santiago. PUC has more than 2,300 courses to choose from and also produces a separate course guide for classes of special interest to international students. PUC offers a wide variety of courses in the sciences, and has an excellent [doctorate program in biology sciences](#). It also hosts the *Centro de Estudios Avanzados en Ecología y Biodiversidad* (CASEB), with research Centers in Marine Biology ([ECIM](#)), and Mediterranean Ecology ([EDIEM](#)), as well as the *Fundación Senda Darwin* ([FSD](#)) for the sustainable management of Chilean forests.

"Studying abroad in the Universidad Católica has been a challenging and an exciting experience. The workload is medium to heavy, probably depending on your fluency."
- [David Wax](#), History and Literature concentrator, fall 04.

[Universidad de Chile \(UCH\)](#)

The University of Chile is the country's oldest and largest public institution of higher education and has more than 23,000 students at its 13 campuses, all located in downtown Santiago. The University of Chile plays a leading role in generating and transferring technology in many fields, and is known for its research programs that produce over 50% of all scientific and technological publications in the country. As a large public institution, the Universidad de Chile has a diverse student body, and a wide range of programs and initiatives in the sciences, as well as social sciences and humanities. It offers an excellent doctorate program in science with a specialization in Ecology and Evolutionary Biology ([EBE](#)). The University of Chile hosts many institutes of distinction including the [Center for Forestry Studies](#), [Center for Environmental Law](#), [Center for Space Studies](#), [Geology Department](#), [Geophysics Department](#), and [Department of Astronomy](#).

"I really enjoyed the classes that I took at the University of Chile, and it was great to get a different perspective on Latin American from the perspective within the region."
- [Thomas Sean McKean](#), Government concentrator, spring 04.

Harvard College students interested in studying sciences will find in Chile a very fascinating and intellectually stimulating environment to do so. All classes at the PUC and UC are conducted in Spanish.

Science concentrators interested in enrolling at Pontificia Universidad Católica may find the following courses particularly interesting:

Native Flora (AGC2281)

Flora Nativa explores the main characteristics of Chile's native flora, its biology, taxonomic classification, geographical distribution and economic relevance. The class includes presentations in class, lab work, and field trips. This class is taught by Professor Gloria Montenegro, former president of the Botanical Society of Chile, currently president of the consultative group for a foundation which does research in science and technology of natural resources.

Conservation and Handling of Wild Fauna (AGZ2020)

Conservación y Manejo de la Fauna Salvaje prepares the students to develop critical criteria and become familiarized with the different practices for conservation, handling and/or wild fauna control in the silvoagropecuaries ecosystems. This class is taught by Professor Cristián Bonacic who holds a Ph.D. from Oxford University.

Forest Ecology: Biodiversity, History, and Dynamic of the Chilean Forestry

Ecología de Bosques: Biodiversidad, Historia y Dinámica de los Bosques Chilenos analyzes the history, flowering aspects, biological interactions, and the reproduction of the Chilean forests. This class is taught by Professor Juan Armesto, a well-known Chilean ecologist who holds a doctorate from Rutgers University.

Biogeography in Chile

Biogeografía de Chile focuses on the main ecosystems in Chile including the Andean Mountains, Atacama Desert, the Mediterranean area, the forest and tundras. This course normally meets for two weeks during the semester in the experimental station of "Senda Darwin Foundation" in Chiloé, which is a large island with a vast diversity of species, located in the south of Chile. It provides students hands-on experiences in ecological inquiry along with educators, forest service personnel, and indigenous (Huilliche) community members. This class is taught by Professors Juan Armesto, Director of CASEB, and Carolina Villagrán, a specialist in Paleontology and Biogeography.

Ecology of Organisms (BIO459F)

Ecología de Organismos analyzes and illustrates how animals and plants interact with natural habitats and how they adapt their physiological system to the environmental conditions. It also provides a new insight about physiological, behavioral, and evolutionary ecology. This class is taught by Francisco Bozinovic and Fabián Jaksic, both are well-known ecologists, who specialize in conservation issues.

Principles on Ecology and Environment (BIO143M)

Principios de Ecología y Medio Ambiente aims to provide students with the basic elements and principles of ecology, its main hypothesis, theories and paradigms. This class also gives a special emphasis to a global approach to the Ecological Sciences, highlighting the basic concepts of Human Ecology. This class covers the problematic involving the impact on the environment caused by the intervention or presence of men in the ecosystem.

Ecology of Population (BIO461F)

Ecología de Poblaciones explores the growth and demography of population, analyzing the spatial patterns in Biology and discussing adaptation, natural selection, and genetics of population.

Science concentrators interested in enrolling at the Universidad de Chile (UCH) may find the following courses particularly interesting:

There are numerous opportunities for Harvard students interested in [Astronomy](#) to study at the [graduate level](#), including specific courses on galaxies, radioactive processes in astrophysics, radio astronomy, and dynamic stars. Universidad de Chile has a stellar team of faculty in astronomy including Diego Mardones and Guido Garay who both received their doctorates in astronomy from Harvard University, Mónica Rubio Ph.D. in Astrophysics from the University of Paris, and María Teresa Ruiz Ph.D. in Astrophysics from the University of Princeton.

Biological Conservation

Conservación Biológica introduces the students to the conceptual bases of biology for conservation, including philosophy, theory and studies on conservation, and biodiversity with special emphasis on Latin America. Biological conservation is shown as a social and biological problem, where the multidisciplinary approach is critical.

Environmental Pollution

Contaminación Medioambiental studies the main environmental pollutants including the atmospheric, water (superficial and underground waters), ground contamination, and also the study of toxic and dangerous waste in Chile, especially in the mining and forest areas. It then explores the biological, chemical and physical strategies to treat environmental pollution.

Ecology (CEC-814)

Ecología help students understand the factor which explain the distribution and abundance of biologic organisms across time and space, ranging from individual to community and ecosystem. It explores the ecology of individuals and research protocols, niche theory, and principles of energy assignment. The course also examines population ecology, growth, and population regulation. This class is taught by Professor Ramiro Bustamante.

Globalization, Mining Industry, and Copper

Globalización, Industria Minera y Cobre examines in depth Chile's most important export industry, through exploring the economic cycles of globalization in the mining industry in Chile. The course examines the mineral, technological, and productive innovations of copper, and the activities of the private and public mining sector, as well as the tendencies of the global, Latin American, and Chilean economy and the possible future scenarios. This class involves leading mining specialists including Hugo Latorre, Sara Larraín, William Hayes, Juan Villarzú, Julián Alcayaga, Jorge Lavandero, Carlos Tomic, Orlando Caputo, and Felipe Portales.

Seismology (GF40B)

Sismología aims to provide students with methods of applied seismology and terrestrial and marine seismic. They work on digital seismic data acquisition, methods of refraction and reflection, basic interpretation, and elements of seismic migration and Terrestrial radar (GPR).

Volcanology (GL611)

Volcanología gives students information on the natural endogen forces and the expression of volcanic phenomena. Chile is within the "fire belt of the Pacific" and has an enormous amount of volcanoes from the north to the south and many of them are active. This class is taught by Professor Miguel Angel Parada Reyes, Ph.D. in Geology from Tohoku University in Japan, and a specialist in Petrology, Geology, and Geochemistry.

Orientation Program

The Harvard Study Abroad Program begins in Santiago, Chile in mid-February for the (Harvard) spring semester and mid-July for the (Harvard) fall semester with a two-week orientation program for all Harvard students. This program includes an intensive Chilean Spanish language program and an experiential learning program focused on Chilean culture, history, and politics. During the

Orientation Program, Harvard students will spend the mornings in the classroom and many afternoons and evenings visiting a variety of community, cultural, governmental, and international institutions, many of which will be possibilities for internships during the academic year. Without exception, students (including those who are native speakers of Spanish) have found the two-week orientation program of great value.

"The orientation program made me more comfortable in Chile and helped me to get back into the groove of talking all the time in Spanish and to learn Chilean slang as well".

- [Robert Ford](#), History concentrator, spring 04.

"The orientation was extremely useful. Some fieldtrips were especially valuable, like the trip to the población La Victoria, because it showed an extremely poor side of Santiago that I wouldn't have seen otherwise. I also thought the day trip to Isla Negra was very interesting because it gave us a chance to see a part of Chile outside of Santiago and also learn about Chilean poet Pablo Neruda, a key figure in helping understand Chilean identity".

- [Adam Kramer](#), History concentrator, spring 04.

The Academic Semester in Chile

After the Harvard Orientation Program, Harvard students enroll in regular Chilean university courses at undergraduate or graduate levels. While there are a few courses that are primarily for international students, the great majority of classes, particularly upper level courses, will be with Chilean students. Students participating in the Harvard Program will have course names listed on their Harvard transcripts as Pass/Fail.

Internships and other opportunities of particular interest to science concentrators

Harvard College students have done internships and research projects (many while on the Study Abroad Program) at organizations such as the United Nations Economic Commission for Latin America and the Caribbean ([ECLAC](#)), the United Nations Development Program ([UNDP](#)), the Chilean Ministry of Economy, micro credit organizations, private foundations, and investment banks. The Regional Office has excellent contacts within the scientific community in Chile to assist Harvard students find internships in areas of their substantive scientific interest.

"Through the DRCLAS office in Santiago, I was able to set up a fascinating internship on the impact of air pollution on health at [CONAMA](#), Chile's equivalent of the Environmental Protection Agency while I was also studying at the Catholic University."

- [Brian Matthay](#), Environmental Sciences and Public Policy concentrator, spring 03.

"After graduating from Harvard College in 2002, I traveled to Valdivia, Chile as a Rotary Scholar. I was searching for an experience in the ancient forests of southern Chile that would help me define my interests in forest science and prepare me for graduate school. While in Valdivia I worked with Professor Antonio Lara of the Universidad Austral de Chile. I joined Lara's group and headed into the Patagonian Andes "tree hunting" for the oldest alerce trees in Chile. An alerce tree can grow as long as 3,600 years, making it the second longest living tree in the world (after the bristlecone pine). We collected tree cores from live trees and standing and fallen dead trees. Back in the lab I used these samples to piece-together a tree ring width chronology for the past 4,000 years. We are now using this as a proxy record to study climate history. While in Chile I applied to graduate schools in forest ecology. I was impressed with David Foster's historical ecology research at the Harvard Forest. In June I began studies at Harvard, and I am now researching New England's version of 'ancient' forests".

- [Posy Busby](#), History of Science concentrator

Housing opportunities with Chilean host families

To enhance the cultural and linguistic experience, Harvard students are strongly encouraged to live with local families in Chile. The DRCLAS Regional Office works closely with a local housing coordinator to facilitate home stay opportunities. In the host family home or apartment, students will receive room and board, three meals a day, and laundry privileges. The host family coordinator works to make good matches that include opportunities to express preferences (such as smoking/non-smoking, pets/no pets, children/no children, etc.). Typically, these are Chilean families who have experience housing international students.

"I lived with a Chilean family. The family consisted of a single mother and her son. I had such an amazing time because I have always wanted to have a younger brother. Also, I was allowed to be very independent, but take part in family activities when I wanted. It was also great because it gave me the opportunity to practice my Spanish more than I would have if I had lived with other Americans in an apartment."

- [Thomas Sean McKean](#), Government concentrator, spring 04.

Applying to the Program

There is a very straightforward and simple application process to apply for Harvard's Study Abroad Program in Santiago, Chile.

Students interested in participating in the program should register at the [Office of International Programs](#) by completing the Harvard Study Abroad application. At that time, Harvard students must indicate their interest in which Chilean university they are interested in attending (available on the individual university web pages or at the OIP), as well as put together a tentative list of courses that they plan to take. This plan of study needs to be approved by the Office of International Programs. This plan of study forms part of the application.

"I would strongly suggest the Study Abroad model used by DRCLAS to all Harvard students considering studying abroad. Because the program was Harvard administered, and because of recent changes, my semester here in Chile has fitted in seamlessly with my time at Harvard. I would be hard-pressed to imagine a more smooth overall process. Applying in the first place was remarkably simple. Once I arrived in Chile, the orientation program was tremendously coordinated, balancing language instruction with cultural activities very thoughtfully."

- [David Lizoain](#), Economics concentrator, spring 03.

Students should also submit the following information as part of their application:

- One-page essay on objectives of participating in the Chile study abroad program
- Tentative list of courses for program of study
- Demonstration of good command of the Spanish language (such as advanced Spanish course at Harvard, or letter from instructor)
- Academic transcripts from Harvard University
- Resumé
- Copy of passport identification page
- Four passport photos
- Completed housing form
- Proof of Health Insurance

Once accepted into the program, students will receive a comprehensive package from Santiago with more detailed information about the schedule and the program.

Getting additional information:

For more information about the Harvard College Study Abroad Program in Santiago, Chile, and any specific questions you might have, please contact the DRCLAS Santiago Student Program Coordinator, Marta Mella at mella@fas.harvard.edu, or phone 011 (56-2) 290-0305, or fax: 011 (56-2) 290-0310. For general information about the Study Abroad Program and about the

DRCLAS Regional Office, see [Harvard Study Abroad](#) program in Chile and [DRCLAS Regional Office](#).

At Harvard University, you can also speak with Leslie Hill, Office of International Programs at hill2@fas.harvard.edu, phone (617) 495-7675 or Erin Goodman, DRCLAS Student Program Coordinator, egoodman@fas.harvard.edu, phone (617) 496-9153.

You <http://drclas.fas.harvard.edu/santiago/humanitiesconcentration.htm> can also find additional information about other concentrations, including: [Economics](#), [Humanities](#), and [Social Studies](#).

Frequently asked questions:

1. Do I need to apply for a student visa before I leave the USA? If so, how?

Yes, you do. Before coming to Chile, DRCLAS Regional Office will send you a welcome package where you will find the required documentation to process your student visa at the closest Chilean consulate you can find. The address for the Chilean Consulate in Boston is: 1 Bernardo O'Higgins Circle, Brighton, MA 02135-7840 Telephone: 617-232-0416 Fax: 617-232-0817 onchile.org@attbi For more information about the Student VISA process and its requirements, please click on the following link <http://www.chile-usa.org/visarequirements.htm>

2. Will I be able to register my student Visa when I get to Chile?

Yes. Once that you have arrived in Chile, on the third day of the Orientation you and your study abroad fellows will go with the DRCLAS Student Program Coordinator to the Chilean International Police, to register your student visa and then to National Identification Agency to get your Chilean ID.

3. How long is the Harvard Orientation?

The Harvard Orientation is two weeks long, immediately before the start of academic classes at the local universities.

4. What will I be doing as part of this Orientation?

The Orientation program includes an immersion experience in Chilean language, cultural history, politics and literature. In addition there are daily intensive language classes to assist in the adjustment to the peculiarities of Chilean Spanish. There are also a number of experiential learning visits scheduled as well as time to prepare and discuss strategies for taking full advantage of the opportunities in Chile.

5. If I have a cell phone do I need to bring it with me?

Depending on the technology that your cell phone has, you might be able to bring it with you and just change its "chip". In case that you want to buy a cell phone while you are down here, there are several cell phone companies where you can find very competitive prices, for example: Telefónica, Entel PCS and Smartcom.

6. Will I receive help in registering for my classes?

Absolutely. The Harvard staff will assist throughout the process of class registration and selection. We also recommend that you contact students who have participated in the program in the past for information about class selection and other aspects of the program, and will help make contacts to Chilean students as well.

7. How many classes should I take?

Harvard requires a minimum of thirty credits of class during the semester abroad. These hours can be divided up to four courses and a typical class has approximately seventy hours.

8. Who at Harvard should I inform about what classes I am taking in Chile?

First, you need to follow the requirements within your concentration, second you should stop by the Office of International Program and make sure to register the classes that you are planning on taking while abroad using the "Harvard College Degree Credit for Study out of Residence" form. If

you happen to change a course that was not listed in the Harvard College Degree Credit for Study out of Residence” form you have to e-mail the OIP and update them with the new information of your classes. If you are planning on taking a class that will provide you with credits for your concentration, this course needs to be approved by the department that your concentration belongs to.

9. Will I have time to travel?

Yes, depending on the time of year, there are holidays and scheduled breaks. Many students have also traveled before and after their semester in Chile. Santiago is two hours from the beach and one hour from the mountains, so traveling to interesting places over the weekends is easy, close, and cheap.

10. Will I need health insurance?

Yes. You will not be permitted to participate in the program without valid health insurance. You either need to demonstrate that you have health insurance independently or purchase continuing coverage through Harvard, for more information please visit <http://huhs.harvard.edu/HealthnDentalPlans/StudentHealthIns.htm>

11. Does Harvard offer activities throughout the semester?

Yes. Harvard schedules cultural and social activities throughout the semester like to have dinner, go to the cinema, invitation for important lectures, etc.

12. Will I have access to the Harvard Office throughout the semester?

Yes. The office and the staff is always available to assist you. The office is available for studying on weekends, and you can ever hook your laptop up to the Harvard network.

13. Does financial aid extend to study abroad?

Yes, Harvard support students studying abroad for credit. Contact Aurelio Ramírez at aramirez@fas.harvard.edu for more information.

14. What level of Spanish do I need to participate in the Harvard Study Abroad Program in Chile?

We recommend that all participants should have the Spanish corresponding to CA or CB level.