



UANDES DOCTORAL PROGRAMS

Doctoral Program in Philosophy

The Doctoral Program in Philosophy at the Universidad de los Andes aims to contribute to the training of qualified researchers who can integrate into academia nationally and internationally. For this purpose, the Institute of Philosophy at UANDES has a group of professors trained solely at foreign universities (Germany, Spain, France and Ireland), as well as other outstanding researchers from various countries. All of them guarantee the development of a program under internationally accredited standards for research. In the area of practical philosophy, the Doctoral Program in Philosophy at UANDES aims to be among the best in South America and beyond. Research Areas:

- Ancient Philosophy: Metaphysics, Psychology, Logic and Theory of Peripatetic Action.
- Practical Philosophy: Ethics and Political Philosophy, Medieval Philosophy: Augustine and the Augustinian tradition.

Web: https://postgradosuandes.cl/doctorados/doctorado-en-filosofia/

Doctoral Program in History

The Doctoral Program in History at the Universidad de los Andes is committed to the training of qualified researchers who will contribute successfully to the national and international academic field. This includes a systematic process of training that culminates in the preparation and completion of a doctoral thesis, and therefore a meaningful contribution to historical knowledge. All necessary tools are provided to enable students to contextualize their research within the framework of American history and its interrelation with the world. Based on the theoretical foundations of a Christian vision of history, an approach to sources is derived from an interdisciplinary, critical, and rigorous perspective.

The Institute of History has an academic staff formed at national and foreign universities and several outstanding visiting professors from Europe, the United States, and Latin America. <u>Research Areas:</u>

- History of Chile and America.
- Religion and Culture.
- Contemporary History.

Web: https://postgradosuandes.cl/doctorados/doctorado-en-historia/





Doctoral Program in Communication

The Doctoral Program in Communication at the Universidad de los Andes aims to develop a structured and in-depth research project related with public communication. To achieve this, the program focuses on different fields, such as information, entertainment, fiction, advertising, and strategic communication. Students will discuss and explore the relationships among them, as well as the social, commercial, business, and legal contexts in which they operate and are affected by.

The Doctoral Program in Communication seeks to achieve autonomy and originality in research, encourage collaboration between new researchers, and expose them to multidisciplinary visions and relationships within the industry. To accomplish these goals, the university has a strong team of faculty of national and international prestige in the academia.

For receiving this degree, students must publish two articles in a prestigious academic journal in addition to the traditional doctoral thesis.

Research Areas:

- Public Communication.
- Ethics and Right of Information.
- Narrative and Discourse in Communication.
- Management and Communication Company.

Web: https://postgradosuandes.cl/doctorados/doctorado-en-comunicacion/

Doctoral Program in Engineering Sciences

The Doctoral Program in Engineering Sciences with a specialization in Management and Processes of Engineering seeks to equip students with the ability to carry out research and stimulate innovation in science. The Doctoral Program in Engineering Sciences intends to contribute to the increase of scientific and technological knowledge. Research Areas:

• Operations management

This research area includes the use of mathematical models, statistical methods, algorithms, and simulation tools with the objective of supporting strategic, tactical, and operational planning at manufacturing or services companies. Operations Management is an essential tool for the management of business processes, which may require the understanding of large scale and highly complex systems to operate at optimal levels. The faculty works in the following sub-areas of Operations Management:

- Logistics and Transportation: Considers the planning, implementation, operation, and control of the flow of people and objects from the origin to a destination, with a focus on the optimization of resources and customer satisfaction.
- *Optimization:* Considers mathematical programming methods and algorithms required to make decisions that will optimize production and stability.
- *Analytics:* Considers all methods and algorithms used to analyze data, find patterns, make accurate predictions, and ultimately improve decisions in a company.
- *Economy of networks:* Focuses on the study of information in an economic context, as well as communication systems, new technologies and their impact on other industries. It includes the





analysis of market behavior where the price is a relevant variable when considering participation and promotion of competition.

Bioprocess Engineering

This research area integrates principles of reactor engineering, separation processes, simulation and optimization of processes at different scales. In particular, the Faculty of Engineering at the Universidad de los Andes focuses on the creation and transfer of knowledge to improve the operation and design of biological reactors used for the production of metabolites and the treatment of gases.

• Air Pollution and Gas Treatment

This research area studies the different physicochemical and biological phenomena that involves the elimination of gaseous pollutants from different sources of contamination.

The potential lines of collaboration between these research areas are the following:

- Operations Management and Bioprocess Engineering: are related through a natural collaboration in the applied optimization of Bioprocess Engineering.
- Operations Management, Air Pollution and Gas Treatment: are related through the simulation of Transportation Systems.
- Engineering of Bioprocesses, Air Pollution and Gas Treatment: are related since in both the object of study is the simulation of systems.

Web: https://postgradosuandes.cl/doctorados/doctorado-en-ciencias-de-la-ingenieria/

Doctoral Program in Biomedicine

The Doctoral Program in Biomedicine is defined as a program of advanced studies leading to the highest academic degree awarded by the Universidad de los Andes and which is aimed at the specialization of qualifications in the area of biomedical research and innovation.

In this context, the Doctoral Program in Biomedicine considers that advanced training in basic/ fundamental (biological) sciences as well as in applied sciences (biotechnology) are two essential pillars for the development of modern biomedicine. This guiding concept gives the program a unique and differentiating character.

Research Areas:

• Cellular Homeostasis, Immune Response and Cancer

This area of research contains different sub-areas that address the cellular and molecular aspects involved in the modulation of the immune response and the development, progression and response to the treatment of chronic disorders (autoimmune diseases, rejection of transplant, cancer, etc.). It addresses from the study of cellular processes linked to the pathogenesis of cancer or diseases in the immune system to innovative therapeutic options.

• Neurosciences and Nervous System Diseases

This area of research addresses different aspects related to the pathogenesis of neuro-psychiatric diseases and neurodevelopmental diseases. It is linked to studies on molecular and cellular mechanisms associated with chronic stress and neurodegenerative diseases, in addition to studies on the genetic and environmental factors associated with pathologies of the development of the nervous system and their consequences.





Physiopathology of Systems and Biomarkers

This research area includes four sub-areas that address the study of pathophysiology and identification of biomarkers for early diagnosis and/or prognosis in: (i) pregnancy and maternal-fetal pathologies, (ii) renal and cardiovascular pathologies, (iii) dentistry pathologies, and (iv) neuro-psychiatric pathologies.

• Cell Therapy and Regenerative Medicine

This research area is focused on two sub-areas: (i) the search for new sources to treat degenerative diseases in clinic, and (ii) the use of extracellular vesicles in human therapies. In relation to the first sub-area, mesenchymal stem cells of diverse origins and their potential for the treatment of inflammatory, cardiovascular, rheumatic and metabolic diseases are studied. On the other hand, the second sub-area focuses on the study of extracellular vesicles of different origins (mesenchymal stem cells) as therapeutic strategies. In addition, this area is intimately linked to the research in modulation of the immune response, and in biomaterials, nanotechnology, and bioengineering.

• Biomaterials, Nanotechnology and Bioengineering

This research area focuses on material science, nanotechnology, and bioengineering for the development of applications in tissue engineering, biomedical products for medicine and dentistry, and food technology. Under this area, various types of studies are carried out that include the molecular characterization and biophysical properties of biopolymers and nanoparticles, the production of bioactive compounds from natural products, the generation of nanoparticles for the transport of drugs, the development of vascular prostheses and other innovative therapies for Medicine and Dentistry.

Web: https://postgradosuandes.cl/doctorados/doctorado-en-biomedicina/

Doctoral Program in Law

The Doctoral Program in Law of the Universidad de los Andes provides specialized training for researchers who cultivate the study and methodical transmission of legal sciences, which allows exchange of scientific advances in the legal field.

Research Areas:

- Public Law:
- Arbitration
- Administrative Contracting
- Special Crimes
- Economic Criminal Law
- Fundamental Rights
- Constitutional Justice
- Public Litigation
- Legal Regulation of Labor Relations
- Administrative Organization
- Problems of Unfair and Criminal Justification
- Civil Procedure
- Procedural Reforms
- Adolescent Criminal Liability
- General Theory of Criminal Law
- Effective Judicial Protection





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- Private Right:
- Legal Act
- Obligations and Contracting
- Bankruptcy Law
- Insurance Law
- Corporate law
- Person and Family Principles of Private Law
- Intellectual property
- Consumer Protection
- General Theory of Civil Liability
- Law Theory:
- Ethics
- Philosophy of Law
- Law Methodology
- Aristotelian Theory
- Political History of Chile
- Tomás Moro: his legal side

Web: https://postgradosuandes.cl/doctorados/doctorado-en-derecho/

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