APPOINTMENT OF
HEAD OF
DEPARTMENT
OF GEOLOGY

YACHAY TECH
Yachay University for Experimental Technology and Research (Yachay Tech) is to be a world-class, globally connected and regionally transformative center for research and education. It will be at the heart of Yachay City of Knowledge, a modern, vibrant metropolis with startup incubators, R&D facilities and industrial outposts.

Yachay Tech was designed from the onset to be a highly interdisciplinary institution and to have an internationally recognizable philosophy and governance structure. It has been designed to promote fundamental research, encourage basic learning, and reward academic and research excellence. The University’s strategic position right at the heart of the Yachay City of Knowledge allows, in addition to fundamental research, the promotion of technology transfer, the stimulation of business innovation and the establishment of knowledge dissemination which aims at addressing pressing societal needs both within and outside Ecuador.

Alongside research, as is the case for all selective universities, one of Yachay Tech’s primary products is the development of human talent. Indeed, it is the creation of a critical mass of a new talented generation of technological leaders, which would enable the establishment of an effective knowledge-based economy in Ecuador and the region. The success of the City of Knowledge is critically dependent on the quality of both the University’s administration and faculty, driving the creation of human talent. To this end, Yachay Tech has the ambition and resources to commence recruitment of some of the world’s top academic talent and is currently seeking an exceptional Chancellor.
The Opportunity

Yachay Tech, with its vision, magnitude and potential transformative effect on an entire region, challenges the imagination of those academic minds who want to change the world and have true societal impact. By being part of the Yachay project, the inaugural leadership team of higher administrators will have a truly transformative effect, shaping the University and ensuring its impact on the productive matrix of an entire country and the future of higher education of an entire continent.

Yachay Tech will permanently be part of the history of Latin America and a key milestone in the process of internationalizing research and teaching worldwide. The unprecedented government support for a project which is widely considered emblematic for the country and the initial guidance of its Board of Trustees, the Comisión Gestora, a body composed of top international academics that are passionate about Yachay Tech, ensure the institution’s potential are based upon a solid and stable foundation.

Mission

The mission of Yachay Tech is to provide an international environment in which research, learning, technology, and professional activity are valued and supported, enabling Ecuador to become a center of interdisciplinary scientific and engineering research activity in Latin America.

Vision

- To aspire to become a leading global research university and the best technological university in Latin America.
- To create world-class human talent through innovative teaching and research.
- To produce citizens who will contribute to Ecuador’s technology, economy, entrepreneurship, culture and future in accordance with the National Plan for Good Living.
- To provide public services that enrich Ecuador’s diverse ethnic communities and society as a whole.

Values

- To maintain integrity in all academic pursuits.
- To constantly strive for excellence and professionalism in all activities.
- To promote interdisciplinary science and discovery.
- To promote innovation and entrepreneurship.
- To respect cultural diversity, religious beliefs, differences in ethnicity, economic status, gender, and sexual preference.
Yachay, The City of Knowledge, is the first planned city of Latin America whose purpose is to drive regional development and to become the motor, powering science, technology, research and innovation. It is envisioned as a network of highly interactive units, including Ecuador’s Public Institutes of Investigation (IPIs), and a technological and industrial park, with the University (Yachay Tech) at its very core.

Yachay City is to implement a triple helix model which interweaves the public sector, academia and the private sector to create a network for interaction among scientists, investors and entrepreneurs, creating a spontaneous ecosystem of research, international business and creativity. An entrepreneurship and innovation program will continuously search for entrepreneurial projects at various stages and provide them with services like incubation, start-up mentoring, acceleration, space and facilities, and access to angel and seed funding.

Through embedding collaboration and connectivity from the outset, Yachay will flourish as a world-class ecosystem for translation.

All the constituents of the City of Knowledge, the university and its interdisciplinary UBRCs (University Based Research Centers), the national IPIs, the technological park, industry and their coordinated interactions, are essential components for achieving the National Plan for Good Living.

Yachay Tech generates new knowledge through faculty research and interdisciplinary Research Centers (UBRCs).

Research Centers and national institutes (UBRCs and IPIs) drive technology and prototype development and applied research.

The technological park translates the UBRCs and IPIs output to become commercially viable products and processes.

The products that are important to Ecuador or generate global demand can be scaled in the industrial park.
Yachay is in the north of Ecuador, near the city of Ibarra in the Imbabura province. The national company in charge of executing this emblematic project is named Yachay EP.

Together with IFEZ, a government company from South Korea, Yachay EP has created the basic guidelines for the construction of a smart city, designed for comfort and in harmony with nature. Yachay will provide an environment that offers residential neighborhoods with preferential costs, cultural centers, conference centers, fitness facilities, sports stadiums and arenas, restaurants, and tourism packages.

The master plan for the city calls for four areas of construction within the city: the knowledge sector, the industrial development sector, the biotechnology sector and the tourism sector.

**Phase 1 (2012-2017):** concentrates on the knowledge sector, which began with the construction of Yachay Tech and the academic campus, and will continue with the construction of facilities to house Ecuador’s 13 Public Research Institutes (The IPIs), business and commercial centers and the initial infrastructure for private companies and entrepreneurial projects.

**Phase 2:** will concentrate on the construction of the Industrial development sector. This sector will be the focal point for investment attraction aiming for the establishment of research and development centers and high-tech production plants. Phase 2 will see the development of technology and industrial parks which will provide central services such as a logistics park, videoconference rooms, financial services, and a technology transfer office.

**Phase 3:** will concentrate on the planning of Yachay’s tourism sector in relation to the growth of the city. Leisure programs offering access to the greatest mega diversity in the world, and including wildlife observation, gastronomy, bicycle touring, ecotourism and extreme sports will be included.

**Phase 4:** will concentrate on the development of Yachay’s agriculture and biotechnology sector, incorporating insights derived from field research and new technologies into Ecuador’s traditional agricultural practices.
YACHAY TECH’S STRUCTURE, ADMINISTRATION AND OPERATION

The achievement of such a purpose with maximum effect and minimum expenditure of resources is accomplished by putting in place a lean, flexible but accountable executive administration responsible for every day operations, and three governing bodies called the Governing Board (Comisión Gestora) which is analogous to a Board of Trustees, the Academic Council and the University Council.

YACHAY TECH GOVERNING BODIES

The University’s Academic Council is a body composed of the Vice-Rector, the Chancellor and the six Deans of the academic schools. The University Council is composed of elected members of the faculty representing each academic school as well as elected student and staff representatives. It also includes a number of ex-officio members, including the Rector, Chancellor and Deans, selected from the top university administration.

Yachay Tech has complete academic, administrative, financial and organizational autonomy.
LEADERSHIP

The Rector (comparable to President) and the Chancellor (Provost) are the two top executive administrators of the University. The Vice-Chancellors and Deans report to the Rector and to the Chancellor and are divided into two broad groups: an Operational group of administrators (directly reporting to the Rector) and an Academic group of administrators (directly reporting to the Chancellor).

On the top of this figure also sits the Comisión Gestora (CG), which acts as a Board of Trustees and which is responsible for hiring the Rector and ratifying the appointments of the remaining of officials shown in this figure.
THE CREATION OF A COMMON LANGUAGE COMMUNITY

The role of a common language is to create shared meanings that bind a community by creating a common, shared spirit. The same principle naturally holds for a new university with a strong community mission such as Yachay Tech, which aspires to attract top faculty and top administrators from around the world. Given the University’s global outlook, English, as the international language of science, technology and business, will be the primary common language at Yachay in both internal and external communications.

In addition to Yachay Tech’s international ambitions, its purpose is also to reach out within Ecuador to draw in young talent who will shape Ecuador’s future. Adopting also the Spanish language as an equally important, official language allows Yachay Tech to assume an international as well as a domestic role and to demonstrate its respect to its home base in Ecuador. In recognition of this, Spanish will be a second official language of the University, allowing it to assume a domestic as well as international role.

The usage of the two official languages is envisaged as follows:

The English language will be the primary language:
- Of teaching at the last two years of all undergraduate studies.
- Of teaching and research at both Master’s and Ph.D. levels, including all exams, theses and papers.
- Of all internal university and City of Knowledge communications and correspondences (with a few exceptions where necessary). Of all external communications with the exception of the communications with the Ecuadorian government, state institutions and agencies as well as cities and municipalities.
- Of all graduation ceremonies and public events and lectures.

The Spanish language will be the primary language:
- Of teaching of the levelling course and at the first two years of undergraduate studies.
- Of all communications with the Ecuadorian government, state institutions and agencies as well as the local community (local cities, municipality). These communications will also be translated in the English language.
The philosophy behind the choice and structure of the six basic schools and twelve departments originates from a consideration of applied areas related to Ecuador’s needs, available resources, and its plans for developing such resources.

According to the current design, for each of the six chosen areas of strength, two departments (one concentrating on basic science and the other on technology or engineering) are combined under the umbrella of a single school headed by a Dean.

By combining sciences and engineering in each subject unit, Yachay Tech aims to educate a generation of scientists/engineers at all levels starting from the undergraduate to the graduate MS and PhD levels as well as facilitating cross-fertilization and translation of knowledge from the stage of fundamental concept through to product development and intellectual property.

Research at Yachay Tech is conducted by individual research groups (headed by faculty members), and also by interdisciplinary University based Research Centers (UBRCs). UBRCs are interdisciplinary research units that operate in parallel to the University’s schools and departments and are designed to enable the bridging of disciplines. Their purpose is to conduct basic interdisciplinary research addressing societal problems of interest to Ecuador, Latin America and the world.

As Yachay Tech and its UBRCs develop, it will increasingly benefit from its linkages with the national IPIs and the City of Knowledge, as well as with outside industry, the country’s productive matrix and the growing entrepreneurial sector.
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<th>SCHOOL/DEPARTMENTS</th>
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<tr>
<td><strong>SCHOOL OF LIFE SCIENCES AND BIOTECHNOLOGY:</strong></td>
<td>Basic biology, evolution and plant genomics, infectious disease, marine life health and diversity, crop genetics, biomass conversion, bio-pharmaceuticals, disease resistance. General device engineering, medical imaging and sensing, medical electronics and nano-devices, micro-fluidics and bio-inspired design.</td>
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<td>• Department of Biology</td>
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<td>• Department of Biomedical Engineering</td>
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| **SCHOOL OF CHEMICAL SCIENCES AND ENGINEERING:** | Basic inorganic and organic chemistry, materials modeling and synthesis, polymer chemistry, biopharmaceuticals, petrochemistry, art preservation; monument restoration. Polymer engineering, oil refining technology, synthetic petro-products, material synthesis and properties. |
| • Department of Chemistry | |
| • Department of Petrochemical Engineering | |

| **SCHOOL OF PHYSICAL SCIENCES AND ENGINEERING:** | Basic physics, atomic molecular physics, quantum mechanics and physics, condensed matter physics. Solid state nano-devices, opto-electronic devices, thin-film structures and device fabrication, solar cells, LED technology, energy efficiency. |
| • Department of Physics | |
| • Department of Nano-Engineering | |

<p>| <strong>SCHOOL OF INFORMATION SCIENCES AND TECHNOLOGY:</strong> | Applied mathematics and scientific computing; large data; image processing, control theory. Information networks; energy and the power grid, machine learning, autonomous systems, small satellites, weather studies, social networks, economics and computer science. |
| • Department of Mathematics | |
| • Department of Computer Science and Engineering | |</p>
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<tr>
<td>SCHOOL OF GEOLOGICAL SCIENCES AND ENGINEERING:</td>
<td>Petrology, mineralogy, geochemistry, tectonophysics, earthquake seismology, volcanology, ocean dynamics, earth observation, glaciology. Oil and gas sustainable extraction technology and drilling, mineral resources exploration and sustainable extraction, industrial ecology, carbon capture, geothermal energy, earthquake engineering, Civil infrastructure hazard monitoring and mitigation, sea floor mapping, minerals resource mapping, mineral extraction and processing.</td>
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<td>• Department of Geology</td>
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<td>• Department of Geological Engineering</td>
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<td>SCHOOL OF SOCIAL SCIENCES AND INNOVATION:</td>
<td>Business economics, global economy and marketing, anthropology, cultural studies and heritage, psychology and family studies; educational studies, community development; urban planning and civil infrastructure, epidemiology. Entrepreneurship, business leadership, technology marketing, project management, intellectual property, business finance and accounting.</td>
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<td>• Department of Social Sciences</td>
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<td>• Department of Innovation</td>
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ECUADOR

The Republic of Ecuador, with a population of over 15 million people, is considered one of the most beautiful and ecologically diverse nations on earth. The country is composed of four geographical regions: the coast, the highlands, the Amazon region and the island region, which is composed of the archipelago of Galapagos. Within this dynamic country, more than 14 ethnic groups neighbor each other, some of which still speak ancient Inca languages, and many of which are distinguished through the preservation of artisanal skills which remain central to Ecuadorian art and culture.

Cities like Quito, Guayaquil and Cuenca decorate the country with magnificent Spanish colonial architecture and complement the country’s natural beauty, with its volcanic peaks and untouched beaches. Quito, the capital, was the first city to be declared a Cultural Heritage Site by UNESCO, was the winner of the award for “Best Tourism Destination” by the World Travel Awards in 2013, and has been declared “Top destination to travel in 2013” by National Geographic. Meanwhile, International Living Magazine has highlighted Cuenca, located in the south of the country, as a “Paradise for Retirees.” Most recently the United States Tour Operators Association categorized Ecuador as the third most important destination of the world.

Stable political environment and commitment towards development

In order to promote a stable and prosperous environment and growth, Ecuador has introduced its own plan of development, The Plan for Good Living. This places the human being as the center of public policy, thus ensuring respect for the rights of their citizens, workers, investors and nature.

A vibrant economy

Ecuador offers a sustainably growing economic environment, making it one of the fastest growing countries in the region. Significant investment in telecommunications and infrastructure, alongside unprecedented construction of hydropower plants, have also allowed Ecuador to lead the Andean region in dynamic growth. Ecuador’s economy has not only grown to significant levels but the country has also managed to reduce poverty, underemployment and unemployment, which decreased to 4.8 per cent in 2012, the lowest in the region¹.

Additionally, Ecuador is one of three countries worldwide that have been able to improve their position in rankings of human development and reduction of poverty, and is one of the countries with the lowest borrowing rates worldwide.

¹ Figures from CEPAL (the Economic Commission for Latin America)
A commitment to research

Strengthening higher education and human talent development have been priorities for Ecuador in recent years in order to achieve its transformation in production and in economic development. In 2011, Ecuador invested in education 4.9 per cent of its GDP, the largest in the South American region, while spending for 2012 increased to 5.2 per cent.

In order to promote research and the innovation capacity of the country, the Government has drastically increased the available scholarships for Master’s and Doctoral degrees in science and technology. Between 2007 and 2013, investment in undergraduate scholarships for studies overseas was worth $313 million. This represents a 27-fold increase compared to the investment made in the period 1994–2006 of just $11.6 million.

As a result of these efforts, the number of researchers engaged in R & D increased tremendously. Indeed, while the number of researchers reported in 2003 was only 845, by 2012, this number had tripled to 2,395 researchers, and it is expected to increase further once SENESCYT (The National Secretary of Education, Science and Technology) scholarship recipients return back to Ecuador. Yet another government initiative that has been implemented is the Prometheus Program (Prometeo), which seeks to strengthen research capacity in public institutions through their linkage to foreign researchers and academic Ecuadorians living abroad.

International links

By early this year, the Public Company Yachay EP and the National Secretary of Higher Education, Science and Technology had already signed a total of 17 agreements of cooperation on behalf of Yachay Tech. Some of the Universities include the German Foundation for Scientific Investigation, the National Polytechnic Institute in Mexico, the Inter-American Organization for Higher Education (IOHE) and the University of Valladolid in Spain. There exists a special agreement with the University of Barcelona that will allow for Yachay student participation in sandwich PhD programs starting in 2015. Additionally, Yachay Tech and the University of Barcelona are exploring possibilities of offering joint Master’s degree programs in a variety of subjects.

Since the establishment of the Comisión Gestora, Yachay Tech has begun to implement an aggressive strategy that will establish a meaningful network of international partners who will be potential players in developing specialized programs in teaching, research and personnel exchange.
Having selected the areas of research and education, Yachay Tech is now following a strategy for sequential hiring which will allow the university to begin operating in a limited capacity as further infrastructure and staff are incorporated systematically and in parallel.

Following Professor Fernando Albericio’s announcement as Yachay Tech’s Inaugural Rector, the University now seeks to appoint its Chancellor. This will be immediately followed by the recruitment of the Deans of the first five of the six Schools as well as the five Department Heads of the science departments within the Schools.

In the 2015 calendar year, the five remaining Department Heads (technology departments of the five Schools) will be appointed as well as the entire set of Vice-Chancellors (both operational and academic). During the latter part of the same year (2015), the searches for Dean and Department Heads for the School of Social Sciences and Innovation will commence and are expected to be concluded by mid-2016.

The long-term (15–20 years) size of the faculty is not expected to exceed 240 tenured and tenure-track professors of all ranks and approximately 60 lecturers. This corresponds to 40 professors per school and 10 lecturers (or 20 professors per department and five lecturers). The above faculty will serve no more than 2,000 undergraduate and approximately 1,000 MS and PhD students. These numbers will also be built-up gradually as the various schools and departments are established.
ACADEMIC DEPARTMENT HEADS

The Department Head will be responsible for both the instructional and research activities of their Department, and bring forward new professorial appointment requests for the Dean’s consideration. They will oversee the teaching and research laboratories, and recommend new educational thrusts and degree programs to the Dean and the University Council. They will also play a critical role in guiding and mentoring young faculty as they start their academic careers within Yachay Tech.

Department Heads report directly to the Dean. The Dean, the Deputy Dean and the two Department Heads are all tenured professors.

Duties include:

- To help identify targets for recruitment alongside the Dean.
- To work closely with research faculty affiliated with their department to develop and promote excellence and appropriate collaboration.
- To further the School’s academic growth and influence by developing and maintaining strategic alliances with high profile contacts and relevant organizations.
- To identify and promote opportunities for interdisciplinary collaboration, internally and externally, both nationally and internationally.
- To ensure effective internal communication of activities to the Dean.
- To promote a culture of excellence in research and education within the Department.
- To promote research excellence and scholarly activity and ensure collaboration between the Department, the wider School and its associated UBRCs.
- To fully utilize Yachay City’s advantages to achieve cross-faculty and interdisciplinary research and knowledge transfer.
- To ensure that comprehensive and forward-looking undergraduate and postgraduate education is implemented and maintained.
- To ensure that postdoctoral and fellowship education and training are developed and meet the needs of business, industry and academia.

Experience and knowledge

- An internationally recognized research profile.
- A level of managerial experience within a research institution.
- An in-depth understanding of the strategic research and education challenges faced by excellent research intensive institutions.
- Evidence of having led interdisciplinary research and collaboration with industry.
- An understanding of the latest developments in learning and teaching.
- Experienced at working across cultures and with a demonstrable commitment to equality and diversity.
- Department Heads are five-year appointments and are presented to the Academic Council for approval. The Rector and the Comisión Gestora subsequently ratify them.
TERMS OF APPOINTMENT

The post is full-time and based at the Yachay City of Knowledge in Ecuador. The salary and benefits will be fully commensurate with the seniority and nature of the appointment and will reflect the required high caliber of the successful candidate.

Details of the terms of appointment will be open to discussion with the preferred candidate. The final appointment will be subject to satisfactory references.

HOW TO APPLY

Yachay Tech will be supported in this appointment process by the executive search firm Perrett Laver. Perrett Laver will support the Comisión Gestora in the discharge of its duties, both to assist in the assessment of candidates against the requirements for the role and to identify the widest possible field of qualified candidates.

Applications should consist of a full curriculum vita, a covering letter of application addressing the role specification, along with teaching, research and administrative experience.

Completed applications should be uploaded at www.perrettlaver.com/yachaytech quoting reference 1708 by 5pm (PST) on Friday 5th September 2014.

Longlisted candidates will be invited for interview with Perrett Laver in October 2014, following which the Comisión Gestora will agree a shortlist. Shortlisted candidates will be invited to attend informal sessions and formal interviews in November 2014.