

Instituto Industrial Luis A. Huergo was founded in 1934 by the Engineer Leon Halpern and his colleagues with whom he shared the interest and commitment towards scientific and technical education. He considered that "although a technician is not a scientist", it could not be dispensed without a scientific training and learning process. For this reason, that year he built a Chemistry Lab, something absolutely unusual for the time at secondary education institutes; an attitude towards innovation that would mark other educational proposals that the Institute offered and still continues to offer to its community.

The Huergo family grew year after year and the new teachers replicated the inner strength that the founder conveyed and proposed constant renewals of curricula, teaching methodology and in-class work. Experimentation was the philosophical foundation on which the duty of the Institute was based. Its permanent concern was to articulate theory and practice. Students spent 80% of their training time in laboratories and 20% in classrooms.

In the 1970s, her daughter Celia Halpern, who had graduated in Chemistry, developed the Pedagogical Office, which provided support to the Headmaster, the Regent and teachers. At that time, a public policy called *Project XIII* or *Full-Time Teachers Project* was implemented, and became a wonderful opportunity to organize the courses by departments, to offer pedagogical support classes to the students as well as emotional support through mentorships.

In this context, the new didactics of technical education were modeled on the so-called "active school" and the "directed study". The Psychopedagogical Cabinet was composed of two psychologists who collaborated with the mentors to organize together with the Medical Department (adolescence, sex education talks, among other topics).

In 1984, **Leon Halpern** was succeeded by **Celia Halpern** in the direction of the Institute. She would coordinate numerous transformations in the different careers that were offered, together with the Heads of Departments, the Directors of Study and Regents.

"Betty" as everyone called her, passed away unexpectedly in January of 2005, leaving from then on, her daughters, **Estela** and **Silvina Domínguez Halpern**, in charge of conducting the Institute.

After three generations, the Institute maintains its motto: "To educate not only excellent technicians but also good men and women", included in a pedagogical program that attends to the development of autonomous critical thinking, respect for diversity and difference, prevalence of responsible behavior and the constant articulation between knowledge and know-how.

OUR VISION

Focusing on a flexible organization and a collaborative culture, our vision promotes respect and appreciation of capacities and intelligences diversity. Inspired by participatory philosophy theories, it concentrates its efforts on teamwork oriented towards problem solving.

Through its management it assumes leadership in order to motivate the responsible exercise of decision-making, to optimize individual and group capacities, adopting permanent assessment in all its dimensions: curricular, didactic-pedagogical, organizational, etc., to ease change and innovation processes.

We focus on:

- · Culture centered on duty and learning,
- Norms and values such as autonomy, responsibility, solidarity, flexibility, tolerance, respect, openness to change and prosociality,
- Teamwork organized in departments and areas,
- Work atmosphere focused on cooperation, active exchange and communication,
- Decentralization and delegation of responsibilities into departmental areas,
- Organizational strategy,
- Permanent assessment for decision-making and improvement of results.

INSTITUTO HUERGO, TODAY

Our school offers six technical carriers and a baccalaureate: Six specializations are offered in the technical modality (6 years plan)

- Chemistry (Chemical technician)
- Constructions (Construction Manager)
- Computing (Computing Technician)
- Electronics (Electronics Technician specialized on Telecommunications)
- Electro-mechanics (Electro-mechanical Technician)
- Renewable Energies (Renewable Energies Technician)
- Visual Arts Baccalaureate (5 years plan)

Nowadays, these plans have been reformulated in order to respect the syllabus established by the National Technical Education Act, as regards to Secondary Technical Vocational Education.

Chemistry

PROFESSIONAL PROFILE

Chemistry Technicians are able to embody knowledge, skills, values and attitudes in order to:

- Operate and bring improvements in chemical, physical, physicochemical and microbiological processes
- Conduct chemical and physical experiments, tests, and analyses for a variety of purposes, including research and development
- Develop appropriate courses of action to address the execution of planned tasks.
- Carry out test analysis and interpret their results
- Setup and maintain laboratory instruments and equipment
- Prepare chemical solutions to use in their work

They are able to interpret the strategic definitions arising from the pertinent technical and hierarchical levels, manage its specific activities, perform and control all the activities required until its effective realization, taking into account the criteria of safety, environmental impact, human relations, quality and productivity setting or setting priorities.

Chemical Technicians have a wide field of work. They are able to work in companies or laboratories of different sizes, producers of commodities and differentiated chemical products and technologies.

Constructions

PROFESSIONAL PROFILE

Construction Managers are able to embody knowledge, skills, values and attitudes in order to:

- Identify methods and techniques to solve various problems, in different degrees of difficulty, according
 to their level, both theoretical and practical, from the construction industry.
- Develop skills to work in groups for the implementation of interdisciplinary projects that integrate the different areas of this professional career.

ROLES AND TASKS

- To analyze the requires of a client and develop an according plan
- To elaborate projects of building constructions (constructive, technical and spatial solutions for a specific requirement plan, planning, managing and controlling the construction process).
- To direct the execution of the constructive processes.
- To execute building works and conduct team work in charge.
- To project, direct, plan, manage and control facilities related to energy (electricity and gas) communications (low voltage), water (hot, cold and fire proof), drainage (sewage and rainwater) comfort (heating, cooling, forced ventilation and air conditioning) and transport (escalators, elevators and forklift).
- To provide technical evaluation services to third parties.

The main occupational areas in which the construction managers are trained to perform can be technical offices,

construction projects, designing and creating products or services related to the field of building, in their different occupational areas of the construction industry: management, planning, control, administration or marketing.

Computing

A Computer Technician not only installs equipment, software and components of computer systems and networks, but also has knowledge to solve relatively specific operational problems, both hardware connectivity and software, that are usually presented to the user in the field of professional and personal computing.

PROFESSIONAL PROFILE

Computing Technicians are able to embody knowledge, skills, values and attitudes in order to:

- Manage the different paradigms of programming
- Interpret and implement the design of computer applications
- Optimize the user's work environment and experience
- Design, produce, adapt, implement and maintain computer applications
- Self-manage their activities

Their activity is oriented to the tasks of assisting users, industries, service companies, public or private and businesses, integrating multidisciplinary teams, providing their operations to:

- Install, configure, maintain of software and hardware products.
- Manage and maintain servers belonging to the network, such as: email and Internet, corporate data, web
 pages, contact centers, content filtering, analog telephony and IP.
- Keep inventory of equipment and licensing up to date.
- Provide IT support and training to staff in existing areas.
- Have the necessary knowledge to help during the decision making processes
- Advice for the purchase of specific software, networking equipment, operating systems and hardware.
- Perform computer security audits.
- Perform preventive maintenance.

OCCUPATIONAL AREA

- Sectors / sub sectors of economic activity, public administration, NGOs in areas of computer science or data processing.
- IT services in large, medium and small companies, in areas of analysis and programming, providing technical support.

Electronics

PROFESSIONAL PROFILE

Electronics Technicians are able to embody knowledge, skills, values and attitudes in order to:

- General electronics and electricity
- Design and assembly of circuits

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- Systems Planning
- Dynamics of work to solve problems
- Component technology
- Safety rules
- Health care in the workplace

OCCUPATIONAL AREA

- Installation and integration
- Electronic equipment technical support
- Operation and maintenance
- Ability to integrate interdisciplinary working groups
- Sales

Electronics Technicians who are specialized on Telecommunications may work in companies of different sizes and may carry out activities on:

- Cable and satellite TV signal distribution companies.
- TV Stations.
- Radio stations.
- Internet distribution companies.
- TV Transmitting Plants.
- Radio transmitting plants.
- Cellular Companies.
- Electronic Laboratories.
- Distributors of integrated circuits and components.
- State research organizations.
- Network design and assembly companies.
- Equipment repair laboratories.
- Design and commissioning of radio-links.
- Instrument calibration laboratories.
- Own ventures in the areas of concern.

Electro-mechanics

PROFESSIONAL PROFILE

Electro-mechanics Technicians are able to embody knowledge, skills, values and attitudes in order to:

- Design mechanical, electromechanical, pneumatic and oleohydraulic equipment and installations; Electrical and automation control circuits; tools and devices.
- Conduct electrical, mechanical, and electromechanical materials and tests.
- Operate equipment, installations, drive and control devices, and machine tools.
- Maintain, predict, prevent and operate the components, equipment and electromechanical installation.
- Assemble devices and components of mechanical and electrical equipment, pneumatic, oleohydraulic and electromechanical systems
- Install lines of consumption and distribution of electric energy of low and medium voltage.
- Generate ventures.

Electro-mechanical Technicians may work in companies of different sizes and may carry out activities related to equipment and installations in buildings and urban infrastructure facilities.

They are prepared to assembly or maintain services. They can also generate and manage, autonomously or with other professionals, various enterprises. At auxiliary service supply sectors, they may be responsible for the supply of electricity, steam, water, compressed air, vacuum, natural gas, solid, liquid and gaseous fuels and industrial gases. Besides, they may perform materials tests, electrical tests, mechanical tests, as well as implement of systems of quality assurance, dimensional, electrical and mechanical metrology systems, among others.

The technicians may act in supply departments in the selection and purchase of specific materials, in the marketing activities of electromechanical equipment and installations, in technical advice, sale and after-sales services.

Renewable Energies

Renewable energies are energies collected from renewable resources that contribute to take care of the environment. In order to confront the effects of pollution and the depletion of fossil fuels, they have become an alternative form of supplying energy because of their lower polluting effect and their possibility of renewal. In the context of the current "energetic crisis", new answers are demanded from science, education, and technology field.

At the present, Buenos Aires City is developing and implementing several Programs in which the environmental problem is present, without a professional profile that can respond to the different requirements that this occupational and professional field demands.

PROFESSIONAL PROFILE

The Technician in Renewable Energies is able to embody knowledge, skills, values and attitudes in order to:

- Design components, equipment and systems for the use of renewable energies.
- Assemble and install components, equipment and systems for the use of renewable energies.
- Operate and maintain components, equipment and systems for the use of renewable energies
- Conduct tests of components, equipment and systems for the use of renewable energies.
- Market, manage and promote energy services and / or products.
- Formulate, implement and evaluate projects for the use of renewable energies, promoting local development.

In conclusion, he will be able to interpret the strategic definitions arising from the relevant technical and hierarchical levels, manage its specific activities, perform and control all the activities required until its effective realization, taking into account the criteria of safety, environmental impact, human relations, quality control and productivity.

The main occupational areas in which the technician is trained to perform can be:

- Industries.
- Suppliers and Distribution companies.
- Telecommunication companies.
- Construction companies.
- Architecture studies.

- Energy Consultants.
- Environmental Consultants.
- Electrical Cooperatives.
- Agricultural Cooperatives.
- Agricultural Establishments.

Throughout four years, the students cover various theoretical-practical perspectives grouped in three fields of training: general, technological and scientific, and technical training.

Visual Arts Baccalaureate

The Visual Arts Baccalaureate offers students the opportunity to engage with contemporary artistic practices from doing, appreciation and reflection. Its curricular units allows them to articulate their productions with the main theories of art, the function of the artists and cultural references of the past and the present.

In this sense, the Visual Arts Baccalaureate incorporates knowledge linked to the artworks circulation and consumption, where they reach recognition and allow the construction of social meaning.

This approach is innovative because of traditional visual arts and digital audiovisual productions coexistence. It involves different languages such as animation, videoclips, multimedia, social media, video games, among others.

Environmental Education Projects

We have developed environmental education projects oriented to address the objectives that are raised in our Institutional Educational Program:

- To promote a critical awareness and responsibility on the care of natural resources and the environment.
- To reflect on the importance of making a sustainable use of natural resources as the only viable way for the continuity of our planet
- To foster a committed and participative attitude towards the whole community, through working together with different institutions: communities, universities, special programs, governments and international programs, among others.
- To identify positive sustainable behaviors by acting as multiplying agents, promoting the importance of taking care of natural resources.
- To inform and sensitize other members of our educational community (families, social actors) on environmental issues.

ENVIRONMENTAL AGREEMENT

In this context, all members of the Huergo Community are committed to attend the environmental care both inside and outside the school, incorporating the following habits:

- To sort and classify waste
- To reduce the amount of waste generated by observing the possibility of reusing it.
- To regulate and take care of the use of water and electricity, avoiding waste.
- To maintain common spaces clean.
- To generate green areas inside the school (vertical gardens) and take care of this spaces in the city.
- To research and promote knowledge related to the problem of climate change and the importance of sustainable development.
- To inform the importance of environmental care inside and outside the school.

ESCUELA VERDE (GREEN SCHOOL)

Escuelas Verdes Program it's a Buenos Aires City Government initiative. It recognizes schools that are committed to Environmental Management Education and develop Environmental Education Projects. The recognition is consolidated with the accreditation of Environmental Bonds, according to a gradual construction scheme structured in steps designed by the Program. Last year, our institution was recognized as a Consolidated School - Bond III - that distinguishes schools that develop Environmental Education Projects in a solid way, integrating them into its Institutional Project and creating spaces for reflection and self-assessment.



The GLOBE Program

Since 1995, we are part of the international program that seeks to promote scientific learning and increase awareness of the environment and climate change.



2mp Program - CONAE

We participate in the Satellite Training Program for children, organized by CONAE.



Wind Turbine Project

It works by converting the kinetic energy of the wind into mechanical energy; and then it uses a wind turbine to create electrical energy.



Vertical gardening

We generate green spaces in our building to address the concept of Biodiversity.



Hydrology Protocol

We conduct a hydrological monitoring of the Matanza-Riachuelo river basin in order to record the water conditions and its alteration over time.

Phenology Protocol

Students analyze the fall and growth of nearby tree leaves to compare and come to conclusions about climate change's impact on our vegetation.

Atmosphere Protocol

Through the data provided by our Meteorological Monitoring Station, we discuss current climatic and atmospheric conditions.

Huergo Recycles

Since 2012 we started a waste sorting and recycling project, training students and teachers.



Biodigester Project

It provides biogas and biofertilizer in an ecological way from the organic waste we generate daily.



Echo Project

With the purpose of multiplying our experience, we develop workshops to advice schools and students.

