

## ELECTRICAL ENGINEERING PROGRAM

### Exit Profile

**Exit profile related to relevance, bio-awareness, responsible participation, honesty, among other aspects.**

<b>Profile</b>	<b>Learning outcome</b>
<p><b>The graduate:</b></p> <p>1. Works cooperatively within the framework of respect for diversity.</p> <p>2. Behaves under ethical principles; supports rights and promotes citizenship practices in a framework of liberty.</p>	<p>1.1 Values points of view given by peers.</p> <p>1.2 Shares ideas and points of view aimed to achieve learning goals.</p> <p>1.3 Promotes agreements with positive, respectful attitude and critical perspective.</p> <p>1.4 Commits to given responsibilities within group.</p>
	<p>2.1 Supports axiological dimensions of the human being.</p> <p>2.2 Shows strong values in actions performed.</p> <p>2.3 Is knowledgeable of fundamental human rights.</p> <p>2.4 Identifies the normative framework, institutions and proceedings that ensure human rights.</p> <p>2.5 Puts into practice and demands the practice of rights.</p> <p>2.6 Takes with responsibility the obligations that generate rights.</p> <p>2.7 Respects freedom of others.</p> <p>2.8 Identifies structural conditions that restrict freedom.</p> <p>2.9 Reprehends every situation that threatens human dignity.</p> <p>2.10 Rejects all types of imposition, authoritarianism, discrimination and exploitation.</p> <p>2.11 Promotes democratic coexistence and the active participation of citizens.</p> <p>2.12 Values the necessity of a fair, supportive and equitable society (Well Being).</p> <p>2.13 Gets involved in social commitment initiatives.</p> <p>2.14 Interprets the sense of being an "honest citizen" according to UPS principles.</p> <p>2.15 Shows values in every performance.</p> <p>2.16 Identifies the regulatory framework and the institutions and proceedings that ensure rights.</p> <p>2.17 Exercises and demands the practice of rights.</p>
<p>3. Finds the transcendent dimension and opts for the relegated ones regarding human existence.</p>	<p>3.1 States faith, beliefs, principles and spiritual values.</p> <p>3.2 Respects spiritual and religious manifestations of others.</p> <p>3.3 Evidences spiritual and religious values in university actions.</p> <p>3.4 Values the personal life project.</p> <p>3.5 Collaborates with projects that benefit the impoverished.</p> <p>3.6 Analyzes financial, social and cultural inequalities at local and national levels.</p> <p>3.7 Identifies possible solutions to situations of economic inequality.</p>
<p>4. Values the interaction among science, technology and society.</p>	<p>4.1 Identifies the evolution of STS studies.</p> <p>4.2 Explains the main problems generated by the uses of science and technology in society.</p> <p>4.3 Proposes solution alternatives to problems in the field of STS.</p> <p>4.4 Takes an ethical stance towards STS interrelationships.</p> <p>4.5 Understands science and technology as a tool at the service of a just, equitable and harmonious society.</p>

<b>Profile</b>	<b>Learning outcome</b>
<p>5. <i>Understands the human being as an integrated being and contributes to the strengthening of an intercultural and inclusive society for Well Being.</i></p>	<p>5.1 Examines the evolution of the cosmos. 5.2 Explains the historicity of the human being. 5.3 Identifies the human being as an integral being. 5.4 Recognizes the multiethnic, intercultural and plurinational reality of today's society. 5.5 Explains the concepts of culture, multiculturalism and interculturalism. 5.6 Promotes intercultural dialogue. 5.7 Exerts inclusive practices.</p>
<p>6. <i>Behaves under social and environmental principles.</i></p>	<p>6.1 Is sensitive to the impoverished by defending justice, welfare and solidarity. 6.2 Constructs citizenship: is democratic, participatory, communitarian, demands rights and observe duties; promotes the culture of peace. 6.3 Is ecological: seek harmony among human beings, nature and deity (ies). 6.4 Is ethical: responsible for own actions, in solidarity with fellow human beings; act under principles and values.</p>

**Profile related to mastery of theories, conceptual systems, methods and languages for the integration of knowledge, profession, and research that will be developed by the future professional. The graduate:**

1. *Models, simulates and interprets the elements and their operating conditions in the electrical system, through the knowledge of electrical technologies, complemented with logic, mathematics and physics.*
2. *Participates in research programs in areas of interest in the electrical field.*
3. *Knows standards and regulations of lighting systems.*
4. *Analyzes, selects and supervises the assembly of electrical machines in the traction area.*
5. *Knows and applies current norms and standards to carry out designs and audits in the electrical and industrial sector.*
6. *Analyzes and selects the necessary equipment in order to guarantee an adequate integration of the electrical systems to improve reliability.*

**Profile related to learning with regard to cognitive abilities and generic competences.**

<b>Profile</b>	<b>Learning outcome</b>
<p><b>The graduate:</b> 1. <i>Uses academic and professional language in spoken and written form.</i></p>	<p>1.1 Understands academic texts at a literal level. 1.2 Interprets academic texts 1.3 Elaborates academic texts in spoken and written form. 1.4 Performs comprehensive reading of academic texts in a foreign language.</p>

<b>Profile</b>	<b>Learning outcome</b>
2. <i>Reasons logically and mathematically.</i>	2.1 Identifies the structure of logical thinking. 2.2 Identifies fallacies in discourse 2.3 Elaborates coherent and logical discourse. 2.4 Uses mathematical logic 2.5 Is engaged in argumentative dialogues.
3. <i>Uses ICTs</i>	3.1 Applies computer tools for the development of their academic and professional activities. 3.2 Uses communication networks to access information. 3.3 Is involved in academic and professional networks.
4. <i>Manages innovative projects in order to transform reality from their professional practice.</i>	4.1 Identifies elements from an innovative project. 4.2 Diagnoses needs in the surrounding environment. 4.3 Ethically manages intervention proposals from professional practice.
5. <i>Identifies the different forms of knowledge production.</i>	5.1 Identifies the difference between real and theoretical objects as a production of science. 5.2 Identifies science as a western historical cultural production. 5.3 Develops proposals that promote intercultural dialogue of knowledge. 5.4 identifies the theoretical and political conditions that cause the crisis of scientific paradigm. 5.5 Identifies the critical thinking trends. 5.6 Identifies the fundamental categories to understand social complexity. 5.7 Applies the critical thinking methods and other knowledge depending on the circumstances. 5.8 Shows openness to dialogue with other knowledge and disciplines. 5.9 Contributes with the creation of environments and processes that benefit a culture of criticality. 5.10 Shows capacity for self-criticism. 5.11 Develops continuous and constant processes of self-learning.
6. <i>Develops research processes from a theoretical, empirical and methodological perspective.</i>	6.1 Comprehends the plurality and epistemic complexity in the production of knowledge. 6.2 Systematizes knowledge and information rigorously. 6.3 Explains the process of production of scientific knowledge. 6.4 Recognizes the plurality of research methods. 6.5 Designs scientific research projects. 6.6 Researches with scientific and academic rigor. 6.7 Writes research reports.

**Profile related to the management of professional and research models, protocols, processes and proceedings. The graduate:**

1. *Plans, designs, implements, operates and performs maintenance of electrical systems in their generation, transmission and distribution stages, as well as in the industrial sector.*
2. *Develops with entrepreneurial vision projects in the electric field considering norms and standards of environmental care.*

3. *Designs, models, simulates, audits and installs lighting systems.*
4. *Designs and implements systems for the improvement of the quality of electric energy.*
5. *Designs, implements and operates monitoring systems for electrical systems.*
6. *Designs, simulates and supervises renewable energy systems focused on non-conventional generation.*