



Faculty of
Electrotechnics
and Computing

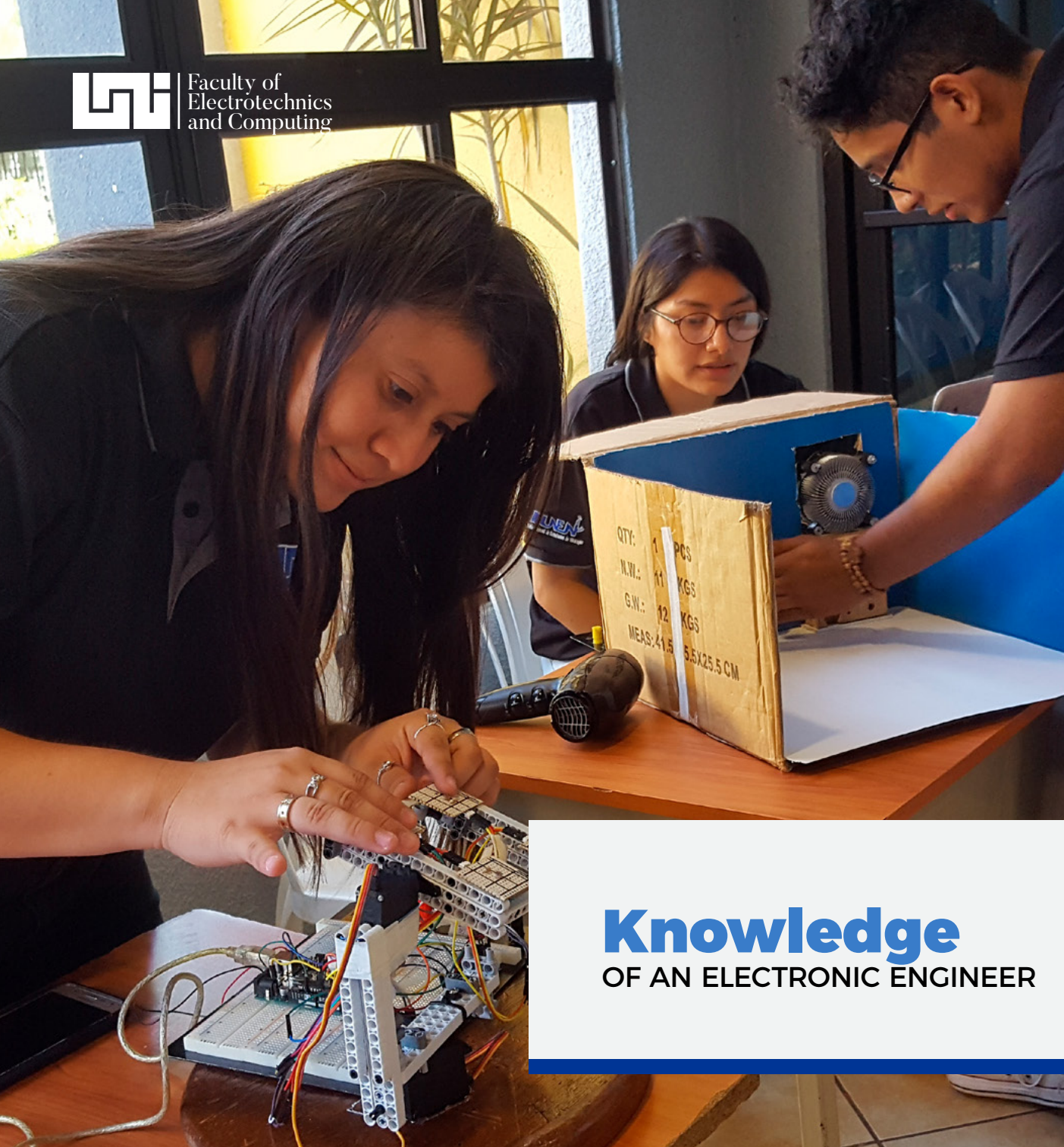
#SomosOrgullosamenteUNI



Electronic ENGINEERING

PROFILE OF GRADUATION
AND CURRICULA

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Knowledge OF AN ELECTRONIC ENGINEER

- Laws, principals, and theories that rule the functioning of the main analog, digital, gadgets that are used to implement electronic systems.
- Laws and principles that rules the functioning of electrical machinery and generations of electrical energy.
- Methods, techniques and basic tools in order to develop programs by using different programming language.
- Methods, techniques and tools in order to design and implement electronic systems in order to solve problem in the following fields: telecommunication, industrial automatization and control
- Laws and principles that rule radiocommunication, telecommunication networks and computer networks.
- Classic and Smart Theory control, industrial instrumentation, programmable logic controllers and foundations of industrial robotics.
- Scientific method for research project development.
- Regulations and standards to install and implement electronic systems in different areas of expertise.
- Laws, principals and theories of basic sciences required in order to understand present and future technology.
- Fundamentals of economics, finance and project formulation and administration.
- Basic fundamentals for the management of human resource, material and finance.

Skills OF AN ELECTRONIC ENGINEER

- Apply mathematic knowledge, science and engineering for the effective problem solving.
- Write program codes by using high level language and specific compiler.
- Design and conduct experiments likewise analyze and interpret data.
- Design a system, a component or a process to satisfy needs in the following fields: telecommunication, industrial automatization and control, under real restriction of different types such as economic, environmental, social, political, ethical, health and safety manufacture and sustainability.
- Work in interdisciplinary teams.
- Identify, formulate, and solve problems related to expertise areas: electronic, industrial measuring system, industrial automatization, automatic control, telecommunication and project management.
- Communicate effectively in a written and graphic manner as well as verbally.
- Use techniques, skills and modern tools to practice engineering.





Attitudes OF AN ELECTRONIC ENGINEER

- Ethical and professional responsibility
- Lifelong learning commitment.
- Concern about the impact of engineering's solutions in a global, economic, environmental and social context.
- Responsibility in decision making.
- Self-preparation in contemporary subjects that broaden the vision of the world and allow visualize beyond scientific and technological aspects.
- High entrepreneurial spirit.
- Innovative attitude.
- Be responsible with the environment demonstrating social consciousness regarding Nicaraguan's society dilemma.

I Semester

- Introduction to Electronic Engineering
- Mathematic I
- General Chemistry
- English I
- Technical Writing
- History of Central America and Nicaragua

II Semester

- Programming I
- Technical Drawing
- Mathematic II
- Physics I
- English II
- Sociology

III Semester

- Programming II
- Electrical Circuits I
- Mathematic III
- Physics II
- Engineering and Technology Research Methods

IV Semester

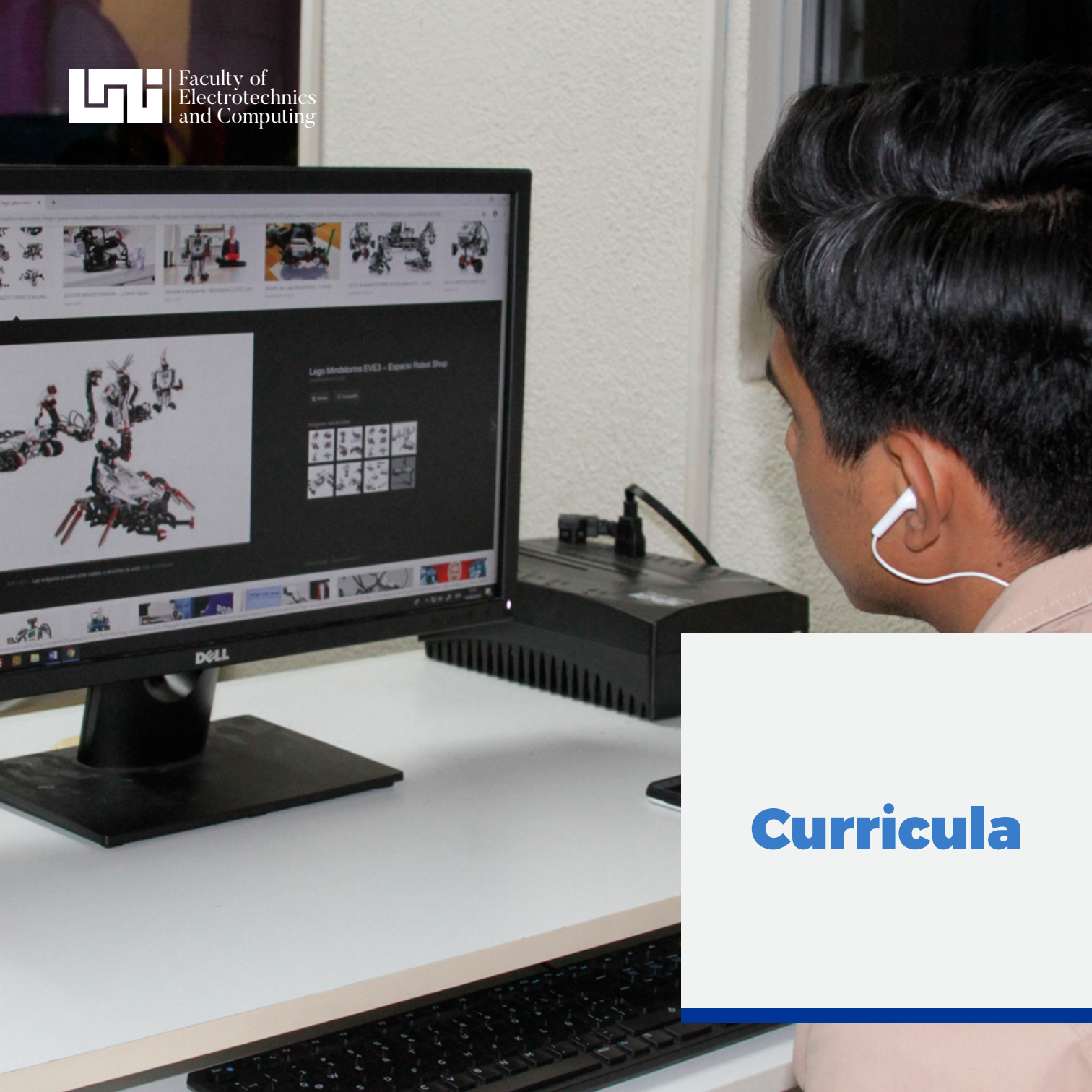
- Analog Electronic I
- Electrical Circuits II
- Mathematic IV
- Transmission Media
- Peace Culture and Human Rights

V Semester

- Digital Electronic I
- Analog Electronic II
- Electrical Systems
- Systems and Signals
- Antenna and Radio Propagation



Curricula



Curricula

VI Semester

- Digital Electronic II
- Applied Electronic
- Statistics I
- Maintenance and Industrial Safety
- Business Administration and Economy for Engineers

VII Semester

- Computer Machinery I
- Measuring Systems
- Communication Systems I
- Philosophy

VIII Semester

- Computer Machinery II
- Control Systems
- Computer Networks
- Communication Systems II
- Economical and Financial Analysis for Engineers

IX Semester

- Technology and Environment
- Engineering Project Management
- Final Project Workshop Preparation
- Applied Control
- Industrial Electronic
- Telecommunication Networks
- Radiocommunication

X Semester

- Final Graduation Project

**SIMÓN BOLÍVAR
CAMPUS**

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General Secretary
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