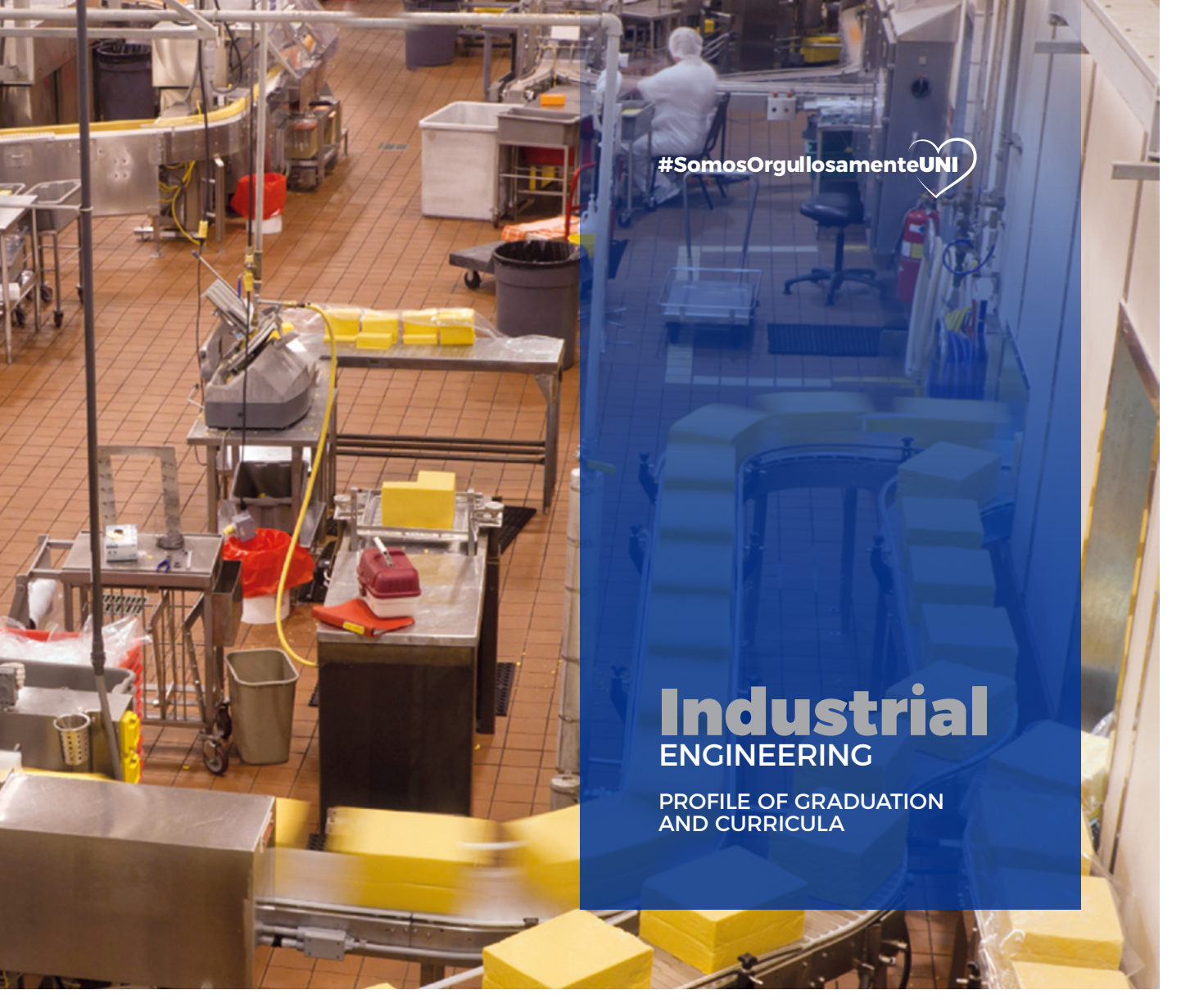

Industrial
ENGINEERING

PROFILE OF GRADUATION
AND CURRICULA

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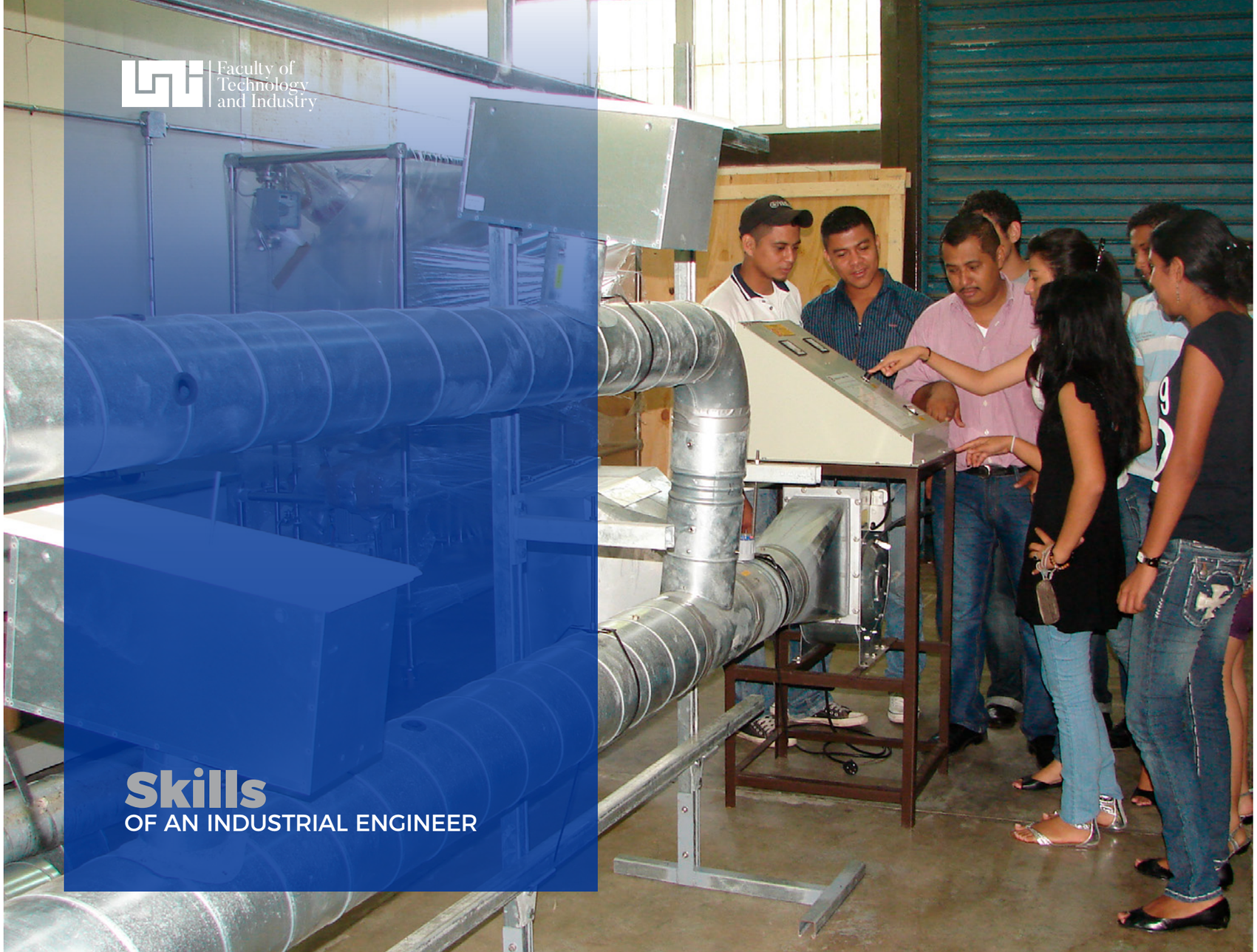
Industrial
ENGINEERING

Industrial engineering studies rational usage of resources and optical management from transformation systems in good and services looking for the appropriate implementation in those systems human, technical, material resources and information with the purpose of getting useful products to society or outstanding service.

Knowledge
OF AN INDUSTRIAL ENGINEER

- Comprise and manage foundations, methods, techniques and procedures for the planning and development of the industrial systems including the study of the demands and needs of the country. It also includes legal aspects and technical regulations in its area of expertise.
- Manage the principal economic aspects and cost project control. Besides, activities related to industrial engineering.
- Master knowledge, methods, techniques and procedures for social-economical project management development. It also includes the management of goods and services for its own operations, integrated management systems, supply chain management, marketing management systems and the organizational effective cycle management.
- Comprise and manage basic, humanistic sciences' foundations, applications, considering its contribution to the solution of industrial engineering problems.



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Skills
OF AN INDUSTRIAL ENGINEER

- Apply methods techniques and tools to perform the marketing, technical study, financial study, financial-economical assessment, and environmental impact assessment complying with legal, current requirements in the country.
- Administrate available and entrepreneurial resources that allow decision making by integrating quality systems, preventing pollution and labor risks.
- Capable of designing, planning, organizing, and leading production systems in good and services, applying tools, methods and techniques to manage storages, industrial preservation in order to perform time and movement studies.
- Apply tools, techniques and methods in order to analyze value chain with the objective of placing goods and services to the clients appropriately.
- Apply tools, techniques and methods in order to analyze marketing variable with the objective of placing goods and services to the clients appropriately.
- Change the vision, mission and values in strategies to satisfy peoples' needs and expectations; develop and design systems (productive process, organizational structure, informative management system, human skill management system, encouragement and recognition decision making system) to implement those strategies.

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Attitudes
OF AN INDUSTRIAL ENGINEER

- Ethical and profesional responsibility.
- Lifelong learning commitment.
- Concern about the impact of engineering's solutions in a global, economic, environmental and social context.
- Responsibility in decision making.
- High entrepreneurial spirit.
- Innovative attitude.
- Be responsible with the environment demonstrating social consciousness regarding Nicaraguan's society dilemma.

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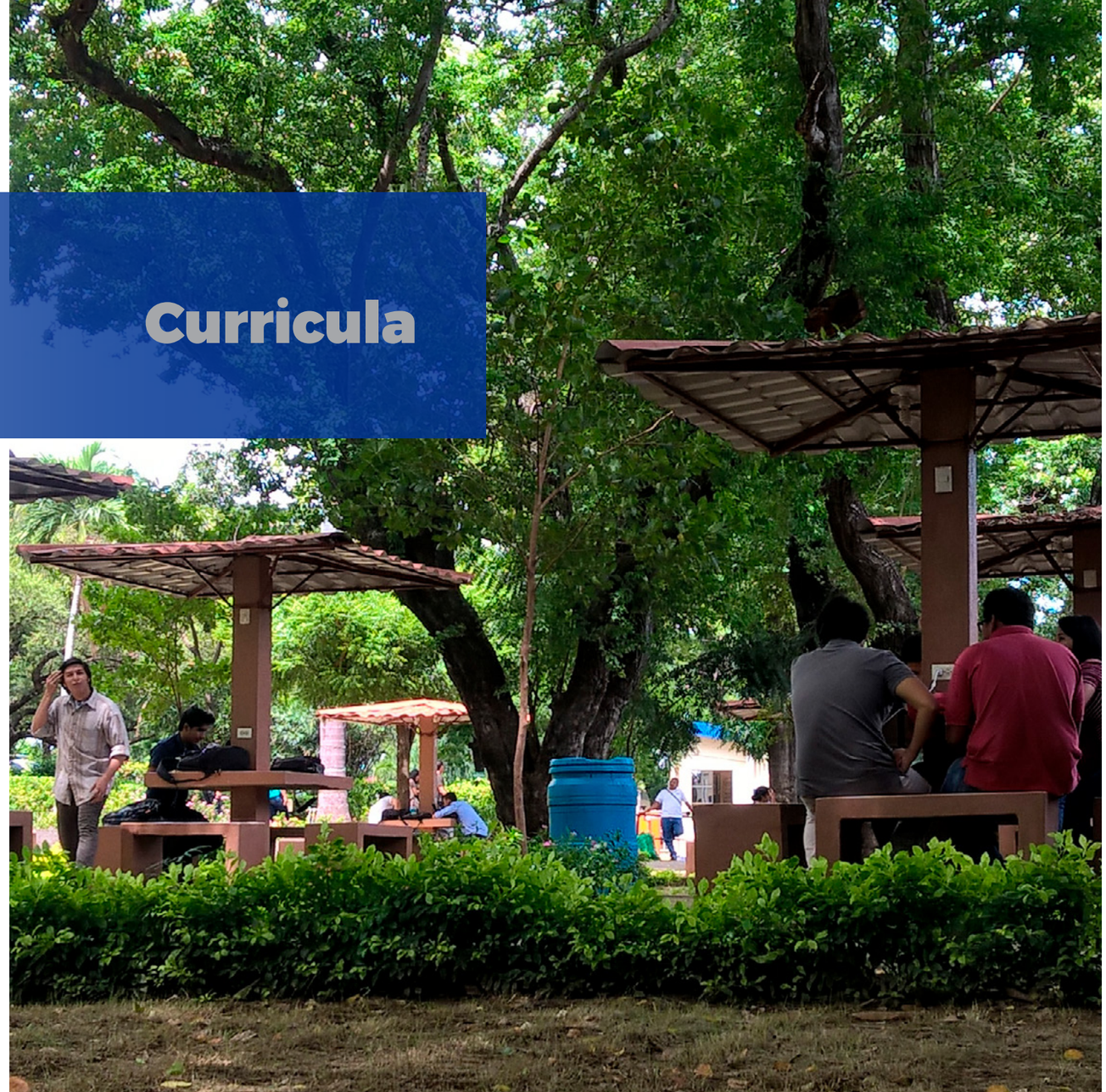
INDUSTRIAL ENGINEERING

Curricula



I Semester

- Mathematic I
- Descriptive Geometry
- English I
- Introduction to Computer
- Introduction to Industrial Engineering
- Technical Writing
- Peace Culture and Human Rights

II Semester

- Mathematic II
- English II
- History of Central America and Nicaragua
- Philosophy
- Physics I
- Computarized Technical Drawing

III Semester

- Mathematic III
- Physics II
- General Mechanic
- General Chemistry
- Technical Drawing II
- Programming I

IV Semester

- Mathematic IV
- Physics III
- Programming II
- Statistics I
- Economy
- Metallurgy and Technological Mechanic

V Semester

- Machinery, Mechanism and its Maintenance
- Numerical Methods
- Statistics II
- Research Methodology
- Work Study I
- Ergonomics, Industrial Safety and Hygiene

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INDUSTRIAL ENGINEERING

VI Semester

- Basic Accounting and Costs
- Operational Research I
- Work Study II
- Manufacturing Processes
- Thermodynamic
- Electrotechnology

VII Semester

- Sociology
- Management Accounting
- Productive Systems Design
- Human Resource Management
- Operational Research II
- Simulation
- Marketing

VIII Semester

- Planning and Production Control I
- Quality Statistic Control
- System Engineering
- Economic Engineering
- Technology and Environment
- Optional I (Microeconomy) or Advanced Marketing Techniques

Curricula

IX Semester

- Planning and Production Control II
- Industrial Maintenance Management
- Total Quality Management
- Project Formulation and Assessment
- Optional II (Macroeconomy) or Service Engineering
- Optional III (Project Management) or Engineering Credibility

X Semester

- Monography

PEDRO ARÁUZ PALACIOS CAMPUS

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Managua, Nicaragua.

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(505) 2249-6437

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General Secretary
Communication Division

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