



Faculty of
Electrotechnics
and Computing

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Telecommunication ENGINEERING

PROFILE OF GRADUATION
AND CURRICULA

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Knowledge

OF A TELECOMMUNICATION ENGINEER

- Master fundamentals, methods, techniques, and procedures to analyze, plan, and develop telecommunication in order to be used for different services. It also includes legal aspects and policies of telecommunications.
- Principles, methods, and tools of engineering's basic and specific sciences, as well as its different topics (radio telecommunication, line telecommunication, telematic systems and electronic systems).
- Knowledgeable of technologies in which modern networks of mobile and fixed telecommunications are based on.
- Understand essential economic principles as well as formulation of projects related to Telecommunication Engineering.
- Understand and manage fundamentals and applications of basic, humanistic sciences considering its contribution to the solution of problems in its area of expertise.

Skills OF A TELECOMMUNICATIONS ENGINEER

- Use telecommunication services appropriately in order to apply them intensively. Some of the examples are: market, electronic government. Telemedicine, tele education, and private institutions in production and service area.
- Design and evaluate telecommunicate systems considering standards policies and laws that rule telecommunication field.
- Diagnose and design solutions in order to solve problems in its area of expertise.
- Design, administrate and assess tele communicative projects.
- Research, innovate and adapt technology in order to develop telecommunications according to the country's needs.
- Make decision about requirements and specifications for the design, installation, maintenance of the systems and telecommunicate equipment.
- Communicate through oral expression as well as in a written way using language rules and informative and communicative technologies.
- Use specialized software in their professional development.





Attitudes OF A TELECOMMUNICATION ENGINEER

- Own moral and ethical values.
- Present responsible and committed attitude with the development of the environment and society.
- Face new challenges that emerge with technological advances.
- Show responsibility with society and the environment and is knowledgeable of how important policies, regulations and laws are in telecommunications.
- Show interest in individual and team work by assuming values and principles in the institution's educational model and the profile of the major.
- Grab hygiene and safety regulations related to telecommunications.
- Show an entrepreneurial spirit before professional problems and the change in social and personal environment.
- Commits with professional development, long lasting learning and achievement of goals.

I Semester

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

II Semester

- Mathematic II
- Physics I
- English II
- Programming I
- Economical and Financial Analysis for Engineers
- Technical Drawing

III Semester

- Mathematic III
- Physics II
- Technology and Environment
- Programming II
- Electrical Circuits I
- Sociology

IV Semester

- Mathematic IV
- Statistics I
- Electronic Analogy I
- Electronic Digital I
- Electrical Circuits II

V Semester

- Systems and Signals
- Electrodynamics
- Electronic Analogy II
- Electronic Digital II
- Operational Systems and Networks

Curricula





Curricula

VI Semester

- Digital Treatment of Signals
- Transmission Lines
- Maintenance and Industrial Safety
- Computer Machines I
- Communication Systems I

VII Semester

- Control Systems
- Antennas and Propagation
- Administration and Business Economy for Engineers
- Computer Networking I
- Communication Systems II

VIII Semester

- Radio Transmission
- Microwave Systems
- Project Management of Engineering
- Computer Networking II
- Wireless Communication

IX Semester

- Radio Receivers
- Peace Culture and Human Rights
- Telephone Networks I
- Network Management
- Optical Communication Systems

X Semester

- Research Methodology for Engineering and Technology
- Television Systems
- Telephone Lines II
- Telecommunication Industry Regulations
- Philosophy



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General Secretary
Communication Division

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