



Faculty of
**Mechanical Engineering
and Production Sciences**

Industrial Engineering

RPC-SE-09-No.086-2020

espol[®]

Bachelor of Science in Industrial Engineering



Applicant Profile

Students with a desire to improve processes and lead manufacturing and service organizations, a strong commitment to quality and sustainable productivity, a proactive mindset, strong analytical and critical thinking skills, and an interest in driving digital transformation across industries are strong candidates for Industrial Engineering.



Employability

Upon graduation, students may pursue professional opportunities in areas such as:

- ▶ Process reengineering
- ▶ Sustainable supply chains
- ▶ Transportation and distribution management
- ▶ Demand and supply planning
- ▶ Continuous process improvement
- ▶ Production planning and control
- ▶ Industrial hygiene and safety
- ▶ Consulting and advisory services
- ▶ Research centers or research groups focused on modeling and data analysis



Professional Skills

After four and a half years of study, students will be prepared to:

- ▶ Build successful careers through the effective and ethical practice of Industrial Engineering, demonstrating a commitment to excellence
- ▶ Develop innovative solutions to improve manufacturing and service processes, contributing to organizational competitiveness
- ▶ Assume leadership roles of increasing responsibility and impact throughout their professional careers
- ▶ Contribute to the sustainable and equitable development of their communities and society



In fact...

Industrial Engineering is the branch of engineering focused on improving the use of resources involved in the creation of high-quality products and services.



LEARN MORE



Curriculum

N 100 - I	PROBLEM SOLVING	SINGLE VARIABLE CALCULUS	PHYSICS: MECHANICS	GENERAL CHEMISTRY	ARTS, SPORTS AND LANGUAGES ELECTIVE COURSES	ENGLISH I
N 100 - II	PROGRAMMING FUNDAMENTALS	VECTOR CALCULUS	PHYSICS: ELECTRICITY AND MAGNETISM	LINEAR ALGEBRA	HUMANITIES ELECTIVE COURSES	ENGLISH II
N 200 - I	INTRODUCTION TO INDUSTRIAL ENGINEERING	STATISTICS I	VECTOR MECHANICS	INTRODUCTION TO ECONOMICS	COMMUNICATION	ENGLISH III
N 200 - II	METHODS ENGINEERING	STATISTICS II	THERMOFLUIDS	OPERATIONS RESEARCH		ENGLISH IV
N 300 - I	QUALITY ENGINEERING	FORECASTING AND INVENTORY CONTROL	INDUSTRIAL PROCESSES	PRODUCT VALUE ANALYSIS	ENGINEERING DRAWING	ENGLISH V
N 300 - II	OCCUPATIONAL HEALTH AND SAFETY	ADVANCED CONTINUOUS IMPROVEMENT	PRODUCTION PLANNING	STOCHASTIC MODELS FOR MANUFACTURING AND SERVICES	SUSTAINABILITY SCIENCE	
N 400 - I	INTEGER PROGRAMMING	LOGISTICS AND CUSTOMER SERVICE	PRODUCTION CONTROL SYSTEMS	SIMULATION	MATHEMATICS FOR FINANCE	COMMUNITY SERVICE INTERNSHIPS
N 400 - II	INDUSTRIAL ANALYTICS	SUSTAINABLE SUPPLY CHAIN MANAGEMENT	ORGANIZATIONAL BEHAVIOUR	FACILITY DESIGN		SELECTED ELECTIVE COURSE
N 500 - I		ENTREPRENEURSHIP AND INNOVATION			INDUSTRIAL ENGINEERING CAPSTONE COURSE	SELECTED ELECTIVE COURSE
						PRE -PROFESSIONAL BUSINESS INTERNSHIPS



Accredited Program



Engineering
Accreditation
Commission



Did you know?

Industrial Engineers have the ability to design, manage, and control production systems, quality systems, industrial safety programs, and supply chains. They also apply operations research to optimize processes in manufacturing and service environments.

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International Relations

Through its External Relations Office, ESPOL promotes and develops partnerships with international cooperation organizations, academic institutions, and research centers. These partnerships create mobility opportunities for the entire ESPOL community and contribute to the excellence that distinguishes the institution.

More than 226 international agreements allow students to participate in experiences abroad, including semester or year-long exchange programs, pre-professional internships, research placements, and participation in conferences, competitions, and other academic activities.

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universities
around the world

