



Faculty of
**Mechanical Engineering
and Production Sciences**

Mechanical Engineering

RPC-SO-15-No.309-2020

espol[®]

Bachelor of Science in Mechanical Engineering



Applicant Profile

Students with a desire to transform industry through technological innovation, a strong commitment to efficiency and productive development, a proactive and persevering mindset, and an interest in the design of machines and thermal systems are ideal candidates for Mechanical Engineering.



Professional Skills

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

- ▶ Design mechanical or thermal systems, components, and processes that meet specific industry needs
- ▶ Solve complex industrial problems through the application of scientific and engineering principles
- ▶ Optimize industrial designs, systems, and processes to improve operational performance
- ▶ Manage the installation, operation, and maintenance of machinery, industrial plants, HVAC systems, and power generation systems



Employability

Mechanical Engineers may work in any industry involving mechanical and thermal systems. They design, evaluate, install, and maintain machinery and production systems. They also perform administrative and executive functions at various organizational levels, both within established organizations and through independent professional practice or entrepreneurial ventures.



In fact...

Mechanical Engineers work across virtually all industries and are considered versatile professionals whose expertise is essential in areas such as design, production, manufacturing, and maintenance.



LEARN MORE



Curriculum

N 100 - I		SINGLE VARIABLE CALCULUS	PHYSICS: MECHANICS	GENERAL CHEMISTRY	PROBLEM SOLVING	ARTS, SPORTS AND LANGUAGES ELECTIVE COURSES	ENGLISH I
N 100 - II	LINEAR ALGEBRA	VECTOR CALCULUS	PHYSICS: ELECTRICITY AND MAGNETISM		INTRODUCTION TO MECHANICAL ENGINEERING	ENGINEERING DRAWING	ENGLISH II
N 200 - I	PROGRAMMING FUNDAMENTALS	DIFFERENTIAL EQUATIONS	COMMUNICATION		MATERIALS SCIENCE AND ENGINEERING	MECHANICAL WORKSHOP	ENGLISH III
N 200 - II	STATISTICS	ADVANCED MATHEMATICS	THERMODYNAMICS	STATICS	HUMANITIES ELECTIVE COURSES		ENGLISH IV
N 300 - I	ENTREPRENEURSHIP AND INNOVATION		FLUID MECHANICS	SOLID MECHANICS	DYNAMICS		ENGLISH V
N 300 - II	SUSTAINABILITY SCIENCE	BASIC ELECTRICITY	HEAT TRANSFER	MECHANICAL DESIGN	MECHANICS OF MACHINERY		
N 400 - I		ELECTRONICS	TURBOMACHINERY AND POWER PLANTS	MECHANICAL SYSTEMS DESIGN	INDUSTRIAL MAINTENANCE	MACHINING PROCESSES	COMMUNITY SERVICE INTERSHIPS
N 400 - II		INSTRUMENTATION	THERMOFLUIDS SYSTEMS DESIGN	INDUSTRIAL PROJECTS	APPLIED CONTROL SYSTEMS	MANUFACTURING PROCESSES	SELECTED ELECTIVE COURSE
N 500 - I						MECHANICAL ENGINEERING CAPSTONE COURSE	SELECTED ELECTIVE COURSE
							PRE-PROFESSIONAL BUSINESS INTERSHIPS



Accredited Program



Engineering
Accreditation
Commission



Did you know?

Mechanical Engineers provide solutions through the design of components, mechanical and thermal systems, and manufacturing processes. They manage the installation and maintenance of machinery, industrial plants, HVAC systems, and power generation systems.

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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

