

## Equipment for Industrial Processes

### 1. Admission Requirements:

#### • Prerequisites:

- Successful completion of high school studies and obtaining a baccalaureate degree or equivalent.
- Proficiency in the Romanian language demonstrated by either a valid certificate or completion of a Romanian Preparatory year, which can be undertaken at our university or another accredited institution prior to submitting the application.
- Foreigners must obtain from the Ministry of Education the recognition of their studies before enrolling in the admission process.

#### • Entrance Exams:

- The admission average of registered candidates is made up of: average of the baccalaureate exam - weight 100%.
- Admission to undergraduate studies is strictly in descending order of the general admission averages obtained by the candidates respecting the capacity of tuition for each study program

### 2. Degree Levels:

- Bachelor's Degree: 4-year program.

### 3. Curriculum:

#### • Core Courses:

**Mandatory courses** that all students in the program must take:

- Mathematical Analysis
- Linear Algebra and Analytical Geometry
- Numerical Methods
- Physics
- Technical Chemistry
- Mechanics
- Resistance of Materials
- Mechanisms
- Technical Drawing
- Materials Science
- Applied Informatics
- Thermotechnics and Thermal Machines
- Fluid Mechanics and Hydraulic Machines
- Tolerances and Dimensional Control
- Applied Electronics
- Computer Programming and Programming Languages

- Electrical Engineering and Machines
- Electric Drives
- Machine Parts.

- **Electives:**

- Static Process Equipment
- Machines for Process Industries
- 3D Modelling of Mechanical Structures (SOLIDWORKS)
- Computer-Aided Design (CATIA)
- Maintenance and Reliability of Installations
- Anti-Vibration Protection of Process Equipment
- Manufacturing of Process Equipment
- Depollution Equipment and Installations
- Ventilation and Air Conditioning Installations
- Equipment and Installations for the Prevention of Environmental Pollution
- Machine Tools and Machining
- Tribology
- Automation
- Mechanical Vibrations
- Hydraulic and Pneumatic Drives
- Integrated Dimensional Control
- Refrigeration Plants
- Finite Element Method
- Manufacturing Technology.

- **Major/Concentration:**

- The primary mission of the study program is to advance both teaching and scientific research. This program is strategically aligned with the goal of enhancing university education within the realm of mechanical engineering. It provides students with a comprehensive understanding of the design, operation, and management of equipment used in industrial settings. This interdisciplinary program combines elements of mechanical engineering, materials science, and industrial management to prepare students for careers related to the development and maintenance of industrial processes and systems. Additionally, it aims to foster the growth of research, design, technological innovation, and managerial development activities within the broader field of mechanical engineering.

- **General Education Requirements:**

- Successful completion of the mandatory courses, seminars and labs, completion of the three internships and the bachelor thesis.

4.	<b>Credits:</b>
	<ul style="list-style-type: none"> <li>Each semester carries a weight of 30 ECTS, with a total of 240 ECTS required for graduation.</li> </ul>
5.	<b>Internships and Practical Experience:</b>
	<ul style="list-style-type: none"> <li>Students have the opportunity to carry out their internship in companies and enterprises in Dambovită county and its surroundings, as well as in the teaching and research laboratories of the faculty or the Institute for Scientific and Multidisciplinary Research.</li> <li>II - Internship 1: 3 weeks x 30 hours = 90 hours.</li> <li>III - Internship 2: 3 weeks x 30 hours = 90 hours.</li> <li>IV - Internship for Bachelor's Thesis Project Development: 2 weeks x 30 hours = 60 hours.</li> </ul>
6.	<b>Research Requirements:</b>
	<ul style="list-style-type: none"> <li>In order to present the bachelor's thesis, students are required to accrue the necessary number of credits (240 credits) and then prepare and deliver the bachelor's thesis.</li> </ul>
7.	<b>Academic Advising:</b>
	<ul style="list-style-type: none"> <li>A supervising teacher is assigned to each year of study and partially assisted activities are coordinated by supervising teachers.</li> <li>The bachelor thesis is also supervised by a scientific supervisor.</li> </ul>
8.	<b>Extracurricular Activities:</b>
	<ul style="list-style-type: none"> <li>Students have the option to participate in clubs, organizations, or extracurricular activities related to their field of study or personal interests.</li> </ul>
9.	<b>Examinations:</b>
	<ul style="list-style-type: none"> <li>The courses will span 14 weeks during each semester and conclude with oral, written, or practical examinations. Successful completion of these exams is mandatory to earn study credits.</li> </ul>
10.	<b>Thesis Defense:</b>
	<p>The prerequisites for presenting a bachelor thesis before a committee include:</p> <ul style="list-style-type: none"> <li>Attainment of 240 ECTS credits throughout the program.</li> <li>Obtaining the approval of the scientific supervisor to present the bachelor thesis.</li> <li>Credits for Practical Diploma Project Elaboration: 2 ECTS.</li> <li>Credits for Elaboration of the Diploma Project: 4 ECTS.</li> </ul>
11.	<b>Graduation Requirements:</b>
	<ul style="list-style-type: none"> <li>Graduation necessitates the fulfilment of all program requirements, encompassing the completion of the required credit hours and the successful completion of the bachelor thesis.</li> </ul>
12.	<b>Degree Awarding:</b>

- Bachelor's Degree (Engineer) in Equipment for Industrial Processes.