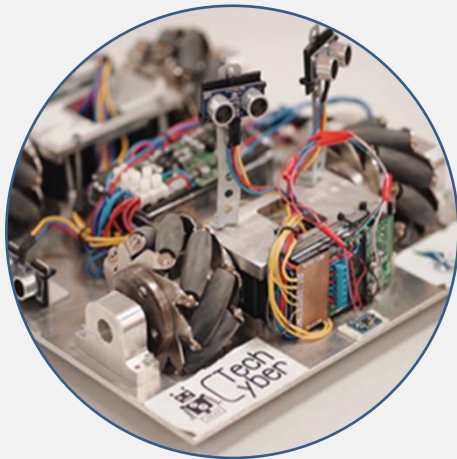




UNIVERSITATEA
LUCIAN BLAGA
— DIN SIBIU —

FACULTATEA DE
INGINERIE



Bachelor programme information

Established in: 2008

Form of study: full-time

Duration of study: 4 years

Academic degree: engineer

Language of instruction: Romanian/English

Specific programme elements

“Mechatronics is a major objective for European research and for educational programmes”;

One of the main research directions concerns the actioning and flexible automation of mechatronic systems, by developing automation systems based on programmable controllers and microcontrollers;

Another research direction is related to the design of intelligent modular motion control systems;

The use of industrial robots also represents one of the research directions of the study programme;

The students of the “Mechatronics” specialisation achieved excellent results at internal and international mobile robot competitions.

The goal

The goal of the “Mechatronics” specialisation is to prepare engineers specialised in designing, manufacturing and using mechatronic products. The graduates of this programme are system engineers, with skills both in the mechanic, and in the electronic and computer fields. Great attention is given to practical training, to acquiring practical skills by working with mechatronic equipment.

Objectives

- Computer aided designing and engineering analysing of mechanic systems and structures in mechatronic systems;
- Studying the principles of automation systems and of artificial intelligence systems;
- Understanding and designing electrical, hydraulic and pneumatic actioning systems in mechatronic systems;
- Studying, understanding and designing automation systems based on programmable controllers and microcontrollers;
- Integrating knowledge from the mechanic, electric, electronic, automation and automatic levelling fields, in order to make mechatronic products.

Professional competences

- Applying the fundamental general technical and expert knowledge in order to solve technical problems specific to the field of Mechatronics and Robotics;
- Developing and using schemes, function structure diagrams, graphic representation of technical documentation specific to the field of Mechatronics and Robotics;
- Creating local automation applications in mechatronics and robotics, using partial typified and non-typified components and partial assemblies, as well as CAD resources;
- Aided designing, creating and providing maintenance for mechatronic systems by integrating component subsystems (mechanic, electronic, optical, software etc.).

Transversal competences

Performing professional tasks by identifying the objectives that need to be accomplished, the available resources, the conditions for completing these, and the corresponding deadlines.

Responsibly carrying out multidisciplinary tasks in a team, by exercising roles on various levels of hierarchy.

Identifying the need for continuous training and efficiently using informational sources and communication resources and assisted vocational training (software applications, data bases, online courses etc.).

Development opportunities

The strong development of the industrial area of Sibiu, and of those adjacent to it, created the premises for necessity and opportunity to prepare specialists in the mechatronic field. The multitude of economic agents, such as those in the production of mechatronic components in the automotive industry, offers professional development opportunities for the graduates of this study programme.

The graduates of the “Mechatronics” specialisation can attend the courses of all the master programmes provided by the Faculty of Engineering.