

**FRAMEWORK INTERNSHIP PROGRAM FOR THE FIELD OF
STUDY
MATHEMATICS IN TECHNOLOGY general academic profile
Semester 6**

The workplace hosting the student for professional internship appoints a company supervisor to whom the student-intern will be subordinate. Internship completion means that the student has achieved the following learning outcomes based on knowledge, skills and relevant competences:

I. The degree of achievement of learning outcomes in the field of KNOWLEDGE:

1. He/she has practice-based knowledge in the field of mathematics in technology, with emphasis on major subjects.
2. He/she has extended and in-depth knowledge of various areas of higher mathematics and detailed knowledge of the applications of mathematical methods and tools in engineering and technical sciences.
3. He/she has structured and theory-based knowledge in the field of technical sciences, including electrical engineering and electronics.
4. He/she has an extended and in-depth knowledge of physics.
5. He/she has a structured and theory-based knowledge of computer science, including numerical methods; is familiar with at least one software package or programming language.
6. He/she has structured knowledge of taking measurements, acquiring, processing and analyzing data or signals.
7. He/she has structured and theory-based knowledge in the area of design, construction, operation and use of devices, machines, systems, etc.; knows and understands the processes occurring in their life cycle.
8. He/she knows and understands engineering technologies and is familiar with the latest development trends in the field of study.
9. He/she has basic knowledge of the principles of ergonomics, occupational health and safety and hazards occurring in industry, etc.

II. The degree of achievement of learning outcomes in the field of KNOWLEDGE:

1. He/she knows how to use knowledge in the field of mathematics in technology with emphasis on major subjects.
2. He/she knows how to use knowledge in higher mathematics.
3. He/she knows how to use various mathematical tools and methods, including numerical ones, to solve engineering problems.
4. He/she can develop an algorithm for solving a simple engineering task and implement and test it in a selected programming environment.
5. He/she can formulate an engineering problem, carry out detailed examination using analytical, simulation, or experimental methods, interpret the obtained results and draw conclusions.
6. He/she knows how to make use of equipment, tools, etc. in accordance with general requirements and technical documentation; knows how to apply occupational health and safety rules.
7. He/she knows how to use the acquired knowledge as well as appropriate methods and tools to solve typical engineering tasks.
8. He/she can design, build and test a simple device, object, system, etc.
9. He/she can prepare documentation or deliver a speech along with a multimedia presentation related to the implementation of an engineering task using specialized terminology.

10. He/she can use a foreign language to a degree sufficient to communicate, as well as to read and understand mathematical texts, technical documentation and similar documents.
11. He/she knows how to work individually and in a team and interact with other people; is able to estimate the time needed to complete the task; is able to develop and implement a work schedule ensuring that the deadline is met.
12. He/she knows how to independently plan and carry out self-study in order to improve and update his/her competences.

III. The degree of achievement of learning outcomes in the field of SOCIAL COMPETENCES:

1. He/she is aware of the level of his/her knowledge in relation to the research conducted in exact and natural sciences as well as in engineering and technical sciences.
2. He/she is aware of the necessity of deepening and expanding knowledge to solve newly emerging technical problems.
3. He/she can think and act in a creative and entrepreneurial way, taking into account safety, ergonomics of work and its economic aspects, is aware of the need to initiate action for the public interest and of responsibility for the results of the team's work as well as its individual participants.
4. He/she understands and appreciates the importance of intellectual honesty in his/her own and other people's actions; is willing to demonstrate integrity, impartiality, professionalism and ethical attitude.