
diplomirani inženir strojništva/diplomirana inženirka strojništva

Selected qualifications

Name of qualification	diplomirani inženir strojništva/diplomirana inženirka strojništva
Translated title (no legal status)	Bachelor of Applied Science in mechanical engineering
Type of qualification	Diploma prve stopnje (VS)
Category of qualification	Izobrazba
Type of education	Professional bachelor's education
Duration	3 years
Credits	180 credits
ISCED field	Field Tehnika, proizvodne tehnologije in gradbeništvo

ISCED subfield

subfield metalurgija, strojništvo in kovinarstvo

Qualification level

SQF 7
EQF 6
First level

Learning outcomes

The qualification holder will be able to:

General competences:

- ability to think critically, analytically and synthetically,
- ability to transfer acquired knowledge into practice,
- ability to define, understand and creatively solve professional problems,
- ability to communicate effectively in writing and orally in the profession, also in a foreign language, and to impart knowledge to others,
- ability to evaluate one's own knowledge and achievements and to deepen and disseminate one's knowledge,
- ability to adapt to new situations in order to improve quality,
- information management skills,
- compliance with safety, functional, economic and environmental principles,
- ability to make professional decisions and take responsibility for them,
- ability for independent and team work.

Subject-specific competences:

- Ability to independently solve technical problems in mechanics that arise in the construction and design of new products.
- Understanding the basics of electrical engineering, microelectronics, embedded systems and performing basic measurements of electrical quantities and engineering work with electronic assemblies.
- Knowledge of basic classical and especially modern materials, their mechanical, chemical and physical properties, the possibilities of their processing and treatment.
- Knowledge of the basics of cutting, transformation, addition processes, transformation tools, assembly tools and the ability to independently analyze problems using professional literature and computer systems.
- Understanding the basic economic categories, principles and rules related to the operation of the company and knowledge of depreciation methods, calculation of costs and sales prices, assessing the business performance of the company and the economic viability of investments.
- Ability to use knowledge for the production of technical documentation from the point of view of knowledge of standards for technical drawing, presentation of objects in space and understanding the use of modern IT technologies for the production of technical documentation.
- Mastering correct oral and written communication and the ability to communicate in the technical field in Slovene and a foreign language supported by modern ICT tools.
- Theoretical and practical knowledge of design and methods of calculations of building blocks of machines and devices and independent solution of technical problems from building blocks of machines and devices in innovative design, development and design of products.
- Identifying the basic laws of the project, describing the project environment, project planning, defining roles within the project, presenting the role of the project manager, communicating within

the project team and with project stakeholders, project monitoring and project reporting.

- Ability to use advanced methods and tools in the innovative design of products and devices and their impact on the product life cycle.
- Knowledge of energy conversion and use technology and ability to operate power plants or design small systems.
- Ability to make a value analysis of workflows and products, analysis of work time, evaluate work and implement rationalization in the company.
- Knowledge of basic principles and methods of construction with regard to reliability, maintenance and recycling.
- Knowledge of standardization, comprehensive product quality assurance, product reliability assurance, production testing procedures, quality improvement methods, basic concepts of metrology and good metrological practice, ability to predict reliability and assess measurement uncertainty.
- Knowledge of technologies that enable the rapid production of improved prototypes and to reduce costs and increase competitiveness in the development of new or existing products with rapid production technologies.
- Ability to effectively design the product, organize the development procedure and select appropriate materials and technology for product design.
- Ability to take an independent approach to the innovative design of machines and devices.
- Ability to design mechatronic systems, plan the maintenance of control systems, detect, locate and troubleshoot systems.
- Knowledge of fluid systems systems and auxiliary systems

Assessment and completion

Students' knowledge is assessed by means of practical exercises and seminar papers, and also via products, projects, performances, services, etc. and by examinations. Examination performance is graded as follows: 10 (excellent); 9 (very good: above-average knowledge but with some mistakes); 8 (very good: solid results); 7 (good); 6 (adequate: knowledge satisfies minimum criteria); 5-1 (inadequate). In order to pass an examination, a candidate must achieve a grade between adequate (6) and excellent (10).

Progression

Students progress to the second year if they collect at least 50 ECTS with the completed obligations of the first year and successfully pass the exams in the following subjects: Engineering Mathematics, Engineering Mechanics 1 and Modern Materials.

Student progress to the third year if they complete all obligations of the first year and if they collect at least 50 ECTS (a total of 110 ECTS from first and second year) and successfully pass exams in the subjects: Engineering Mechanics 2, Machine Builders and devices and Innovative design.

Transitions

Second-cycle master's study programmes (SQF level 8)

Condition for obtaining certificate

Students complete all obligations and complete the study programme Innovative Product Development, when they complete all obligations of the study programme and collect at least 180 credit points.

Obligations include:

- completed exercises,
- completed required seminar and other written assignments,
- a positive assessment of the practical training report,
- all successfully passed examinations,
- prepares and successfully defends the project final task

Awarding body

Visoka šola Ravne na Koroškem

URL

<https://visjasolaravne.si/>
