

# Magister inženir stavbarstva/magistrica inženirka stavbarstva

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## Selected qualifications

Name of qualification	Magister inženir stavbarstva/magistrica inženirka stavbarstva
Translated title (no legal status)	Master of Science of Civil Engineering
Type of qualification	Diploma druge stopnje
Category of qualification	Izobrazba
Type of education	Master's education
Duration	2 years
Credits	120 credits

## Admission requirements

- A completed first-cycle study programme in architecture; or
- a completed first-cycle study programme in another field, if prior to enrolment the candidate has completed course units essential for further studies, totalling 10 to 60 credits; or
- a completed professional higher education programme in Civil Engineering before the introduction of the Bologna programmes; or
- a completed professional higher education programme under the former programme in another field, if prior to enrolment the candidate has completed course units essential for further studies, consisting of 10 to 60 credits.

## ISCED field

Field  
Tehnika, proizvodne tehnologije in gradbeništvo

## ISCED subfield

subfield arhitektura, prostorsko načrtovanje in urbanizem

## Qualification level

SQF 8  
EQF 7  
Second level

## Learning outcomes

The qualification holder will be able to:

(general competences)

- demonstrate mastery of basic knowledge in the fields of mathematics, building engineering physics and methodology of engineering planning,
- demonstrate proficient knowledge and understanding of these fields in connection with relevant engineering knowledge,
- address problems taking into account influences from complementary fields in accordance with their level of knowledge and understanding,
- identify problems and their structure, take into account different methods and select them,
- use and select available instruments at the theoretical level, use computer software and experiments,
- identify cultural, ecological and economic frameworks in connection with health, social and safety issues,
- autonomously carry out projects for the planning and implementation of protective structures and supporting structures,
- cooperate with engineers and others,
- apply knowledge from the field of engineering analysis to planning,
- integrate research and development results from related fields of architecture, mechanical engineering and electrical engineering with the planning and realisation of buildings and their use,
- use suitable methods for learning, planning, calculating, analysis and the processing and presentation of data, such as the use of literature, the planning and implementation of study

- projects and investigations, interpretation of data and computer simulation,
- keep abreast of relevant legislation,
- apply and monitor the development of technical regulations and standards,
- apply theoretical knowledge and participate in its transfer to implementation projects at the level of planning and implementation, physical practicability, economic value and financial feasibility,
- develop social competences that include, in particular, the field of communications,

(subject-specific competences)

- demonstrate mastery of basic knowledge in the fields of applied geometry and building engineering physics,
- demonstrate mastery of specific knowledge in the fields that represent the specific basis for the construction profession: construction materials, advanced construction materials, building engineering physics, systems analysis, informatics for construction and architecture,
- demonstrate mastery of professional fields covering the planning, implementation, maintenance and removal of buildings: design of living and working space, supporting structures, protective structures, project management and related information and communications technologies, and their connection with architectural activity,
- apply basic, specific and professional knowledge to the resolution of engineering problems in complex buildings in the field of building engineering physics, rational energy use, sound and noise and fire protection,
- apply and select special analytical methods and tools from the field of building engineering physics,
- carry out critical, comparative analysis of problems that arise in relation to the planning, implementation, use and reciprocal effects of supporting and protective structures of buildings, installations and control systems,
- apply and understand relevant and topical scientific bases from the field of construction at both the national and international levels,
- keep abreast of the development of new procedures, materials and technologies in the field of construction and complementary fields at the national and international level,
- demonstrate understanding of the need to follow development and keep abreast of national and international research achievements in the fields of building engineering physics, ensuring a high-quality living environment, efficient energy use and renewable energy sources,
- analyse the constituent elements of a building: supporting structure, thermal and acoustic insulation, waterproofing, psychophysical and fire protection at the level of the building and its enhancement, in particular in the context of dynamic systems,
- conceptualise problems and select and apply suitable methodological and software tools to address them,
- resolve problems of protection and control systems in buildings in accordance with engineering design methodology,
- participate in the development of methods for the analysis of energy efficiency, acoustics and noise control, quality of the living environment and control systems,
- demonstrate autonomous and critical familiarity with current research achievements and apply them to the addressing of specific engineering problems from the field of building engineering physics,
- transfer knowledge to co-workers,
- autonomously draw up plans in accordance with competences under the Construction Act (ZGO),
- lead development,
- apply methods for conceptual planning at the level of protective structures,
- integrate with other professional fields, in particular with the architecture, installations and control systems, and plan their implementation,
- participate in the manufacturing-consumer socio-ecological circle using methodological instruments (system analysis) acquired in the field of engineering analysis and engineering design,
- apply specific research methods,
- identify problem areas and fields holistically, taking into account sustainable, environmentally

- friendly, ecological and economic aspects,
- find suitable sources in current professional and scholarly publications,
- demonstrate familiarity with the philosophy of engineering design,
- acquire specific experience at the level of practical, theoretical and engineering activities,
- test and develop engineering methods,
- demonstrate familiarity with important scientific discussions in the field of building engineering physics,
- autonomously organise, manage and assess,
- lead groups comprising members from different fields and with different qualifications in the field of the planning, construction and management of buildings in practice,
- assume responsibility in the management and administration of projects.

## Assessment and completion

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 may enrol in the next year if by the end of the academic year they have completed course units prescribed by syllabuses consisting of at least 45 ECTS credits.

## Transitions

Third-cycle doctoral study programmes (SQF level 10)

## Condition for obtaining certificate

In order to complete the programme, students must complete all prescribed course units, for a total of 120 ECTS credits, including practical training and the submission and defence of a master's thesis.

## Awarding body

University of Ljubljana, Faculty of Civil and Geodetic Engineering

URL

