Magister inženir telekomunikacij/ magistrica inženirka telekomunikacij

Selected qualifications

Name of qualification

Magister inženir telekomunikacij/ magistrica inženirka telekomunikacij

Translated title (no legal status)

Master of Science in telecommunications 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

Admission requirements Enrolment in the second-cycle programme Telecommunications is open to candidates who have completed:
• a first-cycle study programme in a relevant field: telecommunications (5233), electricity and energy (522), electronics and automation (523), industrial engineering/electrical engineering (522), computer science (481);
• a first-cycle study programme in another science or engineering field: physical science (broad programmes – 440), physics and astronomy (441), mathematics and statistics (46), engineering and engineering trades (broad programmes – mechatronics 520), mechanics and metalwork (521), chemical technology and process engineering (524), building and civil engineering (582), computer use (482) – if prior to enrolment in the programme the candidate has completed course units essential for further study, totalling 20 ECTS credits. These course units may be completed during a first-cycle programme, during supplementary study programmes or by passing differential examinations before enrolment in the programme. Candidates must complete the following course units: Introduction to telecommunications (6 ECTS credits), Programming for telecommunications (8 ECTS credits), Basics of communications networks (6 ECTS credits);
• a professional higher education programme, adopted before 11 June 2004, in a relevant field: telecommunications (5233), electricity and energy (522), electronics and automation (523), computer science (481);
• a completed professional higher education programme, adopted before 11 June 2004, in another field: physical science (broad programmes – 440), physics and astronomy (441), mathematics and statistics (46), mechanics and metalwork (521), chemical technology and process engineering (524), building and civil engineering (582), computer use (482) – if prior to enrolment in the programme the candidate has completed course units essential for further study, totalling 20 ECTS credits. These course units may be completed during a first-cycle programme, during supplemental study programmes or by passing differential examinations before enrolment in the programme. Candidates must complete the following course units: Introduction to telecommunications (6 ECTS credits), Programming for telecommunications (8 ECTS credits), Basics of communications networks (6 ECTS credits);
• an academic higher education programme, adopted before 11 June 2004, in a relevant field: telecommunications (5233). As a rule 60 ECTS credits are recognised for such candidates within the study programme and candidates may enrol in the second year of the programme if with these recognised course units they meet the conditions for transition laid down by an accredited study programme;
• a professional higher education programme, adopted before 11 June 2004, in another science or engineering field: electricity and energy (522), electronics and automation (523) with the exception of telecommunications, computer science (481). As a rule, 30 ECTS credits are recognised for such candidates within the study programme, and candidates may enrol in the corresponding year of the programme;
• a professional higher education programme, adopted before 11 June 2004, and a programme leading to a specialisation, adopted before 11 June 2004, in a relevant field: telecommunications (5233). As a rule 60 ECTS credits are recognised for such candidates within the study programme and candidates may enrol in the second year of the programme if with these recognised course units they meet the conditions for transition laid down by an accredited study programme;
• a professional higher education programme, adopted before 11 June 2004, and a programme leading to a specialisation, adopted before 11 June 2004, in another field: electricity and energy (522), electronics and automation (523) with the exception of telecommunications, computer science (481). As a rule, 30 ECTS credits are recognised for such candidates within the study programme, and candidates may enrol in the corresponding year of the programme.

| **ISCED field** | Field |
| | Tehnika, proizvodne tehnologije in gradbeništvo |

| **ISCED subfield** | subfield elektronika in avtomatizacija |

Qualification level	SQF 8
	EQF 7
	Second level

Learning outcomes

The qualification holder will be able to:

(general competences)

- autonomously find sources of information and use them critically,
- integrate technical knowledge, methods, skills and the use of engineering tools to autonomously resolve technical problems in known or altered circumstances,
- apply abstract thinking and the integration of acquired knowledge to autonomously develop innovative ideas and solutions,
- carry out research in connection with problems from the field of telecommunications and related fields,
- work autonomously in multi-disciplinary teams,
- manage complex systems and take decisions supported by arguments,
- communicate independently using various media and for various purposes such as the writing of project documentation, public oral presentations in a foreign language, etc.,
- demonstrate awareness of the need for in-depth knowledge of the subject and systematic professional work and research in order to achieve progress in any field.

(subject-specific competences)

- demonstrate thorough familiarity with and understanding of the principles of the transfer of various types of information (data, speech, images, etc.),
- demonstrate in-depth professional knowledge of telecommunications systems and various types of networks and the services that can be offered via them,
- work autonomously in the selection, design and development of selected types of hardware (e.g. transmission media, communication electronic circuits, transmission systems, network hubs, terminal equipment) and/or software (e.g. communication protocols, image and speech processing, user services and applications) needed in telecommunications,
- autonomously apply principles, methods and tools for analysis, planning and/or management in the above fields of telecommunications,
- keep abreast of and demonstrate understanding of new developments in principles, technological approaches, devices and services in the field of communication technologies; demonstrate the ability to use them and make their own innovative research and development contributions,
- demonstrate familiarity with the most important current technical or scientific literature for a selected narrow field of communication technologies,
- work independently in industry and enterprise.

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 scored 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

In order to progress to the second year, students must have passed first-year examinations totalling at least 42 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 course units in all subjects in which they have enrolled, and write and defend a master's thesis.

Awarding body

Faculty of Electrical Engineering and Computer Science, University of Maribor

URL

https://feri.um.si/en/