
Elektrotehnik/elektrotehnica

Selected qualifications

Name of qualification	Elektrotehnik/elektrotehnica
Translated title (no legal status)	Electrotechnician
Type of qualification	Srednja strokovna izobrazba
Category of qualification	Izobrazba
Type of education	Upper secondary technical education
Duration	4 years
Credits	240 credits
Admission requirements	• Elementary school education or • lower vocational education or • equivalent education under previous regulations
ISCED field	Field Tehnika, proizvodne tehnologije in gradbeništvo
ISCED subfield	subfield elektrotehnika in energetika

Learning outcomes

Certificate holders will be able to:

- read, plan, draft, monitor and amend technical documentation in accordance with prescribed instructions and through the use of ICT;
- program simple applications on programmable devices; program, install and wire programmable relays;
- install and wire various types of electrical and communication installations, connect users and carry out basic maintenance work;
- connect elements of electrical installations in switchboards, distribution and connecting devices, and select and switch electrical protections;
- carry out basic measurements and maintenance on electrical and communications installations, interpret results and identify faults;
- make required settings to an operating system and provide basic user support for the use of software;
- observe measures for safe work with electrical devices;

Elective:

Planning of electrical installations:

- implement user connections with elements of remote control;
- carry out electrical engineering calculations using dimensioning procedures in relation to user circuits and protections;

Drive technology:

- connect and test motors for safe operation, write measurement protocols and mechanically connect motors to powered machines;

Use of regulations:

- perform wiring, connecting, programming and setting of parameters of components in control and regulation systems and implement regulations;

Functioning of electrical energy systems:

- connect and maintain elements of low-voltage electrical networks and carry out measurements;
- provide advice on the introduction of measures for the efficient use of energy and the use of renewable energy;

Electricity generation and transmission:

- prepare and lead minor assembly and maintenance work in generation and transmission installations;
- carry out less complex switching operations in electricity generation and transmission;

Computer equipment maintenance:

- assemble and maintain computer hardware and rectify faults
- protect systems against abuse and viruses

Distribution network management:

- prepare and lead work on distribution networks
- formulate agreements on trade in electricity

Use of microprocessor devices:

- plan and program microprocessor boards
- control, capture and regulate microprocessor boards

Electricity supply and power conversion:

- demonstrate familiarity with the basic principles of generation and the importance of guaranteeing needs for electricity connections, set parameters and maintain electromechanical transformers

Transmission and recording of information:

- select, assemble, set up, manage and service components of audio and video systems
- set up local VF networks and install antenna devices

Equipment for multimedia technology:

- record, archive and broadcast sound, pictures and video in digital format, formal preparation of photographs

AV communications:

- manage hardware and software for filming, editing and showing AV content
- use computer formats to record text, graphics, video, sound and other media content

Online applications in multimedia technology:

- plan the development of, set up, update and maintain a website and online applications in accordance with a customer's requirements
- handle database data

Computer-aided design:

- use digital photography devices
- design websites and other documents for electronic media

Automation planning:

- manufacture and maintain simple pneumatic, electro-pneumatic and hydraulic controls
- program, install, start up, monitor and control the functioning of simple, automated multi-device units and video, carry out measurements and rectify faults

Capture and processing of process variables:

- select, install, assemble and wire sensors and measurement transducers
- capture, store, process and display captured process variables in laboratory and industrial environments using computer applications

Certificate holders have built on their key vocational knowledge and abilities with key general knowledge

in line with national standards.

Assessment and completion

Students' vocational abilities and skills and the fulfilment of conditions to obtain credits in accordance with the relevant education programme are established through verification and assessment. Assessment of students also takes into account non-formally acquired knowledge, which must be adequately demonstrated. Students are assessed using scores from 5 (excellent) to 1 (inadequate).

Progression

Students may progress to the next year if at the end of the academic year they achieve a passing grade in all general education subjects and vocational modules from the school's operational curriculum for the year and have completed all extracurricular activities and all work placement requirements. Progression is also possible by decision of the programme teaching staff.

Transitions

Matura/vocational course, higher vocational education (SQF level 6), professional higher education (SQF level 7) and academic higher education (SQF level 7)

Condition for obtaining certificate

Students must successfully (i.e. with passing grades) complete general education subjects, compulsory and elective vocational modules, and the open part of the curriculum. They must also complete extracurricular activities and on-the-job training and pass the vocational matura examination.

A vocational matura comprises a compulsory section (written and oral examination in Slovene, written and oral examination in nature protection) and an elective section (written and oral foreign language or mathematics examination, and a product/service and an oral presentation).

Awarding body

Vocational and technical secondary schools and adult education institutions

URL

<https://paka3.mss.edus.si/registriweb/ProgramPodatki.aspx?ProgramID=6017>
