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# Elektrotehnik SI/elektrotehnica SI

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## Selected qualifications

Name of qualification	Elektrotehnik SI/elektrotehnica SI
Translated title (no legal status)	Electrotechnician SI
Type of qualification	Srednja strokovna izobrazba
Category of qualification	Izobrazba
Type of education	Upper secondary technical education
Duration	4 years
Credits	253 credits
Admission requirements	<ul style="list-style-type: none"><li>• Elementary education or</li><li>• lower vocational education or</li><li>• equivalent education under previous regulations.</li></ul>
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, prepare 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 devices for the digital capture of photographs,
- 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.

The programme is adapted for provision in Slovene as the language of instruction in the ethnically mixed area of Slovenian Istria and also has the following special objectives:

- to develop communication skills in Italian and Slovene,
- to develop knowledge of the natural, cultural and historical heritage of the Italian national community and its mother nation,
- to teach respect for and understanding of ethnic and cultural diversity and promote cooperation between members of the Slovene nation and Italian national community. Certificate holders will also have built on their key vocational knowledge and abilities with key general knowledge in line with national standards.

## Assessment and completion

Students' vocational competences and skills, and the fulfilment of conditions to obtain credits in accordance with the education programme are established through testing 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 positive assessment in all general education subjects and relevant vocational modules set out in the school's operational curriculum and have completed all extracurricular activities and work placement requirements.

## Transitions

Secondary technical, vocational or vocational-technical education; master craftsman/foreman/shop manager examination (SQF level 5).

## Condition for obtaining certificate

Students must successfully (i.e. with positive scores) complete general education subjects, compulsory and elective vocational modules, and the open part of the curriculum. They must also complete extracurricular activities and work placement requirements and pass the vocational matura examination. The vocational matura comprises a compulsory section (written and oral examinations in Slovene and healthcare) and an elective section (written and oral examination in mathematics, a foreign language or Italian, and service with oral presentation).

## Awarding body

Secondary vocational and technical schools.

URL

<https://paka3.mss.edus.si/registriweb/ProgramPodatki.aspx?ProgramId=8845>

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