SLOVENSKO
OGRODJE
KVALIFIKACIJ

Doktor znanosti/doktorica znanosti s področja jedrske tehnike

Selected qualifications

Name of qualification	Doktor znanosti/doktorica znanosti s področja jedrske tehnike
Translated title (no legal status)	Doctor of Philosophy in the field of nuclear engineering
Type of qualification	Doktorat
Category of qualification	Izobrazba
Type of education	Doctoral education
Duration	3 years
Credits	180 credits

Admission requirements

Direct transition to a doctoral programme without completion of a master's thesis may be possible in the case of students who have particularly distinguished themselves during the master's programme, who have completed all the course units of the master's programme, for a total of 90 credits, and are successful in their research work. In such cases they must show the results of their work through authorship or co-authorship of an article in a publication that is considered, within the field, to be internationally recognised, and must do so before defending their doctoral dissertation.

ISCED field

Field
Naravoslovje, matematika in statistika

ISCED subfield

subfield fizika

Qualification level

SQF 10
EQF 8
Third level

Learning outcomes

Qualification holders are qualified to:

- demonstrate a capacity for abstraction and analysis of problems,
- collect, critically assess and synthesise data, measurements and solutions,
- identify the necessary data for the formulation of new knowledge,
- formulate new knowledge on the basis of existing theories or available data,
- apply knowledge in practice (particularly knowledge of modern technologies),
- make interdisciplinary connections between scientific findings,
- undertake autonomous research and development work and work in an (international) group,
- communicate and impart technical information to the general public,
- use modern research methods and procedures,
- critically assess and present their results,
- pursue further independent learning and research and keep abreast of literature.

(subject-specific competences)

- demonstrate in-depth understanding of the physical laws of nature,
- make connections between the basic laws of nature and observable characteristics of the world,
- pose physics problems in a creative manner and analyse them,
- formulate physics problems mathematically,
- deduce the physical bases of practical problems,
- model problems,
- demonstrate advanced experimental skills in physics,
- critically evaluate the results of measurements and apply these in the building or upgrading of models,
- demonstrate understanding of the principles of operation of technological devices on the basis of basic laws,

- present physical methods and results in a manner adapted to a target audience (in Slovene and a foreign language),
- impart knowledge about physics,
- demonstrate thorough familiarity with research results from the broader and narrower field of research,
- demonstrate understanding of the most complex mathematical problems and proofs,
- carry out autonomous research,
- abstract practical problems,
- keep abreast of and use mathematical literature,
- use various modern mathematical methods to resolve problems,
- work critically and autonomously and provide advice in the field of mathematics and physics education.

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

Enrolment in the third year of postgraduate studies is open to students who intend to continue their studies at the doctoral level and who have completed course units consisting of at least 60 credits. On enrolling in the third year, the student and their supervisor must sign a declaration that the student will continue their studies in a doctoral programme.
Enrolment in the fourth year of postgraduate studies is open to students who have completed all course units (90 credits) and written a master's thesis, or who have received approval for a direct transition to a doctoral programme and whose doctoral dissertation topic has been approved before enrolment in the fourth year.

Condition for obtaining certificate

In order to complete the doctoral programme, students must complete course units totalling 240 credits, where 90 credits are from taught course units and 150 credits are from research, including the doctoral dissertation and its defence.

Awarding body

Faculty of Mathematics and Physics, University of Ljubljana

URL

https://www.fmf.uni-lj.si/en/