

Doktor znanosti/doktorica znanosti s področja fizike

Selected qualifications

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

Admission requirements

- A completed second-cycle study programme; or
- a completed academic higher education programme adopted before 11 June 2004; or
- a completed professional higher education programme adopted before 11 June 2004 and a study programme leading to a specialisation; before enrolment in the programme candidates must complete course units totalling 35 credits: Statistical Thermodynamics (8 credits), Physics-Based Modelling (10 credits), Physics of Complex Systems (7 credits) and Introduction to Research (10 credits); or
- a completed study programme leading to professions regulated by EU directives, or another integrated master's degree programme consisting of 300 credits.

ISCED field

Field
Naravoslovje, matematika in statistika

ISCED subfield

subfield interdisciplinarne izobraževalne aktivnosti/izidi, pretežno naravoslovje, matematika in statistika

Qualification level

SQF 10
EQF 8
Third level

Learning outcomes

Qualification holders are qualified to:

(general competences)

- demonstrate autonomy in the highest-level research and most demanding scientific work,
- demonstrate thorough understanding of theoretical and methodological foundations and mastery of highest-level research methods, procedures and processes,
- show critical autonomy within the science and the profession,
- synthesise and apply knowledge,
- show autonomy in the development of new knowledge and solutions to address the most complex problems,
- work in research groups and on projects,
- communicate internationally in the highest scientific and professional circles,
- show a commitment to professional scientific and professional ethics,
- assume responsibility in taking the most challenging scientific and professional decisions,
- demonstrate independence and responsibility in management and responsibility towards team work,
- demonstrate in-depth understanding of theoretical and methodological concepts,
- act as mentor to younger colleagues at institutes, universities, companies, etc.,
- demonstrate effectiveness in the use of the available resources: own creative and intellectual abilities; available intellectual capital (colleagues), other tangible and intangible resources (money, equipment, space and time),

(subject-specific competences)

- solve specific research problems in various fields of physics,
- apply knowledge in a selected specific research and work field of physics and related disciplines,
- formulate and implement original scientific solutions to given physical and interdisciplinary problems,
- use standard and modern physical empirical research methods,
- autonomously develop, evaluate and orient contemporary trends in physics education,
- develop connections between scientific, academic and educational institutions,
- present scientific results obtained from the field of physics in the form of publications in international scientific periodicals,
- demonstrate in-depth understanding of theoretical and methodological concepts in physics,
- autonomously develop new knowledge in physics.

Assessment and completion

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 completed first-year course units totalling at least 35 credits. Students must obtain these 35 credits through the compulsory subject Project Management (5 credits), individual research (at least 10 credits) and the compulsory or elective subjects from the selected module (at least 20 credits).

In order to progress to the third year, students must have completed all first-year course units and second-year course units totalling at least 35 credits, obtained through the compulsory subject Seminar (10 credits), individual research (at least 10 credits) and elective subjects from the selected module (at least 15 credits). In order to enrol in the third year, students must have completed at least 95 credits. They must also have obtained approval of the topic of their doctoral dissertation from their supervisor and the studies committee.

Condition for obtaining certificate

In order to complete the programme, students must complete all course units prescribed by the study programme.

Awarding body

University of Maribor, Faculty of Natural Sciences and Mathematics

URL

<http://fnm.um.si/index.php?lang=en>
