



UČNI NAČRT PREDMETA / SUBJECT SPECIFICATION

Predmet:	Doktorska disertacija
Subject Title:	Doctoral Dissertation

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
FIZIKA PHYSICS		3	2

Univerzitetna koda predmeta / University subject code:

Predavanja Lectures	Seminar Seminar	Sem. vaje Sem. work	Lab. vaje Lab. work	Mentorstvo Mentorship	Samost. delo Individ. work	ECTS
				60	840	30

Nosilec predmeta / Lecturer:

Jeziki / Predavanja / Lecture: /
Languages: Vaje / Tutorial: /

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Ni posebnih pogojev.

Prerequisites:

No special prerequisites needed.

Vsebina:

Izdelava doktorske disertacije z naslednjo okvirno vsebino:

- Izvleček doktorske disertacije v slovenskem in angleškem jeziku in ključne besede
- Kazalo vsebine, slik, tabel, prilog
- Uvod
- Materiali in metode
- Rezultati
- Diskusija
- Sklep
- Literatura in viri
- Priloge (po potrebi)

Pred zagovorom doktorske disertacije študent odpošlje osnutek članka (manuskript), ki temelji na znanstvenih spoznanjih doktorske disertacije, znanstveni reviji, indeksirani v SCI, pri čemer mora biti študent prvi ali vodilni avtor članka.

Contents (Syllabus outline):

Student works out the doctoral thesis with the following rough structure:

- Abstract of the doctoral thesis in Slovenian and English language and key words
- Table of contents, figures, tables, supplements
- Introduction
- Materials and methods
- Results
- Discussion
- Conclusions
- Bibliography
- Supplements (if needed)

Before the defence of the doctoral thesis, the student submits a manuscript, which is based on his/her scientific results of the doctoral thesis, to a scientific journal, indexed in SCI, whereby he/she must be the first or the leading author of the article.

Temeljni študijski viri / Textbooks:

- Katz, M. J., 2007: From research to manuscript. A guide to scientific writing. Springer, 152 str.
- Ren, Z.: Navodila za pripravo podiplomskega dela, Maribor : Fakulteta za strojništvo, 2004.
- Meloy, J. M.: Writing the qualitative dissertation : understanding by doing, Mahwah (New Jersey), London : L. Erlbaum, Associates, cop. 2002.
- Day, R. A., Gastel, B. How to write and publish a scientific paper 6th ed., Cambridge University Press, Cambridge 2006

Cilji:

Doktorska disertacija je pisni dokument, s katerim študent dokaže vrhunsko sposobnost uporabe teoretičnih znanj in v praksi pridobljenih izkušenj za rešitev problema, ki si ga je izbral s prijavo teme doktorskega dela. V doktorski disertaciji študent pokaže sposobnost izbire in uporabe metod dela v fiziki, uporabe domače in tuje strokovne literature ter dodatnih virov za potrebe rešitve izbranega problema.

Predvideni študijski rezultati:*Znanje in razumevanje:*

Globlje poznavanje širšega znanstvenega področja in vrhunsko razumevanje ožjih vsebin s področja doktorske disertacije. Poudarek je na aplikaciji pridobljenih vrhunskih teoretičnih in praktičnih znanj ter obvladovanju najrazličnejših metodologij znanstvenega dela.

Prenesljive/ključne spretnosti in drugi atributi:

Obvladanje dokumentiranja in prezentacije znanstvenih izsledkov, obvladanje reševanja znanstvenih problemov, suverenost v predstavitvah ključnih spoznanj in spretnost argumentiranja.

Metode poučevanja in učenja:

Mentor preverja vsebino in strukturo disertacije ter usmerja kandidata pri predavitvi disertacije.

Objectives:

The doctoral thesis is a written document by means of which the student proves his top-level ability to use the theoretical knowledge and his experiences achieved in the practical work to resolve the selected problem. In his doctoral thesis, the student presents the ability to choose and use appropriate methods in physics, to use literature and additional sources in order to solve the chosen problem.

Intended learning outcomes:*Knowledge and Understanding:*

In-deep knowledge of broader scientific area and top-level understanding of special topics from the field of doctoral thesis. The emphasis is given to the application of the top-level theoretical and practical knowledge obtained as well as to the complete acquaintance with different methodologies of scientific work.

Transferable/Key Skills and other attributes:

Proficiency in documenting and presenting the scientific results, proficiency in solving scientific problems, sovereignty in presentations and discussions about the results of research.

Learning and teaching methods:

The supervisor controls the contents and the structure of the thesis and directs the candidate in preparation of the defence of doctoral thesis.

Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

• Doktorska disertacija	75 %	• Doctoral thesis
• Zagovor in ubranitev doktorske disertacije	25 %	• Presentation and defence of doctoral thesis

Materialni pogoji za izvedbo predmeta :

- Večja predavalnica z audiovizualnimi pripomočki.

Material conditions for subject realization

- Lecture hall with multimedia equipment.

Obveznosti študentov:

(pisni, ustni izpit, naloge, projekti)

Izdelava doktorske disertacije;
Izdelava in odposlanje osnutka članka v revijo indeksirano v SCI;
Prezentacija in ubranitev doktorske disertacije pred komisijo.

Students' commitments:

(written, oral examination, coursework, projects):

- to write the doctoral thesis;
- to write and submit the manuscript to the journal indexed within SCI;
- to present and defend the doctoral thesis in front of the committee.