Univerza v Mariboru

Fakulteta za naravoslovje in matematiko

UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	**Prenosljiva znanja I**
Course title:	**Transferable knowledge I**

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
FIZIKA, 3. stopnja		2.	3.
PHYSICS, 3rd cycle		2.	3.

Vrsta predmeta / Course type	Obvezni predmet/compulsory
Univerzitetna koda predmeta / University course code:	

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
				15	**75**	**3**

Nosilec predmeta / Lecturer:	**Marko Gosak**

Jeziki / Languages:	**Predavanja / Lectures:**	Ni definirano
	Vaje / Tutorial:	Not defined

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Ni pogojev.	None.

Vsebina:	**Content (Syllabus outline):**
Študent v okviru tega predmeta opravi obveznosti z udeležbo na različnih aktivnostih (delavnicah, tečajih, seminarjih, poletnih šolah, izobraževanjih ipd.), ki jih izvaja Univerza v Mariboru ali druge priznane domače ali tuje institucije. Aktivnosti lahko zajemajo naslednje tri širše tematske sklope: **- veščine in znanja na strokovno-znanstvenem področju** (aktivna udeležba tečajev,	Student fulfils the obligations at the subject by active participation at different activities (e.g. workshops, courses, seminars, summer schools, training etc.) conducted by University of Maribor or other renown domestic or foreign institution. Activities can be chosen from three main topics: **- skills and knowledge in the area of scientific-expertise** (active participation at workshops,

seminarjev, delavnic ali izobraževanj s področja strokovne znanstvene dejavnosti (npr. uporabe novih eksperimentalnih, teoretičnih in računalniških metod in orodij, strokovnega tujega jezika) in pedagoško-didaktičnih dejavnosti (npr. predavanja na tuji ali domači univerzi; mentorstva študentom, dijakom in učencem pri raziskovalnih nalogah; organizacija in izvedba strokovnih ali pedagoških delavnic, taborov, seminarjev ipd.)), delo z viri (baze revij na spletu, programska orodja za citiranje in urejanje referenc), postopki objave članka (izbira revije, postopki oddaje manuskripta, komunikacija z urednikom in recenzenti) Študent lahko v dogovoru z delovnim mentorjem na izbranem primeru (npr. na podlagi lastne magistrske naloge ali bodoče doktorske disertacije) v obliki seminarske naloge simulira objavo članka. Seminarska naloga mora imeti vse elemente »izvirnega kratkega znanstvenega prispevka« in mora biti napisana po navodilih ene izmed fizikalnih revij s faktorjem vpliva. Študent jo predstavi s kratkim predavanjem, pri čemer upošteva pravila strokovne predstavitve kot na znanstveni konferenci. Posamezna aktivnost se ovrednoti z najmanj 0,5 ECTS. Aktivnosti, ki so daljše in zahtevajo več samostojnega dela študenta, se lahko ovrednotijo z večjim številom ECTS, vendar ne več kot z 1 ECTS Študent mora pred udeležbo posamezne aktivnosti oddati s strani delovnega mentorja potrjeno vlogo komisiji za podiplomski študij na Oddelku za fiziko. Vloga mora vsebovati informacije o aktivnosti in program dela. Komisija nato odloči o primernosti izbire in ob odobritvi aktivnost ovrednoti z ECTS.	courses, seminars or training in the field of scientific expertise (e.g. application of novel experimental, theoretical or computational methods and tools, professional foreign language), pedagogical and didactical activities (e.g. lectures at domestic or foreign university, mentorship for students and pupils at research projects, organisation and implementation of professional or pedagogical workshops, summer camps, seminars etc.), handling references (online databases of journals, software tools for citation and managing references), procedures for publication of scientific paper (journal selection, manuscript submission procedures, communication with editors and reviewers) Under the mentorship student can simulate the submission of a scientific paper on the selected topic (e.g. on the basis of their own master thesis or future doctoral dissertation). They present it as a seminar paper which has all elements "of the original short scientific paper" and should be written according to the rules of one of the journals with impact factor. The seminar is then presented with short oral presentation as at the scientific conference. Each activity is assessed with at least 0,5 ECTS. Activity that demands more individual work from students can be assessed with larger value of ECTS but not more than with 1 ECTS. Before attending the activity student has to submit the application confirmed by the working mentor to the committee for postgraduate study at the Department of physics. The application should include information about the activity and the program of work. The committee will then decide on the appropriateness of the selection and upon approval it will assess the activity with ECTS.

Temeljni literatura in viri / Readings:

Ni predpisana / Not defined

Cilji in kompetence:	**Objectives and competences:**
Cilj predmeta je študente usposobiti aktivno uporabljati prenosljiva znanja in jih opremiti s kompetencami za sledenje razvojnih trendov stroke ter razširiti njihova metodološka znanja za reševanje in implementacijo zahtevnih tehničnih, tehnoloških, organizacijskih in razvojnih nalog ter projektov. Tukaj gre večinoma za znanja, veščine in kompetence, ki jih ni moč usvojiti pri klasičnem izobraževanju znotraj uveljavljenega kurikuluma strokovnega področja, za katerega se kandidat izobražuje, saj so vezane na aktualne razmere in trende, ki se hitro spreminjajo.	The aim of this course is to train students for actively use transferable skills and to equip them with the competencies for tracking the development trends of the profession and to expand their methodological knowledge for solving and implementation of complex technical, technological, organizational and developmental tasks and projects. These are mostly knowledge, skills and competences within the established area of expertise that cannot be gained during the standard curriculum, since they are tied to the current situation and trends, which are rapidly changing.
Predvideni študijski rezultati:	**Intended learning outcomes:**
Znanje in razumevanje: Študent usvoji izbrana (odvisno od izbire aktivnosti) prenosljiva znanja in veščine na področjih: - uporabe in aplikacije novih eksperimentalnih, teoretičnih in računalniških metod in orodij, strokovnega tujega jezika, pedagoško-didaktične dejavnosti, mentorstva, organizacije, predstavitve in objave rezultatov raziskav v obliki znanstvenih objav, dela s programskimi orodji za urejanje bibliografij in referenc ter citiranje ipd.	Knowledge and understanding: Student gains selected (depending on the choice of activity) transferable knowledge and skills in the areas of: - the use and application of novel experimental, theoretical and computational methods and tools, professional foreign language, didactic activities, mentoring, organization, presentation and publishing of research results in the form of scientific papers, using software for editing and managing bibliographies, citations and references etc.
Metode poučevanja in učenja:	**Learning and teaching methods:**

Samostojno delo študenta, in druge oblike študija, ki lahko zajemajo tudi aktivno udeležbo na konferencah, seminarjih, delavnicah, poletnih šolah, tečajih ipd., samostojno izvedbo mentorstev, organizacijske aktivnosti, predavanja, predstavitve ipd.	Individual student work, and other forms of work, which may include active participation at conferences, seminars, workshops, summer schools, courses, etc., individual mentoring, organizational activities, lectures, presentations and the like.

Načini ocenjevanja:	Delež (v %) / Weight (in %)	**Assessment:**
Se oceni z opravil / ni opravil.	**100%**	Pass / fail evaluation.

Reference nosilca / Lecturer's references:

Ni referenc. / No references.