UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet:	Seminar I
Course title:	Seminar I

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Nanoznanosti in nanotehnologije, 3. stopnja	/	1	2
Nanosciences and Nanotechnologies, 3rd cycle	/	1	2

Vrsta predmeta / Course type	Obvezni / Mandatory
Univerzitetna koda predmeta / University course code:	NANO3-830

Predavanja Lectures	Seminar Seminar	Vaje Tutorial	Klinične vaje work	Druge oblike študija	Samost. delo Individ. work	ECTS
	30			30	240	**10**

**Navedena porazdelitev ur velja, če je vpisanih vsaj 15 študentov. Drugače se obseg izvedbe kontaktnih ur sorazmerno zmanjša in prenese v samostojno delo. / This distribution of hours is valid if at least 15 students are enrolled. Otherwise the contact hours are linearly reduced and transfered to individual work.*

Nosilec predmeta / Lecturer:	Prof. dr. Barbara Malič Prof. dr. Gojmir Lahajnar Prof. dr. Veronika Stoka Prof. dr. Aleksander Zidanšek Prof. dr. Boris Žemva

Jeziki / Languages:	**Predavanja / Lectures:**	Slovenski ali angleški / Slovene or English
	Vaje / Tutorial:	

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:	**Prerequisits:**
Zaključen študij druge stopnje.	Completed second-cycle studies.

Vsebina:	**Content (Syllabus outline):**
Študenti bodo razvili sposobnosti spremljanja ter prepoznavanja aktualnih znanstveno raziskovalnih problemov, sodobnih metod raziskovanja, najnovejših rezultatov in uporabe najnovejšega znanja na področju nanoznanosti in nanotehnologij. Študenti se bodo soočili tudi z izzivi izdelave pisnega pregleda obravnavanih vsebin ter s posredovanjem ugotovitev v obliki ustne komunikacije.	Students will develop the ability to follow and identify current scientific research problems, modern methods of research, the latest results and the use of the state-of-the -art knowledge in the field of nanosciences and nanotechnologies. Students will also face with the challenges of writing a written review of the selected topics and by sharing of their findings with oral communication.

Temeljni literatura in viri / Readings:

Znanstvena literatura s področja seminarja ter literatura s področja pisnega in ustnega komuniciranja s strokovno javnostjo. / Scientific literature from the field of the seminar and literature on written and oral communication with the professional public.

Cilji in kompetence:	Objectives and competences:
Cilj predmeta je spoznavanje aktualnih raziskovalnih problemov, sodobnih metodoloških pristopov k njihovi razrešitvi in najnovejših dosežkov na področju nanoznanosti in nanotehnologij. Pomemben cilj je tudi sposobnost pisnega celostnega povzemanja obravnavanih vsebin in posredovanje ugotovitev v obliki ustne predstavitve in uporabe znanstvenih argumentov v kritični ustni komunikaciji z znanstveno javnostjo.	The aim of the course is to learn about current research problems, modern methodological approaches to their solutions and the latest achievements in the field of nanosciences and nanotechnologies. An important goal is also the ability to write comprehensive review of the selected study subject and to share their findings in the form of oral presentations. In addition, they will practice the use of scientific arguments in critical oral communication with the scientific community.

Predvideni študijski rezultati:	Intended learning outcomes:
Priprava pisnega poročila, njegova predstavitev ter suverena ustna komunikacija o obravnavanih vsebinah. Študenti bodo izpopolnili sposobnosti spremljanja ter poznavanja sodobnih raziskav in dosežkov na področju nanoznanosti in nanotehnologij, kritične ocene pomembnosti objav v znanstveni literaturi, pisnega povzemanja obravnavane vsebine ter njene suverene predstavitve in ustnega komuniciranja z znanstveno javnostjo.	Preparation of written reports and oral presentations based on their own research work. Students are expected to gain a general understanding of the research activities in nanosciences and nanotechnologies. They will be able to perform a critical evaluation and relevance of the publications in scientific literature that will be given in the written report. In addition, they will improve their skills in presentation and oral communication with the scientific community.

Metode poučevanja in učenja:	Learning and teaching methods:
Seminar, konzultacije, druge metode	Seminar, consultations, other methods

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Pisna seminarska naloga Ustna predstavitev z zagovorom seminarske naloge	70 % 30 %	Written seminar work Oral presentation with the defense of the seminar work

Reference nosilca / Lecturer's references:

ROJAC, Tadej, BENČAN, Andreja, DRAŽIĆ, Goran, SAKAMOTO, Naonori, URŠIČ, Hana, JANČAR, Boštjan, TAVČAR, Gašper, MAKAROVIČ, Maja, WALKER, Julian, MALIČ, Barbara, DAMJANOVIĆ, Dragan. Domain-wall conduction in ferroelectric BiFeO3BiFeO3 controlled by accumulation of charged defects. *Nature materials*, ISSN 1476-1122, 2017, vol. 16, no. 3, str. 322-327, doi: 10.1038/nmat4799. [COBISS.SI-ID 29936679],

LOZINŠEK, Matic, MERCIER, Hélène P. A., BROCK, David S., ŽEMVA, Boris, SCHROBILGEN, Gary J. Coordination of KrF2 to a naked metal cation, Mg2+. *Angewandte Chemie : International edition*. [Print ed.]. 2017, vol. 56, no. 22, str. 6251-6254. ISSN 1433-7851. DOI: 10.1002/anie.201611534. [COBISS.SI-ID 30151719],

BIDOVEC, Katja, BOŽIČ, Janja, DOLENC, Iztok, TURK, Boris, TURK, Vito, STOKA, Veronika. Tumor necrosis factor-α induced apoptosis in U937 cells promotes cathepsin D-independent stefin B degradation. *Journal of cellular biochemistry*. 2017, vol. 118, no 12, str. 4813-4820. ISSN 0730-2312. DOI: 10.1002/jcb.26152. [COBISS.SI-ID 30506535],

DESANDO, Michael A., LAHAJNAR, Gojmir, PLAVEC, Janez. Molecular interactions and mechanisms in the 1H NMR relaxation of residual CHCl3 in deuterochloroform solution of a two-chain ionic surfactant. *Journal of solution chemistry*. 2018, vol. 47, no. 7, str. 1246-1268. ISSN 0095-9782, doi: 10.1016/j.jallcom.2015.06.192. [COBISS.SI-ID 28751655],

ABINA, Andreja, PUC, Uroš, JEGLIČ, Anton, ZIDANŠEK, Aleksander. Structural characterization of thermal building insulation materials using terahertz spectroscopy and terahertz pulsed imaging. *NDT & E International*, ISSN 0963-8695. [Print ed.], 2016, vol. 77, str. 11-18, doi: 10.1016/j.ndteint.2015.09.004. [COBISS.SI-ID 28983847]