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. Zvonko Trontelj Prof. dr. Boris Žemva Prof. dr. Barbara Malič Prof. dr. Gojmir Lahajnar Prof. dr. Aleksander Zidanšek Prof. dr. Veronika Stoka

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	70 %	Written seminar work
Ustna predstavitev z zagovorom seminarske naloge	30 %	Oral presentation with the defense of the seminar work

Reference nosilca / Lecturer's references:

BEGUŠ, Samo, PIRNAT, Janez, JAZBINŠEK, Vojko, TRONTELJ, Zvonko. Optical detection of low frequency NQR signals : a step forward from conventional NQR. *Journal of physics. D, Applied physics*, ISSN 0022-3727, 8 Mar. 2017, vol. 50, no. 9, str. 1-10

LAVRIČ, Zoran, PIRNAT, Janez, LUŽNIK, Janko, PUC, Uroš, TRONTELJ, Zvonko, SRČIČ, Stanko. 1414N nuclear quadrupole resonance study of piroxicam: confirmation of new polymorphic form V. *Journal of pharmaceutical sciences*, ISSN 0022-3549, 2015, vol. 104, iss. 6, str. 1909-1918

BEGUŠ, Samo, JAZBINŠEK, Vojko, PIRNAT, Janez, TRONTELJ, Zvonko. A miniaturized NQR spectrometer for a multi-channel NQR-based detection device. *Journal of magnetic resonance*, ISSN 1090-7807, Oct. 2014, vol. 247, str. 22-30

LUŽNIK, Janko, PIRNAT, Janez, JAZBINŠEK, Vojko, LAVRIČ, Zoran, ŽAGAR, Veselko, SRČIČ, Stanko, SELIGER, Janez, TRONTELJ, Zvonko. 1414N Nuclear Quadrupole Resonance study of polymorphism in famotidine. *Journal of pharmaceutical sciences*, ISSN 0022-3549, 2014, vol. 103, iss. 9, str. 2704-2709

JOVANOVIĆ, Sonja, SPREITZER, Matjaž, TRAMŠEK, Melita, TRONTELJ, Zvonko, SUVOROV, Danilo. Effect of oleic acid concentration on the physicochemical properties of cobalt ferrite nanoparticles. *The journal of physical chemistry. C, Nanomaterials and interfaces*, ISSN 1932-7447, 2014, vol. 118, issue 25, str. 13844-13856