

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	Seminar II
Course title:	Seminar II

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

Vrsta predmeta / Course type Obvezni / Mandatory

Univerzitetna koda predmeta / University course code: NANO3-846

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 transferred to individual work.*

Nosilec predmeta / Lecturer: Prof. dr. Barbara Malič
Prof. dr. Gojmir Lahajnar
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: Zaključen študij prve stopnje. **Prerequisites:** Completed first cycle studies.

<p>Vsebina:</p> <p>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 v obliki osnutka članka in osnutka teme magistrskega dela ter s posredovanjem ugotovitev v obliki neposrednega ustnega komuniciranja.</p>	<p>Content (Syllabus outline):</p> <p>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 as a draft paper and a draft topic of the master thesis as well as by sharing of their findings with oral seminar presentation.</p>
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Temeljni literatura in viri / Readings: Strokovna in znanstvena literatura s področja seminarja. / Professional and scientific literature from the field of the seminar.

Cilji in kompetence:

Predmet nadgrajuje pridobljeno znanje pri predmetu Seminar I, cilj predmeta je pripraviti pisno celostno predstavitev svojih rezultatov in teme magistrskega dela ter posredovanje navedenega v obliki ustne predstavitve.

Objectives and competences:

This course upgrades the knowledge received at Seminar I, its aim is to prepare a written comprehensive presentation of the results and the topic of master thesis. An important goal is also the ability to present their findings in the form of oral presentation.

Predvideni študijski rezultati:

Priprava osnutka članka in osnutka teme magistrskega dela, ustna predstavitev ter suverena komunikacija o obravnavanih vsebinah.

Dokazano celovito znanje s področja študijskega programa.

Intended learning outcomes:

Preparation of a draft paper and a draft topic of master thesis as well as oral presentation and sovereign communication about the discussed topics.

Proven comprehensive knowledge from the field of the study program.

Metode poučevanja in učenja:

Seminar, konzultacije, druge metode

Learning and teaching methods:

Seminar, consultations, other methods

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Seminarska naloga (osnutek članka s področja magistrskega dela)	70 %	Seminar (draft paper from the field of the master thesis)
Ustna predstavitev in zagovor seminarske naloge	30 %	Oral presentation and defense of the seminar work
Seminar II študent opravi tako, da pred komisijo pripravi predstavitev svojega projektnega dela na magistrskem študiju in ob zagovoru dokaže tudi celovito znanje s področja študijskega programa. Z mentorjem uskladi datum in uro seminarja ter na info@mps.si najmanj en teden pred predstavitvijo sporoči datum, uro, prostor in naslov seminarja. Po opravljenem Seminarju II odda v tajništvo MPŠ izpolnjen in podpisan zapisnik Seminarja II, izpitno prijavnico za Seminar II, seminarsko nalogo (osnutek članka s področja magistrskega dela) in natisnjene prosojnice seminarja.		The students present the Seminar II on their project work for master studies in front of a committee, where they also demonstrate comprehensive knowledge from the field of the study program. The student and his supervisor shall jointly set the date and time of the seminar. At least one week before the presentation, the student shall communicate the date, time, room and title of the seminar to info@mps.si. After presenting the Seminar II the student must submit to the IPS Secretariat the filled out and signed minutes of the Seminar II, Seminar II exam application, seminar work (draft paper on the topic of the master thesis), as well as printed presentation of the Seminar II.

Reference nosilca / Lecturer's references:

ROJAC, Tadej, BENČAN, Andreja, DRAŽIČ, 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](https://doi.org/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](https://doi.org/10.1002/anie.201611534). [COBISS.SI-ID [30151719](#)],
MATAVŽ, Aleksander, BOBNAR, Vid, MALIČ, Barbara. Tailoring ink-substrate interactions via thin polymeric layers for high-resolution printing. *Langmuir*, ISSN 0743-7463, 2017, vol. 33, no. 43, str. 11893-11900, doi: [10.1021/acs.langmuir.7b02181](https://doi.org/10.1021/acs.langmuir.7b02181). [COBISS.SI-ID [30841383](#)],
DESANDO, Michael A., LAHAJNAR, Gojmir, PLAVEC, Janez. Molecular interactions and mechanisms in the 1H NMR relaxation of residual CHCl₃ in deuteriochloroform 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](https://doi.org/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](https://doi.org/10.1016/j.ndteint.2015.09.004). [COBISS.SI-ID [28983847](#)]