

**UČNI NAČRT PREDMETA / COURSE SYLLABUS**

<b>Predmet:</b>	Seminar III
<b>Course title:</b>	Seminar III

<b>Študijski program in stopnja</b> Study programme and level	<b>Študijska smer</b> Study field	<b>Letnik</b> Academic year	<b>Semester</b> Semester
Nanoznanosti in nanotehnologije, 3. stopnja	/	3	5
Nanosciences and nanotechnologies, 3 <sup>rd</sup> cycle	/	3	5

**Vrsta predmeta / Course type** Obvezni / Mandatory

**Univerzitetna koda predmeta / University course code:** NANO3-832

<b>Predavanja</b> Lectures	<b>Seminar</b> Seminar	<b>Vaje</b> Tutorial	<b>Klinične vaje</b> work	<b>Druge oblike študija</b>	<b>Samost. delo</b> Individ. work	<b>ECTS</b>
	30			30	240	<b>10</b>

*\*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. 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:** Prerequisites:  
Zaključen študij druge stopnje. Completed second-cycle studies.

<p><b>Vsebina:</b></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 članka ter s posredovanjem ugotovitev v obliki neposrednega ustnega komuniciranja.</p>	<p><b>Content (Syllabus outline):</b></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 paper and by sharing of their findings with oral seminar presentation.</p>
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**Temeljni literatura in viri / Readings:** Znanstvena literatura s področja seminarja. / Scientific literature from the field of the seminar.

**Cilji in kompetence:**

Predmet nadgrajuje pridobljeno znanje pri predmetih Seminar I in Seminar II, cilj predmeta je pripraviti pisno celostno predstavitev svojih bistvenih raziskovalnih rezultatov doktorske disertacije v obliki članka ter posredovanje navedenega v obliki ustne predstavitve.

**Objectives and competences:**

This course upgrades the knowledge received at Seminar I and Seminar II, its aim is to prepare a written comprehensive presentation of the essential research results of the doctoral dissertation as a scientific paper. An important goal is also the ability to present their findings in the form of oral presentation.

**Predvideni študijski rezultati:**

Priprava znanstvenega članka za celostno predstavitev svojih bistvenih raziskovalnih rezultatov doktorske disertacije, njegova predstavitev ter suverena ustna komunikacija o obravnavanih vsebinah.  
Dokazano celovito znanje z raziskovalnega področja študijskega programa.

**Intended learning outcomes:**

Preparation of a scientific paper for a comprehensive presentation of the essential research results of the doctoral dissertation and oral presentations based on their own research work. Demonstration of comprehensive knowledge from the research field of study programme.

**Metode poučevanja in učenja:**

Seminar, konzultacije, druge metode

**Learning and teaching methods:**

Seminar, consultations, other methods

**Načini ocenjevanja:**

Seminarska naloga (članek s področja doktorske disertacije)  
Ustna predstavitev in zagovor seminarske naloge

Seminar III študent opravi tako, da pred komisijo treh profesorjev predstavi svoje raziskovalno delo na doktorskem študiju in dokaže celovito znanje z raziskovalnega 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. Predsednik komisije je predstojnik študijskega programa ali njegov pooblaščen predstavnik, člana komisije pa sta tudi mentor in praviloma vsaj en član komisije za oceno disertacije. Po opravljenem Seminarju III odda v tajništvo MPŠ izpolnjen in podpisan zapisnik Seminarja III, izpitno prijavnico za Seminar III, seminarsko nalogo (članek s področja doktorske disertacije) ter natisnjene prosojnice seminarja

Delež (v %)

Weight (%)

**Assessment:**

70 %	Seminar (scientific paper on the topic of the doctoral dissertation)
30 %	Oral presentation and defense of the seminar work

Seminar III assessment is based on the presentation of the student's doctoral project in front of a committee of three IPS professors, where the student also demonstrates comprehensive knowledge from the research field of the study programme. The student and the supervisor 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. The Head of the study program or his authorised representative is the president of the commission, supervisor and usually also one of the members of the commission for the evaluation of the dissertation are also members. After presenting Seminar III, the student submits to the IPS Secretariat the filled out and signed minutes of Seminar III, Seminar III exam application, printed seminar work (scientific paper on the topic of the doctoral dissertation), as well as printout of slides.

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**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, DAMJANOVIČ, Dragan. Domain-wall conduction in ferroelectric BiFeO<sub>3</sub>BiFeO<sub>3</sub> 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](#)],

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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](#)]