UČNI NAČRT PREDMETA / COURSE SYLLABUS	
Predmet	Izbrana poglavja iz višje matematike
Course name	Advanced mathematical topics

Študijski program in stopnja **Study program and level**	**Študijska smer** **Study field**	**Letnik** **Academic year**	**Semester** **Semester**
Fizika in Astrofizika II. stopnja	vse	1	/
Physics and Astrophysics II. level	vse	1	/

Vrsta predmeta / Course type	obvezni / mandatory
Univerzitetna koda predmeta / University course code	2FAF01

Predavanja **Lectures**	**Seminar** **Seminar**	**Sem. vaje** **Tutorial**	**Lab. vaje** **Lab. work**	**Teren. vaje** **Field work**	**Samost. delo** **Indiv. work**	**ECTS**
45	/	45	/	/	180	9

Nosilec predmeta / Lecturer	Prof. dr. Andriy Zagorodnyuk	
Jeziki / Languages	**Predavanja / Lectures**	slovenščina / English
	Vaje / Tutorial	slovenščina / English

Pogoji za opravljanje študijskih obveznosti	**Prerequisites**
/	/

Vsebina	**Syllabus outline**
Izbrane matematične teme, ki so v tistem trenutku najbolj aktualne na področju astrofizike, astrofizike osnovnih delcev in/ali trdne snovi. Podajali jih bodo domači in vabljeni vodilni strokovnjaki z izbranih področij.	Selected mathematical topics that are relevant in astrophysics, astroparticle physics and/or solid state physics at a given moment. Topics will be presented by both local and invited leading experts from their respective fields.

Temeljni literatura in viri / Basic readings
Po dogovoru z nosilcem predavanj in vabljenimi predavatelji, glede teme predavateljev. To be defined in agreement with the course principal and the lecturers; related to topics presented by the lecturers.

Cilji in kompetence	**Objectives and competences**
Cilj predmeta je študente soočiti z izbranimi matematičnimi temami, ki so aktualne za njihov študij fizike, in ki jim jih bodo podali domači in vabljeni predavatelji. Študenti bodo dobili paleto specializiranih znanj s precej ozko usmerjenih področij, ki pa jih bodo	The objective of the course is to face students with selected mathematical topics that are relevant for their studies in physics / astrophysics and that will be presented to them by local and invited experts. Students will acquire specialized knowledge from very specific mathematical fields. With the

s pomočjo nosilca predmeta združili v izboljšano in poglobljeno razumevanje problematike. Pridobljeno znanje o sintezi ekspertnih znanj lahko študenti uporabijo na vseh področjih znanosti.	help of the course principal, they will transform this knowledge into an improved and in-depth understanding. Students can apply the obtained understanding of the synthesis of expert knowledge in all fields of science.

Predvideni študijski rezultati	**Intended learning outcomes**
Študenti bodo spoznali matematična orodja in prijeme, relevantne za reševanje sodobnih problemov v astrofiziki in fiziki.	Students will learn mathematical tools and approaches, relevant for solving open problems of astrophysics and physics.

Metode poučevanja in učenja	**Learning and teaching methods**
- predavanja	- lectures

Načini ocenjevanja	**Utež / Weight (%)**	**Assessment**
- ustni izpit	100	- oral exam

Reference nosilca / references of the course principal
Dr. Andriy Zagorodnyuk je pridruženi profesor za področje fizike na Univerzi v Novi Gorici. Dr. Andriy Zagorodnyuk is an Adjunct professor of physics at the University of Nova Gorica.