

## UČNI NAČRT PREDMETA / COURSE SYLLABUS

<b>Predmet:</b>	SODOBNA FILOZOFSKA KOZMOLOGIJA
<b>Course title:</b>	CONTEMPORARY PHILOSOPHICAL COSMOLOGY

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Filozofija, II. stopnja/ Philosophy, 2nd level	Filozofske perspektive / Philosophical Perspectives	1.	2. (poletni / summer)

**Vrsta predmeta / Course type** strokovni izbirni / professional elective

**Univerzitetna koda predmeta / University course code:**

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30	-	-	-	-	-	3

**Nosilec predmeta / Lecturer:** Red. prof. dr. Marko Uršič / Prof. Marko Uršič, Ph.D

<b>Jeziki / Languages:</b>	<b>Predavanja / Lectures:</b>	slovenski / Slovene
	<b>Vaje / Tutorial:</b>	-

**Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:**

pogoji za vpis v ustrezni letnik študija

**Prerequisites:**

matriculation into the adequate year of the study programme

**Vsebina:**

Predmet *Sodobna filozofska kozmologija* predstavi študentom sodobno kozmologijo predvsem s filozofskega zornega kota. Najprej se seznanijo z osnovnimi idejami »standardnega kozmološkega modela« (tj. s kozmologijo »prapoka«), glavni namen predmeta pa je pokazati in razvijati povezanost med znanstveno in filozofsko kozmologijo, tako v metodološkem kot v tematskem smislu, pri čemer gre tudi za *iskanje smisla* v sodobni kozmologiji, za njen *logos* in *telos*. Nekaj glavnih tematskih sklopov: vprašanje neskončnosti vs. končnosti vesoljnega prostora-časa, filozofska analiza teorij o mnogih vesoljih (»multiverzumu«), epistemološki premislek o kozmološkem »antropičnem načelu«, vprašanje

**Content (Syllabus outline):**

This course presents to the students the modern cosmology especially from the philosophical point of view. At the beginning they learn the basic issues of the »standard cosmological model« (i.e., the cosmology of »Big Bang«), however, the principal aim of this course is to present and develop the interdependence between scientific and philosophical cosmology in methodological as well as in thematic connections. A philosophical *quest of sense* in modern cosmic theories is also suggested, by seeking of its *logos* and *telos*. Some principal issues are: infinity vs. finiteness of the cosmic space-time, philosophical analysis of the recent theories of multiverse(s), epistemological reflections about the »Anthropic Principle«, questions concerning origins

nastanka življenja in možnost drugih oblik življenja v vesolju, teorije kompleksnosti in emergence, lepota in sublimnost neba, odnos med naravo in duhom, med evolucionizmom in kreacionizmom. Predavatelj se zavzema za enost narave in duha, za »tretjo pot« med ateizmom in teizmom, za kozmološki »evolucijski panteizem«.

of life and the possibility of other forms of life in cosmos, theories of complexity and emergence, beauty and sublimity of the sky, relations between nature and mind, evolutionism and creationism. The main point of the lecturer is the unity of nature and mind, he seeks the »third way« between atheism and theism, some kind of »evolutionary pantheism«.

### Temeljni literatura in viri / Readings:

1. Uršič, Marko: *Daljna bližina neba (Štirje časi – Jesen)*, Cankarjeva založba, Ljubljana, 2010 (izbor).
2. Davies, Paul: *Zlatolaskina uganka*, Modrijan, Lj., 2010 (izbor).
3. Greene, Brian: *Tkanina vesolja*, Učila, Tržič, 2006 (izbor).
4. Hawking, Stephen: *Vesolje v orehovi lupini*, Učila, Tržič, 2004.
5. *Modern Cosmology and Philosophy*, ur. J. Leslie, Prometheus Books, New York, 1998 (izbor).
6. *Universe or Multiverse?*, ur. B. Carr, Cambridge University Press, Cambridge, 2007 (izbor).
7. *God and Evolution*, ur. M.K.Cunningham, Routledge, London, 2007 (izbor).

### Cilji in kompetence:

Predmet razvija sistematično in poglobljeno refleksijo o filozofskih vidikih sodobne kozmologije, metodološko povezuje analizo in sintezo, naravoslovno in fenomenološko obravnavo ter se usmerja k iskanju *smisla* v sodobnih kozmoloških dognanjih in iskanju novega *etosa*, ki ga ta spoznanja implicirajo.

S študijem sodobne filozofske kozmologije se pogloblja znanje na področju filozofije narave, filozofije prostora/časa, filozofije znanosti ipd. Predmet je izrazito *interdisciplinaren*, namenjen tudi širšemu krogu študentov, tako humanistike kot naravoslovja, še posebej študentom fizike in astronomije.

Predmet je nadgradnja predmeta *Filozofija narave* (na prvi stopnji) in se vsebinsko dopolnjuje tudi s predmetom *Filozofija prostora in časa* (na drugi stopnji).

### Objectives and competences:

This course develops a systematic and enhanced reflection about several philosophical issues of modern cosmology; from the methodological point of view, it connects analysis and synthesis, analytic and phenomenological approaches, and it directs attention to the searching of *sense* in modern cosmological discoveries, also claiming to the search of new *ethos* which follows from these scientific results.

By studies in contemporary philosophical cosmology, students also deepen their knowledge of philosophy of nature, theories of space-time etc. This course is distinctly *interdisciplinary*, it is offered also to the broader circle of students of humanistic as well as natural sciences, especially to the students of physics and astronomy.

It develops the thematic subjects of *Philosophy of Nature* (in the 1st level of philosophy) and it is connected also with the course *Philosophy of Space and Time* (in the 2nd level, Philosophical Perspectives).

### Predvideni študijski rezultati:

Znanje in razumevanje:  
Študentje spoznajo osnove sodobne kozmologije, nastanek in razvoj standardnega kozmološkega modela. Razumejo odnose med teorijami in izkustvom ter med znanstvenimi modeli in filozofskimi interpretacijami. Spoznajo glavne *filozofske* razsežnosti sodobne kozmologije.

### Intended learning outcomes:

Knowledge and understanding:  
Students learn the elements of modern cosmology, basic features of the standard cosmological model. They get to understand better the relations between theories and experimental data, between scientific models and philosophical interpretations. They reflect upon the main *philosophical* issues of modern cosmology.

**Metode poučevanja in učenja:****Learning and teaching methods:**

Predavanja s prezentacijo snovi v PowerPoint tehniki in individualne konzultacije. Osnovna literatura je predavateljeva knjiga *Daljna bližina neba* (2010), vse gradivo z zaslonov je dostopno tudi na predavateljevi osebni spletni strani.

Lectures with presentations on the screen (the presented material is available to students also in the web page of this course), discussions about more difficult segments of the lectured topics; individual reading of literature, especially of the lecturer's comprehensive book *Daljna bližina neba* (*The Distant Closeness of the Sky*, 2010, see below).

Delež (v %) /

**Načini ocenjevanja:**

Weight (in %)

**Assessment:**

Sodelovanje pri predavanjih (z vprašanji ipd.), obseg individualnega študija literature, znanje na ustni izpit.

Predavanja / lectures 20%,  
ustni izpit / oral examination 80% .

Active participation in lectures (also with questions etc.), individual readings of literature, final oral exam.

**Reference nosilca / Lecturer's references:**

1) URŠIČ, Marko. *Daljna bližina neba : človek in kozmos*. 1. izd. Ljubljana: Cankarjeva založba, 2010. 700 str., XVI str. pril., ilustr. ISBN 978-961-231-767-6. [COBISS.SI-ID [249923072](#)]

2) URŠIČ, Marko. Paradoksi transfinitne kozmologije. *Analiza (Ljubl.)*, 2009, letn. 13, št. 4, str. 5-27. [COBISS.SI-ID [64291329](#)]

3) URŠIČ, Marko. "Cogito ergo mundus talis est" : on some metaphysical and epistemological aspects of the anthropic cosmological principle. *Acta anal.*, 2002, vol. 17, issue 28, str. [53]-67. [COBISS.SI-ID [22654050](#)]