COURSE TITLE	COSMOLOGY					
Code	KBF: 105 ISVU: 82135	Year of study	I			
Course teacher/s	Full professor Ivan Tadić, Ph.D.	Credit (ECTS)	3			
Assistants		Type of instruction (number of hours per semester)	L	S	E	F
			30			
Course status	Core course	Percentage of e-learning implementation				

COURSE DESCRIPTION	
Course goals	Student should gain insight into the history of the universe and its understanding, a contemporary scientific view on its origin and interpretation.
Course enrollment requirements and core competencies	
Expected learning outcomes at the course level (4-10 learning outcomes)	Having successfully completed the course a student should be able to: 1. Interpret the evolution of theories about the origin of the universe throughout the history. 2. Present main novelties causing the scientific shift. 3. Discern difficulties and new scientific theories of Galileo. 4. Interpret the Big Bang theory of the origin of the universe. 5. Briefly describe the main forces in the universe. 6. Describe the phenomenon of the expanding universe within its spatial form and density.
Detailed course content (weekly class schedule)	Relationship between human and world (2); Presocratic Cosmologies (1); Plato's cosmology (3); Eudoxus and Calippus cosmology (2); Aristotle's view of the world (2); Ideas on heliocentric system of the world, the epicycle, the eccentric and the equant (1); Ptolemy (1); the scientific shift, in general (2); Nicolaus Copernicus (3); Tycho Brahe (1); Johannes Kepler (1); Galileo Galilei and contemporary views of the Church on this matter (3); Isaac Newton (1); contemporary cosmology (2); elementary particles and forces of the universe (1); spatial image of the world (1); the Big Bang Theory (3).
Format of course instruction::	☒ lectures ☐ seminars and workshops ☐ exercises ☐ *on line* entirely	☐ individual tasks ☐ multimedia ☐ mentorship work ☐ (other)
Student obligations	Regular class attendance and active participation	

Screening student work (specify *portion in ECTS credits per each activity so that total number of ECTS credits corresponds to the ECTS credit value of the course)*						
	Class attendance	1,0	Research		Practical training	
	Experimental work		Written representation		(Other)	
	Essay		Seminar essay		(Other)	
	Mid-term exams	1,0	Oral exam	0,5	(Other)	
	Written exam	0,5	Project		(Other)	

Grading and evaluation of student work in class and at the final exam	Mid-term exam 50% Final exam 50 %

Obligatory literature	**Title**	**Number of**	**Availability via**

<table>
<tr><td rowspan="5">(available in the library or via other media)</td><td></td><td>copies in the library</td><td>other media</td></tr>
<tr><td>S. W. Hawking, Kratka povijest vremena, Izvori, Zagreb, 1996.</td><td>1</td><td></td></tr>
<tr><td>S. Weinberg, Prve tri minute, Izvori, Zagreb, 1998.</td><td></td><td></td></tr>
<tr><td>V. Bajsić, Granična pitanja religije i znanosti, KS, Zagreb, 1998.</td><td>5</td><td></td></tr>
<tr><td>D. Lambert, Znanosti i teologija. Oblici dijaloga, KS, Zagreb, 2003.</td><td>1</td><td></td></tr>
<tr><td>Supplementary literature</td><td colspan="3">F. Selvaggi, Filosofia del mondo. Cosmologia filosofica, PUG, Roma, 1985., str. 1-591.
B. Van Hages, Filosofia della natura, PUU, Roma, 1983., str. 1-224.
P. Maffei, L'universo nel tempo, Mondadori, Milano, 1982., str. 1-391.
TH. S. Kuhn, Struktura znanstvenih revolucija, Jesenski i Turk, Zagreb, 2002^{2}., str. 1-243.
S. L. Jaki, Dio e i cosmologi, LEV, Città del Vaticano 1991., str. ; 1-238.
T. Petković, Uvod u modernu kozmologiju i filozofiju, Gradska knjižnica “Juraj Šižgorić”, Šibenik – Element, Zagreb, 2001., str. 1-59, 179-202.
Simone Morandi, Teologija i fizika, KS, Zagreb, 2012.</td></tr>
<tr><td>Quality assurance methods aimed at ensuring the acquisition of defined learning outcomes</td><td colspan="3">Lectures, consultations, student attendance register and participation in discussions, mid-term exam and final exam.</td></tr>
<tr><td>Other (according to the opinion of education provider)</td><td colspan="3"></td></tr>
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