

Svaki novi izborni predmet za ak. god. 2017./2018. treba biti napisan u ovoj tablici na HR i EN jeziku

Naziv predmeta			PREGLED ODABRANIH POGLAVLJA IZ FIZIKE				
Kod	PO-ST	Godina studija	1.				
Nositelj/i predmeta	Marija Raguž	Bodovna vrijednost (ECTS)	2				
Suradnici	Zvonimir Boban Danijel Nejašmić	Način izvođenja nastave (broj sati u semestru)	P	S	V	T	
			8	8	9		
Status predmeta	Izborni	Postotak primjene e-učenja	0				
OPIS PREDMETA							
Ciljevi predmeta	Kratak pregled predznanja fizike potrebnog za uspješno savladavanje gradiva predmeta Medicinska fizika i biofizika. Predmet se preporučuje svim studentima s lošijim predznanjem iz fizike i/ili matematike.						
Uvjeti za upis predmeta i ulazne kompetencije potrebne za predmet	Nema						
Očekivani ishodi učenja na razini predmeta (4-10 ishoda učenja)	Sposobnost primjene koncepata fizike u proučavanju načina funkcioniranja ljudskog tijela i primjene dijagnostičkih metoda: 1. Medicinski ultrazvuk 2. Radiologija 3. Slikovne tehnike u nuklearnoj medicini 4. Funkcije ljudska osjetila 5. Srce i cirkulacija 6. Biomehanika						
Sadržaj predmeta detaljno razrađen prema satnici nastave	1. Elementarna matematika 2S+1V 2. Struktura tvari 1S 3. Fizikalne veličine 1S 4. Klasična mehanika 2P+1S+2V 5. Rotacija, kruta tijela 1P+1V 6. Deformacije, elastičnost 1P 7. Mehanički valovi 1S+1V 8. Elektromagnetizam 3P+2V 9. Geometrijska optika 1S+1V 10. Termodinamika 1S 11. Fluidi 1P+1V						
Vrste izvođenja nastave:	X predavanja X seminari X vježbe						
Obveze studenata	Pročitati priložene materijale.						
Praćenje rada studenata ( <i>upisati udio u ECTS bodovima za svaku aktivnost tako da ukupni broj ECTS bodova odgovara bodovnoj vrijednosti predmeta</i> ):	Pisana provjera znanja (2 ECTS)						

Ocjenjivanje i vrjednovanje rada studenata tijekom nastave i na završnom ispitu	Pisani ispit, rasprave tokom nastave		
Obvezna literatura (dostupna u knjižnici i putem ostalih medija)	Naslov	Broj primjeraka u knjižnici	Dostupnost putem ostalih medija
	Halliday D, Resnick R, Walker J, Fundamentals of Physics Extended (10th edition), John Wiley & Sons, Inc., 2014.		Da
	Hewitt PG, Conceptual Physic, Pearson <b>Addison Wesley</b> , 2006.		Da
	Young HD, Freedman RA, University Physics (13th edition), Pearson <b>Addison Wesley</b> , 2012.		Da
Dopunska literatura			
Načini praćenja kvalitete koji osiguravaju stjecanje utvrđenih ishoda učenja			
Ostalo (prema mišljenju predlagatelja)			

NAME OF THE COURSE		PHYSICS OVERVIEW (SELECTED TOPICS)																										
Code	PO-ST	Year of study	1																									
Course teacher	Marija Raguž	Credits (ECTS)	2																									
Associate teachers	Zvonimir Boban	Type of instruction (number of hours)	L	S	E	F																						
	Danijel Nejašmić		8	8	9																							
Status of the course	Elective	Percentage of application of e-learning	0																									
COURSE DESCRIPTION																												
Course objectives	Brief overview of the physical backgrounds necessary for successful attendance of the course: Medical physics and biophysics. It is recommended for all students with none or insufficient backgrounds in physics and (or) mathematics.																											
Course enrolment requirements and entry competences required for the course	None																											
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Competence in application of physics to study of human body and diagnostic tools in terms of: <ol style="list-style-type: none"> <li>1. Medical ultrasound</li> <li>2. Radiology</li> <li>3. Nuclear medicine imaging</li> <li>4. Human sensory functions</li> <li>5. Function of heart and circulation</li> <li>6. Biomechanics</li> </ol>																											
Course content broken down in detail by weekly class schedule (syllabus)	<table border="0"> <tr><td>12. Elementary mathematics</td><td>2S+1E</td></tr> <tr><td>13. Structure of matter</td><td>1S</td></tr> <tr><td>14. Physical quantities</td><td>1S</td></tr> <tr><td>15. Classical mechanics</td><td>2L+1S+2E</td></tr> <tr><td>16. Rotation, rigid body</td><td>1L+1E</td></tr> <tr><td>17. Deformation, elasticity</td><td>1L</td></tr> <tr><td>18. Mechanical waves</td><td>1S+1E</td></tr> <tr><td>19. Electromagnetism</td><td>3L+2E</td></tr> <tr><td>20. Geometrical optics</td><td>1S+1E</td></tr> <tr><td>21. Thermodynamics</td><td>1S</td></tr> <tr><td>22. Fluids</td><td>1L+1E</td></tr> </table>						12. Elementary mathematics	2S+1E	13. Structure of matter	1S	14. Physical quantities	1S	15. Classical mechanics	2L+1S+2E	16. Rotation, rigid body	1L+1E	17. Deformation, elasticity	1L	18. Mechanical waves	1S+1E	19. Electromagnetism	3L+2E	20. Geometrical optics	1S+1E	21. Thermodynamics	1S	22. Fluids	1L+1E
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Format of instruction	x lectures x seminars x exercises																											
Student responsibilities	Read the provided materials.																											
Screening student work (name the	Written examination																											

<i>proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)</i>	(2 ECTS)					
Grading and evaluating student work in class and at the final exam	Written examination, in-course discussion					
Required literature (available in the library and via other media)	<b>Title</b>	<b>Number of copies in the library</b>		<b>Availability via other media</b>		
	Halliday D, Resnick R, Walker J, Fundamentals of Physics Extended (10th edition), John Wiley & Sons, Inc., 2014.			Yes		
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Optional literature (at the time of submission of study programme proposal)						
Quality assurance methods that ensure the acquisition of exit competences						
Other (as the proposer wishes to add)						