



Table 2

**3.2. Course description**

Basic description		
Course coordinator	Prof. dr. sc. Dragica Bobinac	
Course title	Biomechanics	
Study programme	Physiotherapy graduated study	
Course status	compulsory	
Year	2	
ECTS credits and teaching	ECTS student 's workload coefficient	3,5
	Number of hours (L+E+S)	15+10+30

1. COURSE DESCRIPTION		
1.1. Course objectives		
The objectives are the elements of mechanics and biomechanics. Mechanics of biological materials. Muscle contraction and mechanics. Scope of anthropometry on movement biomechanics. Kinematic. Kinetics. Kinesiological electromyography.		
1.2. Course enrolment requirements		
- Course enrolment requirements include		
1.3. Expected course learning outcomes		
Know theoretically and practically about statics, kinematic, dynamic and mechanic of material. Kinematics: direct measurement techniques, Imaging measurement techniques. Mechanics of biological materials: connective structures, cartilage, bone and muscles. Measurement and theory about body and muscle anthropometry. Kinetics: Forces and moments of forces. Electrophysiology of muscle contraction. Recording and processing of the EMG. Mechanical work, energy and power. Muscle mechanics: motor unit, contractile element, types of contraction contraction velocity		
1.4. Course content		
Mechanics: statics, kinematic, dynamic and mechanic of material. The elemnts of biomechanics: forces in biomechanics, center of mass of the body, equilibrium. Mechanics of biological materials connective structures, cartilage, bone and muscles.Scope of anthropometry : density, mass and inertial properties, experimental measurement, musvle anthropometry. Kinematics: direct measurement techniques, Imaging measurement techniques. Kinetics. Kineziological electromyography. Mechanical work, energy and power. Muscle mechanics: motor unit, contractile element, types of contraction contraction velocity		
1.5. Teaching methods	<input type="checkbox"/> x lectures <input type="checkbox"/> x seminars and workshops <input type="checkbox"/> x exercises <input type="checkbox"/> long distance education <input type="checkbox"/> fieldwork	<input type="checkbox"/> x individual assignment <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratories <input type="checkbox"/> x mentorship <input type="checkbox"/> other
1.6. Comments	Most teaching is carried out through field work	
1.7. Student's obligations		



Regular attendance to lectures, seminars and exercises. Preparation of the course content to be discussed during seminars and practicals.

*1.8. Evaluation of student's work*

Course attendance	5%	Activity/Participation	10%	Seminar paper		Experimental work	
Written exam	10%	Oral exam	20%	Essay		Research	
Project		Sustained knowledge check	55%	Report		Practice	
Portfolio							

*1.9. Assessment and evaluation of student's work during classes and on final exam*

Evaluation would be performed according the actual Rules on studies of University of Rijeka (approved by the Senat) and the Faculty of medicine (approved by the Faculty council). In this system, the overall students' outcome is made up 70% of their achievement during the course itself and 30% of the success in the final exam.

Achievements during the course will be evaluated by: a) sustained knowledge check (partial tests, partial exams and other activities in classes), b) activity during the course, c) seminar paper or presentation, d) course attendance

*1.10. Assigned reading (at the time of the submission of study programme proposal)*

Study programs, which are outside of recommended books, will be presented as additional literature on web pages of the Department.

*1.11. Optional / additional reading (at the time of proposing study programme)*

*1.12. Number of assigned reading copies with regard to the number of students currently attending the course*

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Title	Number of copies	Number of students

*1.13. Quality monitoring methods which ensure acquirement of output knowledge, skills and competences*