

Add. 3		Course program for the first, second and third level (cycle) of studies			
1.	Course title	STATICS			
2.	Code	298			
3.	Study group(s)	PI, TML, TI, HIMV, MSKI, IIM, MV, EE, MHT, AUS			
4.	The organizer of the study program (unit, institute, department)	Faculty of Mechanical Engineering - Skopje, Ss. Cyril and Methodius University in Skopje			
5.	Level (first, second, third)	First			
6.	Academic year / semester	Winter term	7.	ECTS credits	6
8.	Instructor	Prof. Ivan Mickoski, Ph. D. Prof. Dame Korunoski, Ph. D. Associate prof. Zlatko Petreski, Ph. D.			
9.	Prerequisites	/			
10.	<p>Course objectives (competences):</p> <p>Developing an ability for methodological approach for solving problems in Statics. Understanding the concept of forces and moments, composition alignment, decomposition and reduction of forces. Ability for release unfree (connected) parts and solve systems of forces in equilibrium with involvement of the friction. Determination of forces in the constraints and internal forces in structures (beams, bars, frames, chains). Calculation for center of gravity and the geometric characteristics of volumes, surfaces and lines.</p>				
11.	<p>Course content:</p> <p>Basic principles in mechanics, units of measure and measurement systems. Vector force: scalars and vectors, operations with vectors, scalar product (dot product). Forces at a point: conditions of point equilibrium, types of connections and release unfree elements (parts), determining the resultant force. Moment of force: vector product (cross product), static point-scalar and vector formulation, the main point, the moment of force in relation to the axis coupling of forces, force reduction, alignment for simplify the system. Equilibrium, release of ties and conditions of Equilibrium of the parts (elements). Analysis of structures: simple beams, frames, chains, elements of structures and machines. Internal forces: axial, shear and moment diagram. Relationship between load, transverse force and moment. Center of gravity of the body volume, surface and lines. Moment of inertia. Steiner's theorem.</p>				
12.	<p>Study methods:</p> <p>interactive lectures, auditory practice and/or laboratory practice, self-running and/or team work projects, self-learning</p>				
13.	Total hours	6 ECTS x 30 Hours = 180 Hours			
14.	Hours allocation per activity:	30 + 45 + 0 + 45 + 60 = 180 Hours			
15.	Lectures/Lab	15.1.	Lectures	30 Hours	
		15.2.	Lab (student work)	45 Hours	
16.	Project Work/Assignments	16.1.	Project assignments	0	
		16.2.	Individual assignments	45 Hours	
		16.3.	Self-study	60 Hours	
17.	Points/Marks:				
	17.1.	Tests	80 points		
	17.2.	Projects	15 points		
	17.3.	Attendance	5 points		
18.	Grading scale	Under 50		5 (five) (F)	
		51 - 60 points		6 (six) (E)	
		61 - 70 points		7 (seven) (D)	

		71 - 80 points	8 (eight) (C)
		81 - 90 points	9 (nine) (B)
		91 - 100 points	10 (ten) (A)
19.	Prerequisites for taking the final exam	completed activitie 16.2	
20.	Language of Instruction	Macedonian	
21.	Course evaluation	Student questionnaire	

22.	Textbooks				
	Instruction materials				
	No.	Author	Title	Publisher	Year
22.1.	1.	Ivan Mickoski Dame Korunoski Zlatko Petreski	Lectures	/	2011
	2.	Viktor Gavriloski Zaltko Petreski Hristijan Mickoski	Statics – exams	Script, Faculty of Mechanical Engineering - Skopje	2007
	3.	Ivan Mickoski Hristijan Mickoski	Statics – exams, e-script	Script, Faculty of Mechanical Engineering - Skopje	2011
	Supplemental Instruction Materials				
	No.	Author	Title	Publisher	Year
22.2.	1.	J.L. Meriam, L.G. Kraige	Engineering Mechanics STATICS	John Wiley & Sons	2002
	2.	R.C. Hibbeler	Engineering Mechanics STATICS	Prentice Hall 2009	
	3.	R.C. Hibbeler	Engineering mechanics STATICS, Solution Manual	Prentice Hall 2009	2007