

<b>Add. 3</b>		<b>Course program for the second level (second cycle - postgraduate) of studies</b>			
1.	Course title	Energy vs. Sustainable Development: Concepts and Aspects			
2.	Code	1M6SEE07			
3.	Study group(s)	SEE			
4.	The organizer of the study program (unit, institute, department)	"Ss. Cyril and Methodius" University in Skopje, Faculty of Mechanical Engineering - Skopje			
5.	Level (first, second, third degree)	Second			
6.	Academic year / semester	V / summer	7.	ECTS credits	6
8.	Professor	Ass. prof. dr. Ana M. Lazarevska			
9.	Prerequisites for enrolling the course	None			
10.	Course objectives (competences): Introduction to the sustainability concept and aspects implemented on energy systems, both on the demand and the supply side.				
11.	Course content: Introduction to the concept of Sustainable Development (SD), Indicators of SD Implementing the SD concept to energy systems. Modeling and assessment.				
12.	Study methods: Interactive lectures, guest lecturers, auditory practice, work on project assignments/case studies (team work), selfrunning assignments				
13.	Total hours	6 ECTS x 30 = 180 hours			
14.	Hours allocation per activity:	30 +15 +40 + 30 + 65 =180 hours			
15.	Lectures/Lab	15.1.	Lectures (15 weeks x 2)	30	
		15.2.	Lab (student work)	15	
16.	Project Work/Assignments	16.1.	Project assignments	40	
		16.2.	Individual assignments	30	
		16.3.	Self-study	65	
17.	Points/Marks:				
	17.1.	Exams			40
	17.2.	Projects			50
	17.3.	Attendance			10
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 activity 15.2, 16.1. and 16.2 (17.2 & 17.3)			
20.	Language of Instruction	English			
21.	Course evaluation	Student questionnaire			
22.	Textbooks				

22.1	Instruction materials				
	No.	Author	Title	Publisher	Year
	1.	S. Bell, S. Morse	Sustainability Indicators: Measuring the immeasurable	EarthScan Publications. Ltd.	2000
2.	T.E. Graedel, B. R. Allenby	Industrial Ecology	Pearson Education Inc.	2003	
22.2	Supplemental Instruction Materials				
	No.	Author	Title	Publisher	Year
	1.	UN CSD	Sustainable Development Knowledge platform	UN	
	2	Organisation of Economic Co-operation and Development (OECD)	“Core Set of Indicators for Environmental Performance Reviews”. A synthesis report by the Group on the State of the Environment.	Paris: 39	1993
	3	Golay, M., Field, R., Green, Jr. W., Wright, J.C.	Introduction to Sustainable Energy (Online open course-materials)	MIT ( <a href="http://ocw.mit.edu/courses/nuclear-engineering/22-081j-introduction-to-sustainable-energy-fall-2010/">http://ocw.mit.edu/courses/nuclear-engineering/22-081j-introduction-to-sustainable-energy-fall-2010/</a> )	2010
4	D. A. Vallero, P. A. Vesilind	Socially Responsible Engineering: Justice in Risk Management	John Wiley & Sons Inc.,	2007	