1.	Course title	Image Processing		
2.	Course code	INF-I-03		
3.	Study program	Informatics and Computer Engineering		
4.	Unit offering the course	**FCSE**		
5.	Undergraduate/postgraduate/PhD	**Undergraduate**		
6.	Year/semester	7. ECTS: **6**		
8.	Teacher(s)	assist. prof. dr. Ivica Dimitrovski		
9.	Course prerequisites	/		
10.	Goals (competences): Upon the completion of the course the student is expected to rule and use the basic tools and methods for image processing.			
11.	Course content: Introduction. Computer Graphics. Image processing. Computer vision. Image processing programs. The basics of digital image processing. Representation and digitalization of images. Tools and programs for digital image processing. Basic commands in Matlab, elementary functions, variables, vectors, matrices. Operations with images in Matlab. Supported image formats and their conversion. Analysis, transformation and visualization of images in Matlab. Statistical processing operations on images. Image enhancement using filtering and segmentation. Image processing using Photoshop, basic screen, basic tools, settings, resolutions, backgrounds and units. Working with files. Tools for drawing, toning, focus and labelling. Transformations, effects, filters and deformation. Theory of colour. Colour correction and special effects.			
12.	Teaching methods: Lectures supported by presentations with slides, interactive lectures, exercises (use of equipment and software packages), real life examples, invited guest lecturers, preparation and defence of a project work and seminar thesis, learning in an e-environment (forums, consultations).			
13.	Total available time	6 ECTS x 30 hours = 180 hours		
14.	Distribution of the available time	30 + 45 + 35 + 35 + 35 = 180 hours		
15.	Teaching activities	15.1.	Lectures	30 hours
		15.2.	Training (labs, problem solving), seminar and team work	45 hours
16.	Other activities	16.1.	Project work	45 hours
		16.2.	Self study	45 hours
		16.3.	Home work	45 hours
17.	Grading			
	17.1.	Tests		65 points
	17.2.	Seminar work/project (written or oral presentation)		25 points

	17.3.	Active participation		10 points
18.	Grading criteria		to 59 points	5 (five) (F)
			from 60 to 68 points	6 (six) (E)
			from 69 to 76 points	7 (seven) (D)
			from 77 to 84 points	8 (eight) (C)
			from 85 to 92 points	9 (nine) (B)
			from 93 to 100 points	10 (ten) (A)
19.	Final exam prerequisites		Completed activities 15.1 and 15.2	
20.	Course language		Macedonian and English	
21.	Quality assurance methods		Internal evaluation mechanisms supported by student polls	

22. Literature

22.1. Compulsory

No.	Authors	Title	Publisher	Year
1.	Rafael C. Gonzalez, Richard E. Woods	Digital Image Processing, 3rd edition	Prentice Hall	2008
2.	Chris Solomon, Toby Breckon	Fundamentals of Digital Image Processing: A Practical Approach with Examples in Matlab	Wiley	2011
3.				

22.2. Mandatory

No.	Authors	Title	Publisher	Year
1.				
2.				
3.				