

University "Goce Delchev" Stip
Faculty of Computer Science



ELABORATE
for accreditation of study program in
Business Informatics

**UNDERGRADUATE STUDY PROGRAM BUSINESS INFORMATICS,
FACULTY OF COMPUTER SCIENCE, UGD – STIP
4 YEARS STUDY PROGRAM (240 ECTS)**

2016 / 2017

I SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
2FI100112	Mathematics I	8	3+2+2	240
2FI100212	Fundamentals of Computer Programming	6	2+2+1	180
	Fundamentals of Economics	6	2+2+1	180
2FI130112	Introduction to Computer science	6	2+2+1	180
	Faculty elective course EF	4	2+1+1	120
Total:		30	11+9+6	900

I SEMESTER				
Faculty elective courses EF				
CODE	COURSE	ECTS	Classes	Semester workload
4EK130412	E-business	4	2+1+1	120
4EK132112	Entrepreneurship	4	2+1+1	120

II SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
2FI100412	Mathematics II	6	2+2+1	180
2FI100512	Object-oriented Programming	6	2+2+1	180
	Management	6	2+2+1	180
	Faculty elective course EF	6	2+2+1	180
	University elective course	4	0+0+4	120
2FI135212	Practical training	2	0+0+2	60
	Sport and Recreation **	/	0+0+2	/
Total:		30	8+8+12	900

** Signature is required for enrollment in second year of the study program

II SEMESTER				
Faculty elective courses EF				
CODE	COURSE	ECTS	Classes	Semester workload
4EK120112	Financial Accounting	6	2+2+1	180
	Microeconomics	6	2+2+1	180

III SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
2FI100712	Data Structures and Algorithms	6	2+2+1	180
2FI101212	Software Engineering	6	2+2+1	180
2FI130712	Probability and Statistics	6	2+2+1	180
	Finance	6	2+2+1	180
	Faculty elective course EF	6	2+2+1	180
Total:		30	10+10+5	900

III SEMESTER				
Faculty elective courses EF				
CODE	COURSE	ECTS	Classes	Semester workload
	Money and Banking	6	2+2+1	180
	Economics of Innovation	6	2+2+1	180

IV SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
2FI101012	Database Systems	6	2+2+1	180
	Financial Mathematics	6	2+2+1	180
2FI102012	Information Systems	6	2+2+1	180
2FI100812	Visual Programming	6	2+2+1	180
	University elective course	4	0+0+4	120
2FI135212	Practical training	2	0+0+2	60
Total:		30	8+8+10	900

V SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
2FI101412	Internet Programming	6	2+2+1	180
	Marketing	6	2+2+1	180
2FI135312	Information visualization and design	6	2+2+1	180
	Faculty elective course CSF	6	2+2+1	180
	Faculty elective course EF	6	2+2+1	180
Total:		30	10+10+5	900

V CEMECTAP				
Faculty elective courses CSF				
CODE	COURSE	ECTS	Classes	Semester workload
2FI101712	Numerical Methods	6	2+2+1	180
2FI133612	Fundamentals of Operational Research	6	2+2+1	180

V CEMECTAP				
Faculty elective courses EF				
CODE	COURSE	ECTS	Classes	Semester workload
	Business Communication	6	2+2+1	180
	Management of Change	6	2+2+1	180

VI SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
	International Business	6	2+2+1	180
2FI101512	Operating Systems	6	2+2+1	180
	Faculty elective course CSF	6	2+2+1	180
	Faculty elective course EF	6	2+2+1	180
	University elective course	4	0+0+4	120
2FI135212	Practical training	2	0+0+2	60
Total:		30	8+8+10	900

VI SEMESTER				
Faculty elective courses CSF				
CODE	COURSE	ECTS	Classes	Semester workload
2FI101112	Computer Networks	6	2+2+1	180
2FI135512	E-society and Information Systems in the Public Sector	6	2+2+1	180
2FI132712	Human-Computer Interaction	6	2+2+1	180

VI SEMESTER				
Faculty elective courses EF				
CODE	COURSE	ECTS	Classes	Semester workload
	Applied Economics	6	2+2+1	180
	Financial Management	6	2+2+1	180
2FI141912	Fundamentals of Actuarial mathematics	6	2+2+1	180
	Tax Management	6	2+2+1	180

VII SEMESTER				
Mandatory courses				
CODE	COURSE	ECTS	Classes	Semester workload
2FI102112	Computer System Security	6	2+2+1	180
2FI135612	Analysis and Design of Information Systems	6	2+2+1	180
	Faculty elective course CSF	6	2+2+1	180
	Faculty elective course EF	6	2+2+1	180
	Faculty elective course EF	6	2+2+1	180
Total:		30	10+10+5	900

VII SEMESTER				
Faculty elective courses CSF				
CODE	C O U R S E	ECTS	Classes	Semester workload
2FI135812	Web Analytics and Data Mining	6	2+2+1	180
2FI132012	Multimedia	6	2+2+1	180
2FI134512	E-commerce	6	2+2+1	180
2FI132512	Information Storage and Management	6	2+2+1	180

VII SEMESTER				
Faculty elective courses EF				
CODE	C O U R S E	ECTS	Classes	Semester workload
	Internal Audit	6	2+2+1	180
	Accounting Control Systems	6	2+2+1	180
	Strategic Management	6	2+2+1	180

VIII SEMESTER				
Mandatory courses				
CODE	C O U R S E	ECTS	Classes	Semester workload
	<i>Graduation Thesis</i>	6	0+0+8	180
2FI135712	Project Management	6	2+2+1	180
	Faculty elective course CSF	6	2+2+1	180
	Faculty elective course EF	4	2+1+1	120
	University elective course	4	0+0+4	120
	Practical training	4	0+0+4	120
Total:		30	6+5+19	900

VIII SEMESTER				
Faculty elective courses CSF				
CODE	C O U R S E	ECTS	Classes	Semester workload
2FI133012	Cloud Infrastructure and Services	6	2+2+1	180
2FI102812	Distributed Computer Systems	6	2+2+1	180
2FI135912	Fundamentals of Information Retrieval	6	2+2+1	180

VIII SEMESTER				
Faculty elective courses EF				
CODE	C O U R S E	ECTS	Classes	Semester workload
	Management Accounting	4	2+1+1	120
	Comparative Accounting Systems	4	2+1+1	120
2FI142012	Economic - Mathematical Models	4	2+1+1	120
	Insurance	4	2+1+1	120

Code	List of university elective courses II, IV, VI and VIII semester			
	COURSE	ECTS	Classes	Semester workload
UGD100117	Macedonian literature and culture	4	0+0+4	120
UGD100217	Macedonian language, spelling and pronunciation	4	0+0+4	120
UGD100317	Etics	4	0+0+4	120
UGD100417	History of Macedonia	4	0+0+4	120
UGD100517	Copyright	4	0+0+4	120
UGD100617	Tolerance and conflict resolution	4	0+0+4	120
UGD100717	Business systems	4	0+0+4	120
UGD100817	Tourism industry	4	0+0+4	120
UGD100917	Entrepreneurship and Innovation	4	0+0+4	120
UGD101017	Management of self development and behavior	4	0+0+4	120
UGD101117	Business economy	4	0+0+4	120
UGD101217	Choral singing	4	0+0+4	120
UGD101317	Music and art	4	0+0+4	120
UGD101417	Introduction to the history of film	4	0+0+4	120
UGD101517	Screenwriting	4	0+0+4	120
UGD101617	Fundamentals of Drawing	4	0+0+4	120
UGD101717	History of classical painting	4	0+0+4	120
UGD101817	Health promotion	4	0+0+4	120
UGD101917	Oral health and hygiene	4	0+0+4	120
UGD102017	Precious and semi-precious minerals	4	0+0+4	120
UGD102117	Earth Science	4	0+0+4	120
UGD102217	Science of living world	4	0+0+4	120
UGD102317	Protection of the Environment	4	0+0+4	120
UGD102417	Intelligent electronic components and devices	4	0+0+4	120
UGD102517	Planning of an experiment	4	0+0+4	120
UGD102617	History of clothing	4	0+0+4	120
UGD102717	Management and quality control	4	0+0+4	120
UGD102817	Informatics	4	0+0+4	120
UGD102917	Programming Fundamentals	4	0+0+4	120