

Semester 1					
Polytechnic graduate professional st	Polytechnic graduate professional study programme specialization in Informatics Engineering elective courses				
P:mr.sc. Sergej Lugović MBA S:mag.oec Kristina Perec S: Olivera Međugorac S: Dinko Horvat struč.spec.ing.techn.inf.	Digital Economy	ECTS:5.0			
P:mr.sc. Sanja Bračun dipl.oec. P:dr.sc. Mladen Mauher prof.v.šk. A:mr.sc. Sanja Bračun dipl.oec. S:mr.sc. Sanja Bračun dipl.oec.	Asset Management	ECTS:5.0			
P: Vesna Alić-Kostešić dipl.ing.stroj. A: Vesna Alić-Kostešić dipl.ing.stroj.	IT Systems Management	ECTS:5.0			
P:dr.sc. Igor Urbiha prof.vis.šk. A:dr.sc. Igor Urbiha prof.vis.šk.	Mathematics	ECTS:5.0			
P:izv. prof. dr. sc. Petar Jandrić prof. v. šk. A:izv. prof. dr. sc. Petar Jandrić prof. v. šk.	Motivation and Team Work	ECTS:5.0			
P: Ljiljana Matuško Antonić S: Ljiljana Matuško Antonić	Business Ethics and Law	ECTS:5.0			
P: Maja Pauković L: Maja Pauković	Applied Statistics	ECTS:5.0			
P:dr.sc. Mladen Mauher prof.v.šk. L:Dr. sc. Aleksandar Stojanović pred.	Software Engineering and Information Systems	ECTS:5.0			
P: Vesna Alić-Kostešić dipl.ing.stroj. A: Vesna Alić-Kostešić dipl.ing.stroj. S: Vida Senci A: Hrvoje Rakić , dipl.ing.stroj., pred.	Project Management	ECTS:5.0			
P:dr.sc. Ljubivoj Cvitaš dipl.ing. P:mr. Alenka Poljičak dipl.oec., viši predavač A:dr.sc. Ljubivoj Cvitaš dipl.ing. S:dr.sc. Ljubivoj Cvitaš dipl.ing. A: Sanja Đonlić dipl. ing. stroj. (mag. ing. mech.) S: Sanja Đonlić dipl. ing. stroj. (mag. ing. mech.) A:mr. Alenka Poljičak dipl.oec., viši predavač S:mr. Alenka Poljičak dipl.oec., viši predavač	Quality Management	ECTS:5.0			
Polytechnic graduate professional st	udy programme specialization in Info	ormatics Engineering elective courses			
r: Ognjen Staničić dipl. ing. L: Ognjen Staničić dipl. ing.	RLIAGE	EC15:5.0			



Semester 2		
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P:izv. prof. dr. sc. Petar Jandrić prof. v. šk. A:izv. prof. dr. sc. Petar Jandrić prof. v. šk. S:izv. prof. dr. sc. Petar Jandrić prof. v. šk.	Digital culture	ECTS:6.0
P: Vesna Uglješić dipl. dizajner L: Vesna Uglješić dipl. dizajner		ECTS:6.0
P:Prof. dr. sc. Jana Žiljak Gršić , mag. design P: Aleksandra Bernašek Petrinec A: Ana Hoić A: Aleksandra Bernašek Petrinec	Documents and Securities Design	ECTS:6.0
P:Prof.dr.sc. Slavica Ćosović Bajić P: Sanja Kraljević , dipl.ing., v. pred. P: Milan Bajić A:Prof.dr.sc. Slavica Ćosović Bajić A: Milan Bajić L: Milan Bajić A: Sanja Kraljević , dipl.ing., v. pred.	Multimedia Systems	ECTS:6.0
P:izv. prof. dr. sc. Petar Jandrić prof. v. šk. A:izv. prof. dr. sc. Petar Jandrić prof. v. šk. S:izv. prof. dr. sc. Petar Jandrić prof. v. šk.	Basics of Digital Education	ECTS:6.0
P: Vesna Uglješić dipl. dizajner P:dr.sc. Maja Turčić pred. L: Vesna Uglješić dipl. dizajner L: Darija Ćutić , mag. ing. graph. techn.	Applied typography design	ECTS:6.0
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P: dr. sc. Darko Galinec , znan. sur., prof. v. š. A: Edmond Krusha , struč.spec.ing.techn.inf., predavač L: Edmond Krusha , struč.spec.ing.techn.inf., predavač	Business Information System architekture and integration	ECTS:6.0
P:mr.sc. Sergej Lugović MBA S: Dinko Horvat struč.spec.ing.techn.inf.	E-business, economics, organization and management	ECTS:6.0
P:mr.sc. Marinko Žagar viši predavač A:mr.sc. Marinko Žagar viši predavač S:mr.sc. Marinko Žagar viši predavač A: Domagoj Tuličić S: Domagoj Tuličić	Information security	ECTS:6.0
P:dr.sc. Mladen Mauher prof.v.šk. A: Edmond Krusha , struč.spec.ing.techn.inf., predavač L: Edmond Krusha , struč.spec.ing.techn.inf., predavač	Business Process Modeling	ECTS:6.0
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P:mr.sc. Marinko Žagar viši predavač A:mr.sc. Marinko Žagar viši predavač S:mr.sc. Marinko Žagar viši predavač A: Domagoj Tuličić S: Domagoj Tuličić	Information security	ECTS:6.0
P:dr.sc. Mladen Mauher prof.v.šk.	Office Business and Collaborative technology	ECTS:6.0



P:dr.sc. Mladen Mauher prof.v.šk.	Design and manage a portfolio of capital projects	ECTS:6.0
P:dr.sc. Mladen Mauher prof.v.šk.	Interoperability standards in systems management	ECTS:6.0
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P:dr.sc. Miroslav Mađarić dipl.inž.el. P:Prof. dr. sc. Miroslav Slamić profesor visoke škole L: Krešimir Majdenić	dr.sc. Miroslav Mađarić dipl.inž.el. Health Information Subsystems l Prof. dr. sc. Miroslav Slamić profesor soke škole Krešimir Majdenić	
P:dr.sc. Miroslav Mađarić dipl.inž.el. P:Prof. dr. sc. Miroslav Slamić profesor visoke škole L: Denis Jager L: Biserka Klarić	oslav Mađarić dipl.inž.el. Health Information Systems E sc. Miroslav Slamić profesor e ger Klarić	
P:mr.sc. Marinko Žagar viši predavač P:Prof. dr. sc. Miroslav Slamić profesor visoke škole	Security, interfaces and standardization in health IS	ECTS:6.0
P:Prof. dr. sc. Miroslav Slamić profesor visoke škole S:Prof. dr. sc. Miroslav Slamić profesor visoke škole S: Biserka Klarić		ECTS:6.0
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P: Vjeran Bušelić viši predavač A: Vjeran Bušelić viši predavač	Management Soft Skills	ECTS:6.0
P:v.pred. Aleksander Radovan , dipl. ing. L:v.pred. Aleksander Radovan , dipl. ing.	Java Programming	ECTS:6.0
P: Marijan Matić dipl.ing. A: Marijan Matić dipl.ing.	IT Systems Development and Implementation	ECTS:6.0



Semester 3		
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P:Prof.dr.sc. Slavica Ćosović Bajić P: Sanja Kraljević , dipl.ing., v. pred. P: Milan Bajić A:Prof.dr.sc. Slavica Ćosović Bajić A: Milan Bajić L: Milan Bajić A: Sanja Kraljević , dipl.ing., v. pred. L: Tamara Ivelja mag. ing. geod. et. geoinf.	Digital Image Processing	ECTS:6.0
P:izv. prof. dr. sc. Petar Jandrić prof. v. šk. A:izv. prof. dr. sc. Petar Jandrić prof. v. šk. S:izv. prof. dr. sc. Petar Jandrić prof. v. šk.	Instructional Design	ECTS:6.0
P: Mario Janković mag. ing. graph. techn. P:dr.sc. Maja Turčić pred. L:dr.sc. Maja Turčić pred. S:dr.sc. Maja Turčić pred. L: Mario Janković mag. ing. graph. techn. S: Mario Janković mag. ing. graph. techn.	Advanced Web Design	ECTS:6.0
P: Ivan Rajković	Multimedia Processing	ECTS:6.0
P:Prof. dr. sc. Jana Žiljak Gršić , mag. design P: Ana Hoić A: Ana Hoić S: Ana Hoić S: Ana Hoić	Innovation Engineering	ECTS:6.0
P:izv. prof. dr. sc. Petar Jandrić prof. v. šk. A:izv. prof. dr. sc. Petar Jandrić prof. v. šk. S:izv. prof. dr. sc. Petar Jandrić prof. v. šk.	Strategy and policy of digital education	ECTS:6.0
P:mr.sc. Sergej Lugović MBA L:mr.sc. Sergej Lugović MBA L:mag.oec Kristina Perec L: Dinko Horvat struč.spec.ing.techn.inf.	Strategic technological entrepreneurship	ECTS:6.0
Polytechnic graduate professional st	udy programme specialization in Info	rmatics Engineering elective courses
P:mr.sc. Marinko Žagar viši predavač L:mr.sc. Marinko Žagar viši predavač L:prof. Marta Alić	ERP and CRM business information systems	ECTS:6.0
P: Vjeran Bušelić viši predavač A: Vjeran Bušelić viši predavač S: Vjeran Bušelić viši predavač	E-marketing	ECTS:6.0
P:Prof. dr. sc. Goran Klepac Prof. v.š. L:Prof. dr. sc. Goran Klepac Prof. v.š.	Internet databases (NoSQL database in e- business)	ECTS:6.0
P: Željko Kovačević , struč.spec.ing.techn.inf. A: Željko Kovačević , struč.spec.ing.techn.inf. A: Martina Petrovečki struč.spec.ing.techn.inf.	Database modeling and administration	ECTS:6.0
P:dr.sc. Alen Šimec v. predavač L:dr.sc. Alen Šimec v. predavač L: Davor Lozić pred.	Advanced Web Services Programming (open-source,PHP)	ECTS:6.0
P:Prof. dr. sc. Goran Klepac Prof. v.š.	Business intelligence and big data	ECTS:6.0

A:Prof. dr. sc. Goran Klepac Prof. v.š. L:Prof. dr. sc. Goran Klepac Prof. v.š.	analytics	
P:mr.sc. Marinko Žagar viši predavač A:mr.sc. Marinko Žagar viši predavač L:mr.sc. Marinko Žagar viši predavač A: Edmond Krusha , struč.spec.ing.techn.inf., predavač L: Edmond Krusha , struč.spec.ing.techn.inf., predavač	Engineering and design of information systems	ECTS:6.0
P:Prof. dr. sc. Jana Žiljak Gršić , mag. design P: Ana Hoić A: Ana Hoić S: Ana Hoić	Innovation Engineering	ECTS:6.0
P:mr.sc. Sergej Lugović MBA L:mr.sc. Sergej Lugović MBA L:mag.oec Kristina Perec L: Dinko Horvat struč.spec.ing.techn.inf.	Strategic technological entrepreneurship	ECTS:6.0
Polytechnic graduate professional st	tudy programme specialization in Info	rmatics Engineering elective courses
P:Prof. dr. sc. Miroslav Slamić profesor visoke škole	Database and knowledge base in health care	ECTS:6.0
P:mr.sc. Marinko Žagar viši predavač L:mr.sc. Marinko Žagar viši predavač L:prof. Marta Alić	r.sc. Marinko Žagar viši predavač ERP and CRM business information r.sc. Marinko Žagar viši predavač systems of. Marta Alić	
P:Prof. dr. sc. Miroslav Slamić profesor visoke škole L: Biserka Klarić	Computerization of medical records and records	ECTS:6.0
P:Prof. dr. sc. Miroslav Slamić profesor visoke škole A:Prof. dr. sc. Miroslav Slamić profesor visoke škole A:dr.sc. Miroslav Mađarić dipl.inž.el. S:dr.sc. Miroslav Mađarić dipl.inž.el.	New technologies and trends in the e- Health	ECTS:6.0
P:Prof. dr. sc. Jana Žiljak Gršić , mag. design P: Ana Hoić A: Ana Hoić S: Ana Hoić S: Ana Hoić	Innovation Engineering	ECTS:6.0
P:mr.sc. Sergej Lugović MBA L:mr.sc. Sergej Lugović MBA L:mag.oec Kristina Perec L: Dinko Horvat struč.spec.ing.techn.inf.	Strategic technological entrepreneurship	ECTS:6.0
P:Prof. dr. sc. Miroslav Slamić profesor visoke škole P:dr.sc. Miroslav Mađarić dipl.inž.el. L: Ivica Gospočić	Service Management (ITSM) in healthcare	ECTS:6.0
P:dr.sc. Miroslav Mađarić dipl.inž.el. P:Prof. dr. sc. Miroslav Slamić profesor visoke škole L:Prof. dr. sc. Miroslav Slamić profesor visoke škole L:dr.sc. Miroslav Mađarić dipl.inž.el.	Health Care Information Systems life cycle	ECTS:6.0



Semester 4		
Polytechnic graduate professional st	tudy programme specialization in Info	rmatics Engineering elective courses
P:Prof. dr. sc. Miroslav Slamić profesor visoke škole	Graduation Thesis	ECTS:24.0
P: Doc. dr. sc. Lidija Tepeš Golubić v. pred. S: Sara Slamić Tarade struč. spec. rel. publ.	Methodology of professional and scientific research	ECTS:6.0



Semester 5



Semester 6

Study programme	for academic	year 2018/2019
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Code WEB/ISVU	24001/185934	ECTS	6.0	Academic year	2018/2019
Name			•	•	<u> </u>
Status	2nd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate profession ormatike) - elective cours atics Engineering (NOVI	al study programme spe se2nd semester - Polytec Izvanredni specijalisti in	ecialization in Informatics chnic graduate profession formatike) - elective cou	Engineering (NOVI nal study programme rse
Teaching mode	Lectures + exercises (a work at home	uditory + laboratory + s	seminar + metodology +	construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:1. Vesna Uglje Laboratory exercises: V	ešić dipl. dizajner Jesna Uglješić dipl. dizajr	ner		
Course objectives	To gain basic knowledg	e of digital media design	1		
Learning outcomes:	1.design a digital applic	cation. Level:6			
	2.analyze demands, ne 3.combine various meti 4.user experience desig 5.user interface design 6.information architectr 7.critically evaluate adv 8.make a 2D prototype 9.test the usability of d 10.integrate design prin 11.create animations a 12.present the designe	eds, goals and users. Le hods of design process. I gn. Level:6 . Level:6 vantages and disadvanta of application using pro igital product. Level:6 nciples for specific platfo nd transitions. Level:6 d product and explain its	vel:6 Level:6,7 ages of specific designs. totyping software. Level: rrm. Level:6,7 s functionality. Level:6,7	Level:7 :6	
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Demonstration Simulations Discussion Questions and answers Seminar, students pres Homework presentation	entation and discussion 1			
Methods of carrying out laboratory exercises	Laboratory exercises or Laboratory exercises, c Group problem solving Discussion, brainstormi Mind mapping	n laboratory equipment omputer simulations ng			
Course content lectures	1.Basic concepts and o 2.Analyzing demands a 3.User-centered design 4.User journey map, us 5.Methods of conceivin 6.Workflow, team comr 7.Information architecti 8.Wireframing, 2h, Lean 9.Interaction design#8 10.User experience desig 12.Prototyping, 2h, Lea 13.Digital product testii 14.Specific demands w 15.Student projects pre	verview of digital media nd defining the problem methodology, creating er flow#8232;, 2h, Learr g and elaborating desigr nunication and time mar ure, 2h, Learning outcon rning outcomes:1,5 232;, 2h, Learning outcos sign, 2h, Learning outcor n#8232;, 2h, Learning outcor nring outcomes:1,5,8,11 ng, 2h, Learning outcom hen designing for particu- esentation and discussion	design, 2h, Learning out #8232;, 2h, Learning ou personas#8232;, 2h, Lear ning outcomes:1,2,4 n ideas#8232;, 2h, Lear nagement#8232;, 2h, Lear nes:1,3,5,11 nes:1,3,4,9,11 utcomes:1,5,9,11	comes:1,7 tcomes:1,2,4 arning outcomes:1,2,3,4 ning outcomes:1,5 earning outcomes:1,3,7 Learning outcomes:1,4, utcomes:1,7,12	5,10,11
Course content laboratory	1. Choosing and defining 2. Topic research and an 3. User analysis, definin 4. Conception of possibl 5. Mapping user journey 6. Conceiving and elabo 7. Information architect 8. Wireframing, 2h, Lean 9. Presentation of the cc 10. Project developmen 11. Project developmen 12. Prototyping, 2h, Lean 13. Digital product testii 14. Adjusting design for 15. Student projects pre	g project topic#8232;, 2 nalysis, defining demanc g target groups, creating e solutions, 2h, Learning v, detailing user flow, 2h, rating design ideas usin- ure creation, 2h, Learnin rning outcomes:1,5 urrent stage of project, 2 t with focus on UX#8232 t with focus on UX#8232 t with focus on UI#8232, rning outcomes:1,5,8,11 ng, 2h, Learning outcom particular platforms#82 esentation and discussion	h, Learning outcomes:1, ls and goals#8232;, 2h, g personas, 2h, Learning j outcomes:1,3,4,5 Learning outcomes:1,2, g various methods, 2h, L g outcomes:1,5,6 h, Learning outcomes:1, 2;, 2h, Learning outcomes s:1,3,4,5,9 32;, 2h, Learning outcome m#8232;, 2h, Learning outcom	2 Learning outcomes:1,2,4 outcomes:1,2,3,4 ,4 .earning outcomes:1,5 ,7,12 .s:1,3,4,9,11 .s:1,5,9,11 mes:1,4,5,10,11 utcomes:1,7,12	
Required materials	Basic: classroom, black General purpose compu Whiteboard with marke Overhead projector Special equipment specialised software for	board, chalk uter laboratory ers r design and prototyping			

Exam literature	D. Pasztor: Product Design, UX Studio, 2017.			
	A. Kholmatova: Design Systems, S	Smashing Media AG, 2017.		
	K. McElroy: Prototyping for Design	K. McElroy: Prototyping for Designers, OReilly Media, 2017.		
	J. Schneider: Understanding Desig	n Thinking, Lean, and Agile, OReilly Media, 2017.		
	D. Hanington: Universal Methods	of Design, Rockport Publishers, 2012.		
Students obligations	Regular attendance of lectures an	nd lab exercises (70%); all project elements handed in		
Knowledge	Submitting and presenting project	t elements		
evaluation during				
semester				
Knowledge	Presentation and defense of desig	jner project; oral exam		
evaluation after				
semester				
Student activities:	Aktivnost	ECTS		
	(Oral exam)	2		
	(Project)	2		
	(Research)	2		
Remark	This course can be used for final t	hesis theme		
Prerequisites:	No prerequisites.			
Proposal made by	Vesna Uglješić, 15.6.2018			

Code WEB/ISVU	23175/130946	ECTS	6.0	Academic year	2018/2019
Name	Advanced Web Design				
Status	3rd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate profession ormatike) - elective cours natics Engineering (NOVI	al study programme spe e3rd semester - Polytec Izvanredni specijalisti in	ecialization in Informatics hnic graduate profession formatike) - elective cou	Engineering (NOVI ial study programme rse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	eminar + metodology +	- construction)	30+30 (0+15+15+0) 120
Teachers	Lectures:1. dr.sc. Maja Lectures: Mario Jankov Laboratory exercises: N Laboratory exercises:d Seminar exercises: Ma Seminar exercises:dr.s	Turčić pred. ić mag. ing. graph. techn Mario Janković mag. ing. Ir.sc. Maja Turčić pred. rio Janković mag. ing. gra c. Maja Turčić pred.	graph. techn. aph. techn.		
Course objectives	Gaining knowledge in t	the area of advanced wel	o technologies		
Learning outcomes:	1.differentiate differen 2.integrate semantic H 3.organise the separat 4.estimate the use of C 5.design a responsive 6.integrate scalable an 7.relate e-literature an 8.organise content cen 9.present one's project 10.categorize web tech 11.analyse the importa	t web technologies and t ITML5 elements into the s ion of presentation part of CSS3 language on the int web page. Level:6 d interactive vector grap d web technologies . Lev tered design. Level:6,7 t/assignment . Level:6,7 nologies. Level:6 ance of user experience.	heir application . Level:6 structure of a web page. of the web page. Level:6 eractive web. Level:6,7 hics into a web page. Le el:6,7 Level:6	5 Level:6,7 ,7 evel:6,7	
Methods of carrying out lectures	Guest lecturer Case studies Discussion Questions and answers Seminar, students pres	s sentation and discussion			
Methods of carrying out laboratory exercises	Laboratory exercises, c Data mining and knowl Essay writing Discussion, brainstorm Workshop	computer simulations ledge discovery on the W ing	'eb		
Methods of carrying out seminars	Discussion, brainstorm Interactive problem so Workshop	ing Iving			
Course content lectures	1.Development of web 2.New HTML5 element: 3.The importance of se 4.Separation of the pre 5.Web interactivity via 6.Vector graphics on w 7.Different ways of ach 8.The concept of emoti 9.Content centered des 10.New e-book formats 11.Responsive web des 12.Examples and discu 13.Presenting one, 2h, 15.Presenting one, 2h,	and web technologies, 2 s, 2h, Learning outcomes emantic web, 2h, Learning sentational part of web v CSS3 technology, 2h, Le reb via SVG language, 2h nieving animation and int ional web design and the sign, 2h, Learning outcom s and web technologies (1 sign, 2h, Learning outcom ussion of the importance Learning outcomes:9 Learning outcomes:9 Learning outcomes:9	h, Learning outcomes:1, :1,2,10 g outcomes:1,2 via CSS3 technology , 2h arning outcomes:1,3,4 , Learning outcomes:1,6 eractivity on web, 2h, Le creation of personas, 2 nes:8 EPUB3 and DRM), 2h, Le nes:1,3,5 of user experience, 2h, I	,10 n, Learning outcomes:1,2 5,10 earning outcomes:1,3,6 h, Learning outcomes:11 earning outcomes:1,7 Learning outcomes:11	,10
Course content laboratory	1.Planning and executi 2.Creating personas ba 3.Developing a semant 4.Research and integra 5.Developing the press 6.Planning of interactiv 7.Planning and designi 8.Designing of vector of 9.Programming interac 10.Applying web techn 11.No classes 12.No classes 13.No classes 14.No classes	on of content centered d asing on the psychology a tically correct web page of ation of user experience i entational part of a web p re elements via CSS3 tec ng a responsive web pag graphics for Web, 2h, Lea tivity of vector graphics ologies in developing e-b g outcomes:11	esign, 2h, Learning outc and emotions of users, 2 using HTML5 elements, 2 n a web page, 2h, Learn vage using CSS3 technol hnology, 2h, Learning ou e, 2h, Learning outcome rning outcomes:1,6 using SVG and JavaScrip vooks, 4h, Learning outc	comes:8 th, Learning outcomes:11 2h, Learning outcomes:11 ogy, 2h, Learning outcon utcomes:1,4 es:1,5 ot languages , 2h, Learnir omes:1,7	.2 nes:1,3 ng outcomes:1,6
Course content seminars	1.Presenting and discu 2.No lesson 3.No lesson	ssing projects, 8h, Learn	ing outcomes:1,9,10		

1	A No Jesson
Required materials	General purpose computer laboratory
	Whiteboard with markers
	Overhead projector
Exam literature	Dive into HTML5, Mark Pilgrim;
	CSS3 for web designers, Dan Cederholm, ISBN 978-0-9844425-2-2
	An SVG primer for today's browsers, David Daley, W3C
	EPUB3 best practices, Matt Garnish, ISBN 978-1-449-32914-3
	Designing for emotion, Aaron Walter, A book apart, ISBN: 978-1-937557-00-3
Students obligations	Izlaganje teme istraivanja: 10 bodova
_	Izlaganje izrag projekta: 20 bodova
	Izlaganje radionice: 20 bodova
	Uvjet: 25 bodova
Knowledge	Izlaganje teme istraivanja: 10 bodova
evaluation during	Izlaganje izrag projekta: 20 bodova
semester	Izlaganje radionice: 20 bodova
	Uvjet: 25 bodova
Knowledge	Predaja seminarskog rada : 50 bodova
evaluation after	Finalna ocjena se formira prema bodovima sakupljenim tijekom semestra (izlaganje teme, izlaganje projekta i radionica)
semester	i seminarskog rada:
	Ukupno bodova: 100
	90-100 = 5
	80-90 = 4
	70-80 = 3
	60-70 = 2
	Do 60 bodova nedovoljno postignu
Student activities:	Aktivnost ECTS
	(Written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	Maja Turčić dipl.ing., 24.3.2015

Code WEB/ISVU	23185/130957	ECTS	6.0	Academic vear	2018/2019
Name	Advanced Web Serv	vices Programmin	a (open-source,PHP)		
Status	3rd semester - Poly Redovni specijalisti specialization in Infr Polytechnic graduat	technic graduate informatike) - ele ormatics Enginee ce professional stu	professional study progr ctive course3rd semeste ring (NOVI Izvanredni spe udy programme specializ	amme specialization in Informa r - Polytechnic graduate profes cijalisti informatike) - elective ation in Informatics Engineerin	atics Engineering (NOVI sional study programme course3rd semester - ig (NOVI Redovni specijalisti
	informatike (smjer i specialization in Info	raarstvo)) - electiv prmatics Enginee	ve course3rd semester - ring (NOVI Izvanredni spe	olytechnic graduate professio cijalisti informatike (smjer raa	nal study programme rstvo)) - elective course
Teaching mode	Lectures + exercise work at home	s (auditory + lab	oratory + seminar + met	odology + construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:2. dr.sc. A Laboratory exercise Laboratory exercise	en Šimec v. pred s: Davor Lozić pro s:dr.sc. Alen Šimo	avač ed. ec v. predavač		
Course objectives	To qualify students (Apache,MySQL,PhF	to design function ?).	nal Web services applicat	ions in the open source enviro	nment
Learning outcomes:	1.ability to organise 2.ability to compose 3.ability to devise a Level:6,7 4.ability to develop 5.ability to control a 6.ability to prepare 7.ability to connect	e groups of data in e the XML data so model of using c a web service op a web service con a dynamic wsdl c public Web service	nto functional sets. Level hemes and the XML conf onfiguration files to deve erations in the open sour figuration by using PHP t locument. Level:6,7 ces. Level:6,7	6,7 iguration files. Level:6,7 lop Web services in the open s ce environment. Level:6,7 pols. Level:6,7	ource environment.
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se s 1.3.OPĆI Koristiti te 1.5.OPĆI Identificira 1.6.OPĆI Osmišljava 2.2.OSOBNE Odgov 2.3.OSOBNE Etički i 2.6.OSOBNE Iskustv 2.7.OSOBNE Iskustv 2.7.OSOBNE Predst 2.8.OSOBNE Profesi 2.10.OSOBNE Profesi 2.10.OSOBNE Profesi 2.11.OSOBNE Profesi 2.11.OSOBNE Profesi 2.12.OSOBNE Profesi 2.12.OSOBNE Profesi 3.1.SPECINF Razum 3.1.SPECINF Razum 3.3.SPECINF Realizi 180h 5.1.E-poslovanje Ra poslovnim okruženj 5.2.E-poslovanje Vri 10h in 180h 5.4.E-poslovanje Up 180h 5.5.E-poslovanje Up 180h 5.5.E-poslovanje Oc 6.1.E-uprava Razun 0.3.E-uprava Razun 0.3.E-uprava Primije	tranim jezikom u hnike, vještine i s ti, modelirati i rje ti i provoditi poku ornost, dosljedno moralni pristup r va rada u projektr avljanje informaci ikacijske vještine onalna i ljudska c odljivost novim te enost za nova zn ibilnost i prilagodi mi i pravila struke ijevati mjesto i ul ti relevantne spe ju: 5h in 180h ebiti stečena znar rati kritičko razmi zumijevati mjesto ma: 5h in 180h mijeniti znanja, n mijeniti formalne ijevati kolaborativn ni potrijebiti metode	literaturi i svakodnevnoj uvremene alate neophoc šavati inženjerske proble use, analizirati i interpret st, točnost, ažurnost.: 5h adu.: 5h in 180h im timovima i industriji.: ja, ideja, problema i rješe u okviru struke te s klije sobnost.: 5h in 180h ehnologijama i tehnikama anja, iskustva i kulturne o jivost u iznalaženju tehni e.: 5h in 180h ogu IT u kontekstu organ cifične discipline kao što nja za samostalno usvaja šljanje te logičko stvaram o i ulogu IT u kontekstu o netode i alate za formaliz metode na analizu zahtj i alate u modeliranju pro nte poslovnih informacijs logu IT u kontekstu organ op ružanje usluga dionic ne tehnologije uredskog p	stručnoj komunikaciji. : 5h in 1 ne za inženjersku praksu.: 5h me.: 5h in 180h rati dobivene podatke.: 5h in 1 in 180h 5h in 180h enja stručnoj i općoj publici.: 5l ntima, na hrvatskom i englesk a kao dio procesa cjeloživotnog skolnosti.: 5h in 180h čkih rješenja uz neupitno pošt izacije, menedžmenta i poslov su informacijsko-računarsko in nje novih znanja: 5h in 180h je mišljenja u poslovnim i inžen rganizacije, menedžmenta i pos aciju poslovnih informacijskih s eva kod projektiranja poslovnih izacije, menedžmenta i proces ima u sustavu javne uprave: 1 poslovanja u podsustavima jav kod projektiranja komponenti	.80h in 180h L80h u in 180h om jeziku.: 5h in 180h g učenja.: 5h in 180h ivanje temeljnih etičkih nih procesa.: 5h in 180h iženjerstvo i tehnologije u njerskim procesima: 5h in oslovnih procesa u sustava: 10h in 180h n informacijskih sustava : 10h in sa u okruženjima javne 0h in 180h ne uprave: 10h in 180h informacijskih sustava i
Methods of carrying out lectures	6.5.E-uprava Primije Ex cathedra teachir Case studies	eniti standarde in ng	teroperabilnosti u sustav	ma uprave: 10h in 180h	
	Simulations Modelling Discussion Questions and answ Seminar, students p Homework presenta	vers presentation and ation	discussion		
Methods of carrying out laboratory exercises	Laboratory exercise Laboratory exercise Group problem solv Essay writing Discussion, brainsto Development of sof	s on laboratory e s, computer simu ing orming tware solutions a	quipment lations nd solving problems		
Course content lectures	1.Introductory lectu 2.Introduction to XM document by the W	re and teach stud IL (EXtensible Ma 3C rules., 2h, Lea	lents about the responsil rkup Language) standard rning outcomes:2	ilities and teaching materials. Is and syntax of XML documen	, 2h, Learning outcomes:1 ts, preparation of an XML

	3.Architecture and publishing of XML documents, XML Schema, XML transformations, and for what they are used., 2h, Learning outcomes:2
	4.Students will repeat / learn how it works XML Schema and what is it, and who are writing the rules of XML syntax Scheme., 2h, Learning outcomes:3
	5.A client-server architecture, the characteristics of the client and the server, Apache Web server and how it works., 2h, Learning outcomes:3
	7.Theoretical basics of HTML (HyperText Markup Language) and CSS (Cascading Style Sheets), spelling and structure of an HTML document 2h Learning outcomes:4
	8. The integration of HTML and CSS documents, page layout using CSS., 2h, Learning outcomes:5 9.PHP (Hypertext Preprocessor) syntax and its application, the PHP variables and labeling rules., 2h, Learning
	outcomes:5 10.Functionality and application of the loop in the programming environment, data fields, require and include
	commands., 2h, Learning outcomes:6 11.MySQL database, its application and what they do. Examples of how to create a relational database., 2h, Learning
	outcomes:6,7 12.Connecting PHP scripting language with the database, query the database and display the search results. Enter, change, and delete data from the database through the form., 2h, Learning outcomes:6,7 13.Presentation of students on independent projects., 2h, Learning outcomes:6,7
	14.Repeat the key elements of the material, preparing for the exam., 2h 15.Examination of theory, XML, XML Schema, HTML, CSS, PHP (syntax, data types, data fields, loops), MySQL database, SQL queries to the database., 2h
Course content	1.Introductory exercises teach students about the duties and educational materials, and prepares the computer to work
laboratory	with the scripting language., 2h, Learning outcomes:1 2.Creating an XML (EXtensible Markup Language) file using a text editor Notepad + +, 2h, Learning outcomes:2 3.Creating XML files and XML Schema using a text editor Notepad + +, linking documents and validation., 2h, Learning
	outcomes:2 4.Creating a WSDL (Web Services Description Language) documents based on XML rules of writing., 2h, Learning
	outcomes:3 5.Installing Virtual Server on the computer, learning about their work environment. It takes practice to install Apache, MVSOL database and ETP client _ 2b_Learning outcomes:4
	6.Creating forms using a text editor. Check dunkcionalnosti for HTTP POST and GET. Solving problems with the forms and print text on the screen. Work on the local computer with virtual services in the open source environment, 2h,
	Learning outcomes:4 7.Introducing the virtual environment Xampp applications, run applications required for operation of the virtual server,
	solving tasks., 2h, Learning outcomes:5 8.Repetition of knowledge and development of Internet sites on a virtual server using HTML markup text, forms, CSS and acting to know the certificing language RUP. 2h, Learning outcomercies
	9.Solving problems using PHP syntax, PHP variables and labeling rules in HTML., 2h, Learning outcomes:6 10 Solving problems in PHP, data types, strings, use operators and loops., 2h, Learning outcomes:6
	11.Applying different loop in PHP programming environment, working with data fields, require and include commands., 2h, Learning outcomes:6
	12.Using MySql database, creating databases, tables, fields in the table, define the fields, their values, the determination of the primary and secondary key.,, 2h, Learning outcomes:5,6
	13.Connecting to MySQL database with the programming code in PHP, and the appointment of a query to the database, print the data from the database to display the user, making the frontend and backend interfaces., 2h, Learning outcomes:6.7
	14.Repeat acquired knowledge, linking HTML, CSS, PHP, MySQL, XML into a single unit. Solving the task within the frontend and backend interfaces for data input via a form and upload the XML file and import the contents of an XML
	15.Examination of HTML, CSS, PHP (syntax, data types, data fields, loops), MySQL database, SQL queries to the database, XML, 2h
Required materials	Special purpose computer laboratory
	Tools XAMPP application
Exam literature	Šimec, Alen; Programiranje i optimizacija Internet stranica u HTML5 okruženju; Tehničko veleučilište u Zagrebu; 2015; Šimec, Alen: Uvod u HTML, XHTML i CSS: Tehničko veleučilište u Zagrebu; 2011;
	W3C preporuka; Extensible Markup Language (XML) (www.w3c.org); W3Schools Online Web Tutorials (www.w3schools com);
	Fawcett J., Ayers D., Quin L. R. E., Beginning XML, 5th Edition, John Wiley Sons, 2012.;
	Simon St. Laurent, Michael Fitzgerald; XML Pocket Reference, 3rd Edition; OReilly Media; 2005. Doug Tidwell; XSLT, 2nd Edition; OReilly Media; 2008.
	Priscilla Walmsley; XQuery, Search Across a Variety of XML Data; OReilly Media; 2007.
	Holzner S., Inside XML, Pearson Education, 2000; Ray E.T., Learning XML, 2nd edition, OReilly, 2003;
Students obligations	Attendance and active participation in lectures 15 points
	Essay and project 20 points
Knowledge	1st Colloquium (theory and tasks) 25 points
semester	
Knowledge evaluation after semester	Written exam 100 points



Student activities:	Aktivnost	ECTS	
	(Classes attendance)	1	
	(Written exam)	3	
	(Project)	2	
Remark	This course can be used for final thesis theme		
Prerequisites:	No prerequisites.		
Proposal made by	Alen Šimec, Ph.D.		

Code WEB/ISVU	23138/130904	ECTS	5.0	Academic year	2018/2019	
Name	Applied Statistics					
Status	1st semester - Polytech Redovni specijalisti info specialization in Inform Polytechnic graduate p informatike (smjer raar specialization in Inform	nic graduate profession prmatike) - elective cours latics Engineering (NOVI rofessional study progra stvo)) - elective course1 latics Engineering (NOVI	al study programme spe se1st semester - Polytecl Izvanredni specijalisti in mme specialization in In st semester - Polytechnio Izvanredni specijalisti in	cialization in Informatics hnic graduate professior formatike) - elective cou formatics Engineering (N c graduate professional formatike (smjer raarstv	Engineering (NOVI nal study programme rse1st semester - IOVI Redovni specijalisti study programme o)) - elective course	
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	construction)	30+30 (0+30+0+0) 90	
Teachers	Lectures: Maja Paukovi Laboratory exercises: N	ć Iaja Pauković				
Course objectives	To teach students how	to think in a probabilistic	c way			
Learning outcomes:	1.Comparing the differences and limitations of the data, depending on the measuring scale and distribution as well as an understanding of the distribution parameters Level:6,7 2.Analyze the differences between dependent and independent samples; the ability to identify a linear connection between two continuous variables. Level:6 3.define bivariate data; define a scatterplot; define the difference between linear and nonlinear dependence; recognize the negative connection from the scatterplot; define the meaning of the Pearson correlation coefficient; identify the perfect linear dependence; recognize non-linear association of two variables. Level:6,7 4.examine the conditions for the implementation of linear regression and interpretation of regression coefficients; least square method. Level:6,7 5.analyze and understand the proportions and frequencies, and creating contingency tables. Level:6 6. formulate a multiple regression; interpretation of the coefficients in the multiple regression and the comparison of the two models in a multiple regression. Level:6,7 7.select the significant variables in the regression model; understanding coefficient R2 of the final model. Level:7 8.testing assumptions for analysis of variance. Level:7					
Methods of carrying out lectures	Ex cathedra teaching Case studies Discussion Questions and answers auditory					
Methods of carrying	Laboratory exercises of	n laboratory equipment				
out laboratory	Laboratory exercises, computer simulations					
exercises	Group problem solving Traditional literature analysis Data mining and knowledge discovery on the Web Interactive problem solving					
.	In Computer laboratory	/ / // // // // //			D	
lectures	1. Measuring scales and of variables, Z - score., 2. Statistical inference of samples - dependent a 3. Measures of associat (correlation)-, 4h, Learri 4. Simple linear regress independence of obser coefficient; standardize colloquium, 1h, Learnir 5. Analysis of ordinal an replacement for Fisher, 6. Multiple regression. F interval regression ana 7. Evaluation of the reg final model. Compariso standardized and non-s regression., 4h, Learnir 8. Analysis of variance - variance and viefektors 9. colloqium, 1h, Learni 10. No class 11. No class 12. No class 14. No class 15. No class	2h, Learning outcomes: on two samples; compari nd independent samples ion between two variable ning outcomes:3 ion - Introduction and pr vations; influential obser ed regression coefficient. g outcomes:1,2,3,4 id nominal variables. Ana , 4h, Learning outcomes: Parameter estimation me lysis., 4h, Learning outco ression model. Analysis of n of the two models. R2, standardized regression ng outcomes:7 ANOVA. Testing assump ska. The ratio of variance ng outcomes:5,6,7,8	adom variables with para sons of mean and variar ., 4h, Learning outcomes es - correlation. Introduct erequisites for conductir vations. Evaluation of th , 3h, Learning outcomes alysis kontingencijke tab 5 sthod of least squares. Si omes:6 of residuals and influenti the percentage of varia coefficients; Venn diagra ptions. Welch ANOVA / re e F test., 4h, Learning ou	inneters that define then ince. Testing the difference s:2 tion to bivariate data and ing the analysis; test of he e regression model - sta :4 le - speed Association - (gnificance of regression al observations. The sele bility previously explained im; standard, sequential egular ANOVA. The one-f tcomes:8	 ce between means two d association omogeneity of variance, indardized regression Chi Square test as a coefficient. Confidence action of variables in the ad, the meaning of and stepwise factor analysis of 	
Course content laboratory	1.Practical examples an 2.Practical examples an 3.Practical examples an 4.Practical examples an 5.Practical examples an 6.Practical examples an 7.Practical examples an 8.Practical examples an 9.no exercise	nd exercizes from the co nd exercizes from the co	ntents of the unit., 2h, L ntents of the unit., 4h, L	earning outcomes:1 earning outcomes:2 earning outcomes:3 earning outcomes:4 earning outcomes:5 earning outcomes:6 earning outcomes:7 earning outcomes:8		



	10.no exercise 11.no exercise 12.no exercise 13.no exercise 14.no exercise
	15.no exercise
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Overhead projector Special equipment R software
Exam literature	Obavezna 1. Walpole, Myres, Myers and Ye Probability and statistics for engineers and scientistc Prantice Hall Dopunska 2. Use R! Springer
Students obligations	maximum of 3 absences from exercises
Knowledge evaluation during semester	Mid-term, numerical exercises, max. 100 points evaluation: 91-100, excellent 5 81-90, very good 4 71-80, good 3 61-70, sufficient 2
Knowledge evaluation after semester	numerical exercises, max. 100 points evaluation: 91-100, excellent 5 81-90, very good 4 71-80, good 3 61-70, sufficient 2
Student activities:	Aktivnost ECTS (Written exam) 5
Remark	This course can not be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	Andreja Radović, 15th of July 2014

Code WEB/ISVU	23146/130913	ECTS	6.0	Academic year	2018/2019
Name	Applied typography des	sign			
Status	2nd semester - Polytecl Redovni specijalisti info specialization in Inform	hnic graduate professior prmatike) - elective cours atics Engineering (NOVI	aal study programme sp se2nd semester - Polyte Izvanredni specijalisti in	ecialization in Informatics chnic graduate professio (formatike) - elective cou	s Engineering (NOVI nal study programme rse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	- construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:dr.sc. Maja Tu Lectures: Vesna Uglješi Laboratory exercises: C Laboratory exercises: V	rčić pred. ić dipl. dizajner Darija Ćutić , mag. ing. gi /esna Uglješić dipl. dizaji	raph. techn. her		
Course objectives	Gaining knowledge in t	he area of applied typog	raphy		
Learning outcomes:	1.identify type categori 2.differentiate elements 3.manage rhythm with 4.integrate different for 5.design typographic hi 6.combine special char 7.edit page for differen 8.prepare type for a we 9.integrate the rules of	ies . Level:6 s of glyphs. Level:6 space. Level:6,7 nt families. Level:6,7 ierarchy . Level:6 acters in text formatting t purposes. Level:6,7 eb page. Level:6,7 legibility . Level:6,7	. Level:6,7		
Methods of carrying out lectures	Guest lecturer Case studies Discussion Questions and answers Seminar, students pres Homework presentation	entation and discussion n			
Methods of carrying out laboratory exercises	Group problem solving Essay writing Discussion, brainstormi Workshop	ing			
Course content lectures	1. History of typography 2. Anatomy and classific 3. Rhythm and proportic 4. Harmony and contras 5. Hierarchy and text str 6. Special characters, 21 7. Selecting and combin 8. Page design, 2h, Lear 9. Typographic grids, 2h 10. Web typography, 2h 11. Readability and legil 12. Font families, 2h, Le 13. Different roles of typ 14. Presentation and dis 15. No classes, 2h	/, 2h, Learning outcomestication of type, 2h, Learning outcomest, 2h, Learning outcomest, 2h, Learning outcomest, 2h, Learning outcomes:6 ning type, 2h, Learning or orning outcomes:7 n, Learning outcomes:8 bility, 2h, Learning outcomes:8 bility, 2h, Learning outcomes:4,9 pe, 2h, 2h, 2h, 2h, 2h, 2h, 2h, 2h, 2h, 2h	s:1 ing outcomes:1,2 es:3 s:4 putcomes:5 utcomes:1,4 omes:9 es:1,4,6,7,8 utcomes:1,2,3,4,5,6,7,8,	9	
Course content laboratory	1.Shaping typography a 2.Defining and designir 3.Research and applica 4.Designing structural e 5.Use of hierarchy in ty 6.Use of special charact 7.Choosing and combin 8.Choosing of size, defi 9.Use of web typograph 10.Planning and constru 11.Designing missing c 12.Research of text jus 13.Designing lists and t 14.Presentation and dis 15.Presentation and dis	according to content, 2h ng rhythm with horizonta tion of harmony via font elements, 2h, Learning o pography, 2h, Learning ters in design, 2h, Learn ing type for a specific ta ning margin and text blo ny, 2h, Learning outcome ucting the grid, 2h, Learn haracters, 2h, Learning o tification, 2h, Learning out caussion, 2h, Learning o scussion, 2h, Learning o	, Learning outcomes:1,2 and vertical space, 4h, families, 2h, Learning o outcomes:5 ing outcomes:6 isk, 2h, Learning outcom ock, 2h, Learning outcom es:8 ning outcomes:3,7,9 putcomes:2,6,9 putcomes:5,6,7,9 iomes:5,9 utcomes:1,2,9 utcomes:1,2,9	, Learning outcomes:3 outcomes:4 nes:4,9 nes:7	
Required materials	General purpose compu Whiteboard with marke Overhead projector	uter laboratory ers			
Exam literature	The Elements of Typogr Thinking with Type, Elle The Complete Manual c	raphic Style, Robert Brin en Lupton, Princeton Arc of Typography, James Fe	ghurst, Hartley Marks, V hitectural Press, New Yo lici, Peachpit, Berkleley,	/ancouver, 2004, ISBN: 0 rk, 2004, ISBN: 1-56898- 2012, ISBN: 978-0-321-7	-88179-205-5 448-0 '7326-5
Students obligations	Izlaganje teme istraivar Izlaganje izrag projekta Izlaganje radionice: 20	nja: 10 bodova I: 20 bodova bodova			



1				
	Uvjet: 25 bodova			
Knowledge	Izlaganje teme istraivanja: 10 bodova			
evaluation during	Izlaganje izrag projekta: 20 bodova			
semester	Izlaganje radionice: 20 bodova			
	Uvjet: 25 bodova			
Knowledge	Predaja seminarskog rada : 50 bodova			
evaluation after	Finalna ocjena se formira prema bodovima sakupljenim tijekom semestra (izlaganje teme, izlaganje projekta i radionica)			
semester	i seminarskog rada:			
	Ukupno bodova: 100			
	90-100 = 5			
	80-90 = 4			
	70-80 = 3			
	60-70 = 2			
	Do 60 bodova nedovoljno postignu			
Student activities:	Aktivnost ECTS			
	(Research) 2			
	(Project) 2			
	(Seminar Work) 2			
Remark	This course can be used for final thesis theme			
Prerequisites:	No prerequisites.			
Proposal made by	Maja Turčić dipl.ing., 24.3.2015			

Code WEB/ISVU	23136/130902	ECTS	5.0	Academic year	2018/2019
Name	Asset Management		I	• •	
Status	1st semester - Polyte Redovni specijalisti i specialization in Info Polytechnic graduate informatike (smjer ra specialization in Info	echnic graduate p nformatike) - elec rmatics Engineeri e professional stud aarstvo)) - elective rmatics Engineeri	rofessional study progran tive course1st semester ng (NOVI Izvanredni spec dy programme specializa e course1st semester - Pr ng (NOVI Izvanredni spec	mme specialization in Informat - Polytechnic graduate profess :ijalisti informatike) - elective c tion in Informatics Engineering olytechnic graduate profession :ijalisti informatike (smjer raars	ics Engineering (NOVI ional study programme ourse1st semester - (NOVI Redovni specijalisti al study programme stvo)) - elective course
leaching mode	Lectures + exercises work at home	s (auditory + labo	ratory + seminar + meto	aology + construction)	30+30 (15+0+15+0) 90
Teachers	Lectures:1. dr.sc. Mi Lectures:mr.sc. Sanj Auditory exercises:n Seminar exercises:m	aden Mauher prof a Bračun dipl.oec. nr.sc. Sanja Braču nr.sc. Sanja Braču	.v.šk. n dipl.oec. n dipl.oec.		
Course objectives	To empower a stude business system. As position to give cons procurement, use ar resources importanc situations under real	nt to understand Asset manageme stant improvemen ind maintenance of e. As Asset mana- listic market cond	that Asset management ent team members they v ts proposals. Through the f the property, as well as gement team member th itions.	is not a separate process, but a vill be responsible to solve pote e lessons the student will be fa planning and investment proc e student will be in position to	an integrated part of every ential challenges and in miliar with the process of esses and human solve various problem
Learning outcomes:	 Link importance of planning process and market analysis in order to ensure successful asset management. Level:6,7 Identify the role and place of asset management within the business system. Level:6 Key performance indicators comment of asset management over the lifetime. Level:6 Identify the sequence and understand the importance of investment project monitoring. Level:6 Critically evaluate results of analysis of use fixed assets and maintenance based on method of reliability of asset management. Level:7 Be prepared for active participation in processes of asset management within the business system. Level:6,7 				
Involvement of learning outcomes of the course in study programme:	1.3.OPĆI Koristiti teh 1.5.OPĆI Identificirat 1.6.OPĆI Osmišljaval 2.1.OSOBNE Znanje 2.3.OSOBNE Etički i 2.4.OSOBNE Kritička problema.: 5h in 15C 2.6.OSOBNE Iskustva 2.7.OSOBNE Predsta 2.12.OSOBNE Predsta 2.12.OSOBNE Fleksil načela, pravnih norn 3.1.SPECINF Razumi 3.3.SPECINF Razumi 3.3.SPECINF Povezat poslovnom okruženj 3.4.SPECINF Realizir 150h	nike, vještine i su i, modelirati i rješ ti i provoditi pokus o suvremenim pit moralni pristup ra evaluacija argum Dh a rada u projektni vljanje informacija bilnost i prilagodlji ni i pravila struke. jevati mjesto i ulo jevati domenu inž ti relevantne spec u: 20h in 150h sbiti stečena znanj ati kritičko razmiš	vremene alate neophodr avati inženjerske probler se, analizirati i interpretir anjima struke i društva.: du.: 5h in 150h nenata, pretpostavki i poo m timovima i industriji.: 1 a, ideja, problema i rješe ivost u iznalaženju tehnič : 5h in 150h gu IT u kontekstu organiz enjerstva i tehnologija su ifične discipline kao što s ja za samostalno usvajan ljanje te logičko stvaranje	ne za inženjersku praksu.: 5h ir ne.: 5h in 150h ati dobivene podatke.: 5h in 1 5h in 150h dataka u cilju stvaranja mišljen L0h in 150h nja stručnoj i općoj publici.: 5h ikih rješenja uz neupitno poštiv zacije, menedžmenta i poslovn ikladno stupnju obrazovanja: 2 u informacijsko-računarsko inž je novih znanja: 20h in 150h e mišljenja u poslovnim i inženj	i 150h 50h ja i pridonošenja rješenju in 150h anje temeljnih etičkih ih procesa.: 20h in 150h 0h in 150h enjerstvo i tehnologije u erskim procesima: 20h in
Methods of carrying out lectures	Ex cathedra teachin Guest lecturer Case studies Discussion The lessons are exhi encouraged to give a	g bited in a way tha an overview of the	at the theoretical framew e examples they have co	ork combines with examples o me up with.	f practice and students are
Methods of carrying out auditory exercises	Group problem solvi Discussion, brainstol Interactive problem Workshop	ng rming solving			
Methods of carrying out seminars	Group problem solvi Traditional literature Data mining and kno Workshop	ng : analysis owledge discovery	on the Web		
Course content lectures	1.Introductory lectur 2.Strategic manager 3.Life cycle monitori 4.Market analysis, se outcomes:3 5.Financial reports a 6.Metrics and asset 1 7.Fixed assets use a 8.Ontology and Integ 9.Asset managemen 10.Asset managemen 11.No lessons 12.No lessons 13.No lessons 14.No lessons	e, 3n, Learning or ment with plannin- ng and competen egmentation and i s sources of asset management star nd maintenance, grated Asset Mana it tools and metho nt system reliabil	g and use of fixed asset a ces in asset managemen marketing processes as t management performar idards and preparation o 3h, Learning outcomes:5 agement, 3h, Learning ou dologies , 3h, Learning o ity , 3h, Learning outcom	acquisition , 3h, Learning outco t, 3h, Learning outcomes:2,3 ools for successful asset mana nce indicators , 3h, Learning ou f investment projects, 3h, Lear utcomes:6 utcomes:1,2,3,4,5,6 es:1,2,3,4,5,6	mes:2 gement, 3h, Learning tcomes:3,4 ning outcomes:4



	15.No lessons
Course content auditory	 1.No lessons 2.Type and purpose of Assets and the Process of Asset Management Planning, 3h, Learning outcomes:1,2 3.Market Analysis Methods Applying, 4h, Learning outcomes:3 4.Cost and revenue analysis in process of performance indicators calculation , 4h, Learning outcomes:3 5.1st colloquium, 1h, Learning outcomes:1,2,3 6.No lessons 7.No lessons 9.No lessons 10.2nd colloquium, 1h, Learning outcomes:4,5,6 11.No lessons 12.No lessons 13.No lessons 14.No lessons 15.No lessons 15.No lessons 15.No lessons
Course content seminars	1.No activities 2.No activities 3.No activities 4.No activities 5.No activities 6.Practical application of process norms in Asset management , 3h, Learning outcomes:4 7.Investment project analysis, 4h, Learning outcomes:5,6 8.Faults and damage monitoring of Fixed assets during their life cycle , 4h, Learning outcomes:5,6 9.Program support and risk management methods of asset management systems, 4h, Learning outcomes:6 10.No activities 11.No activities 12.No activities 13.No activities 14.No activities 15.No activities
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory
Exam literature	Obavezna literatura: 1.prof. dr.sc. Ivo Čala i ostali: Održavanje i gospodarenje imovinom, Hrvatsko društvo održavatelja, Zagreb, 2016. 2.dr.sc. Mladen Mauher i mr.sc. Sanja Bračun: Aktualne elektroničke mape nastavnika pripremljene za predavanja dostupne na LMS sustavu Preporučena literatura: 1.S. Duffuaa; A Raouf, Cham: e-book Planning and control of maintenance systems: modelling and analysis", Springer, 2015. 2.John Woodhouse: ISO 55000: Asset management What to do and why? 2014. 3.David G Cotts; Kathy O Roper; Richard P Payant, Chichester: e-book International facility management, West Sussex, United Kingdom, 2014. 4.Constantin May; Peter Schimek, Ansbach: Total productive management: fundamentals and introduction to TPM - or how to achieve operational excellence", CETPM Publ. 2014. 5.David G Cotts; Kathy O Roper; Richard P Payant: e-book The facility management handbook, New York: American Management Association, 2010. 6.D. J. VANIER, Asset management: "A to Z", Institute for Research in Construction, National Research Council Canada, 1200 Montreal Road, Ottawa, 2001.
Students obligations	70% of attendance on lessons and exercises
Knowledge evaluation during semester	1st and 2nd colloquium
Knowledge evaluation after semester	Oral Exam (in case of non-fulfilment of 1st and 2nd colloquium conditions)
Student activities:	Aktivnost ECTS (Oral exam) 5
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Code WEB/ISVU	23147/130914	ECTS	6.0	Academic year	2018/2019
Name	Basics of Digital Educat	ion			
Status	2nd semester - Polytecl Redovni specijalisti info specialization in Inform	hnic graduate profession rmatike) - elective cour atics Engineering (NOVI	nal study programme se2nd semester - Poly Izvanredni specijalist	specialization in Informat /technic graduate profess i informatike) - elective co	ics Engineering (NOVI ional study programme ourse
Teaching mode	Lectures + exercises (a work at home	uditory + laboratory + :	seminar + metodolog	y + construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. izv. prof. dr Auditory exercises:izv. Seminar exercises:izv.	. sc. Petar Jandrić prof. v prof. dr. sc. Petar Jandri prof. dr. sc. Petar Jandrid	v. šk. ć prof. v. šk. ć prof. v. šk.		
Course objectives	This course introduces	students to digital educ	ation.		
Learning outcomes:	 1.Formulate / define key concepts in digital education . Level:6,7 2.Formulate / define the main concepts in critical pedagogy . Level:6,7 3.Formulate / define key perspectives to digital technologies. Level:6,7 4.Critically assess key perspectives to educational technologies . Level:7 5.Critically assess the relationships between education and technology . Level:7 6.Formulate / define key aspects of the digital divide . Level:6,7 7.Critically assess the metaphor of digital natives and immigrants . Level:7 8.Critically asses the relationships between digital education and various aspects of the contemporary society. Level:7 9.Present conclusions at an appropriate level. Level:6,7 10.Write a critical seminar on digital education . Level:6,7 				
Methods of carrying out lectures	Case studies Demonstration Simulations Modelling Discussion Seminar, students pres Other e-learning	entation and discussion			
Methods of carrying	Group problem solving				
out auditory exercises	Traditional literature an Data mining and knowle Essay writing Discussion, brainstormi Other e-learning	alysis edge discovery on the V ng	Veb		
Methods of carrying out seminars	Essay writing Other e-learning				
Course content	1.Introduction to digital	education , 2h, Learnin	g outcomes:1,9,10		
lectures	2.Foundations of critica 3.Foundations of critica 4.Views and pespective 5.Views and pespective 6.Introduction to global 7.Education and globali 8.McDonaldisation of ec 9.The digital divide , 2h 10.Digital natives, digit 11.Digital education as 12.Digital education as 13.Digital education as 14.Digital education an	I pedagogy (1) , 2h, Lea I pedagogy (2) , 2h, Lea is to educational techno isation , 2h, Learning ou sation , 2h, Learning ou ducation , 2h, Learning ou ducation , 2h, Learning ou ducation , 2h, Learning ou technology , 2h, Learni culture industry , 2h, Learni d social change, 2h, Learni	rning outcomes:1,2,9 rning outcomes:1,2,9 logies (1) , 2h, Learnin logies (2) , 2h, Learnin itcomes:4,8,9 tocomes:4,8,9 butcomes:4,9,10 5,9,10 ning outcomes:4,9,10 earning outcomes:8,9,10 earning outcomes:8,9,10 earning outcomes:8,9,10	,10 ,10 ng outcomes:3,8,9 ng outcomes:3,9,10 7,9,10 ,10 ,0	
Course content auditory	1. Individual coursework 2. Individual coursework 3. Individual coursework 4. Individual coursework 5. Individual coursework 6. Individual coursework 8. Individual coursework 9. Individual coursework 10. Individual coursewor 11. Individual coursewor 12. Individual coursewor 13. Individual coursewor 14. Individual coursewor 15. Individual coursewor	c, 2h, Learning outcome x, 2h, Learning outcome rk, 2h, Learning outcom rk, 2h, Learning outcom	s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10	0 0 0 0 0	
Course content seminars	1.Individual coursework 2.Individual coursework 3.Individual coursework 4.Individual coursework 5.Individual coursework	 k, Learning outcome 	s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10 s:1,2,3,4,5,6,7,8,9,10		

	 6.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 7.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 8.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 9.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 10.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 11.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 12.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 13.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 14.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10 15.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10
Required materials	Special equipment no equipment
Exam literature	Castells, M. (2003). Internet Galaksija: Razmišljanja o Internetu, poslovanju i društvu. Prvo izdanje. Preveo N. Dužanec. Zagreb: Naklada Jesenski i Turk. Freire, P. (2002). Pedagogija obespravljenih. Prvo izdanje. Zagreb: Odraz. Haraway, D. (1991). Simians, cyborgs and women: the reinvention of nature. London: Free Association Books. Heidegger, M. (1981). "Only a God Can Save Us": The Spiegel Interview. U T. Sheehan (Ed.), Heidegger: The Man and the Thinker. Chicago: Precedent Press, str. 45-67. Horkheimer, M. i Adorno, T.W. (2002). Dialectic of Enlightenment: Philosophical Fragments. Stanford: Stanford University Press. Illich, I. (1973). Tools for Conviviality. London: Marion Boyars Publishers Ltd. Jandrić, P. i Boras, D. (2012). Kritičko e-obrazovanje: borba za moć i značenje u umreženom društvu. Zagreb: FF Press i Tehničko veleučilište u Zagrebu. McLaren, P. (2014). Life in Schools: An Introduction to Critical Pedagogy in the Foundations of Education. Šesto izdanje. Boulder: Paradigm Publishers. McLaren, P. i Jandrić, P. (2014). Critical revolutionary pedagogy is made by walking in a world where many worlds coexist. Policy Futures in Education, 12(6). Prensky, M. (2005). Digitalni urođenici, digitalne pridošlice: Razmišljaju li doista drugačije?. Edupoint, 5(32). Prensky, M. Digitalni urođenici, digitalne pridošlice. Edupoint, 8(40). Suoranta, J. i Vaden, T. (2010). Wikiworld. London: Pluto Press.
Students obligations	(1)Participation (0-30 points) (2)Coursework (0-70 points) A minimum of 15 points in participation is required for successful completion of the course!
Knowledge evaluation during semester	Continuous assessment of online activity.
Knowledge evaluation after semester	Coursework
Student activities:	Aktivnost ECTS (Classes attendance) 2 (Seminar Work) 4
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	Dr Petar Jandrić prof

Code WEB/ISVU	23810/171755	ECTS	5.0	Academic year	2018/2019
Name	Bridge	-		-	
Status	1st semester - Polytech	nnic graduate profession	al study programme spe	cialization in Informatics	Engineering (STARI
	Specijalisti informatike specialization in Inform Polytechnic graduate p specijalisti informatike' specialization in Inform semester - Polytechnic Izvanredni specijalisti i) - elective course1st ser natics Engineering (NOVI professional study progra) - elective course1st ser natics Engineering (NOVI graduate professional si informatike (smjer raarst	mester - Polytechnic grad Redovni specijalisti info mme specialization in In nester - Polytechnic grad Redovni specijalisti info tudy programme special vo)) - elective course	Juate professional study rmatike) - elective course formatics Engineering (N Juate professional study rmatike (smjer raarstvo)) ization in Informatics Eng	programme 1st semester - OVI Izvanredni programme - elective course1st jineering (NOVI
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	- construction)	30+30 (0+30+0+0) 90
Teachers	Lectures: Ognjen Stani Laboratory exercises: (čić dipl. ing. Ognjen Staničić dipl. ing.			
Course objectives	Introduction to Bridge. Introduction to relevan reevaluation. Analyzing	Learning basic bidding a It mathematical principle g information from the p	and play rules. Learning is and card distribution p lay and the bidding and	most frequently used bid robability analysis. Estim making conclusions.	ding conventions. ating hand value and
Learning outcomes:	1.formulate basic bridg 2.Analyze different har 3.estimate hand value 4.conclude card distrib 5.compare certain line	ye rules, bidding flow, de nd types and the way the based on partners hand bution and the winning m s of play based on their i	clarer play and defense. ey are bid. Level:6 and the bidding. Level:6 ove based on the probal mathematical expectanc	Level:6,7 i,7 bility model and available y. Level:6,7	information. Level:6,7
Methods of carrying out lectures	Ex cathedra teaching Case studies Demonstration Discussion Questions and answers Other Practice in the bridge o	s			
Methods of carrying out laboratory exercises	Group problem solving Discussion, brainstorm Interactive problem sol Other Bridge base online	ing Iving			
Course content lectures	1.Introduction to bridge 2.Bidding logic, 2h, Lea 3.Declaring basics, 2h, 4.Opening leads, signa 5.Trump and notrump 6.One of a suit opening 7.1NT and 2NT opening 8.2C opening, 2h, Lean 9.Preemptive bidding, 10.Probabilities in bridg 11.Suit combinations, 2 12.Takeout doubles, 2t 13.Overcalls and comp 14.Practice, 2h, Learnin 15.No classes, 2h	e, 2h, Learning outcomes arning outcomes:1,2,3 Learning outcomes:1,4, ils and principles in defer play, 2h, Learning outcome g, 2h, Learning outcomes ning outcomes:2,3 2h, Learning outcomes:2 ge, 2h, Learning outcomes:2 de, Learning outcomes:4, h, Learning outcomes:2,3 2h, Learning outcomes:4,5	s:1 nse, 2h, Learning outcon mes:1,5 s:2,3 s:2,3 es:4,5 ,5 a ning outcomes:2,3	nes:1,4	
Course content laboratory	1.No classes, 2h 2.No classes, 2h 3.No classes, 2h 4.Mini bridge, 2h, Learn 6.One of a suit opening 7.1NT and 2NT opening 8.2C opening, 2h, Learn 9.Preemptive bidding, 10.Bridge probabilities 11.Suit combinations, 2 12.Takeout doubles, 2h 13.Overcalls and comp 14.Tournament and sc 15.No classes, 2h	ning outcomes:1 ning outcomes:1 gs, 2h, Learning outcomes g, 2h, Learning outcomes ning outcomes:2,3 2h, Learning outcomes:2, 2h, Learning outcomes:4 h, Learning outcomes:2, petitive bidding, 2h, Learn oring methods, 2h, Learn	es:2,3 s:2,3 :4,5 ,5 aning outcomes:2,3 ning outcomes:1		
Required materials	General purpose comp Whiteboard with marke Overhead projector	uter laboratory ers			
F	1 Nation Theory of the			7. mah 2004	
Exam literature	1. Neven Elezović: Nau	icite bridž za deset dana	(I deset noći), Element,	Zagreb, 2004.,	
Students obligations	Regular attendance	peoretical and practical a	vame		
evaluation during semester	regular allendance, th	ieoretical and practical e	20115		



Knowledge evaluation after semester	Written and oral exam		
Student activities:	Aktivnost (Classes attendance) (Practical work) (Constantly tested knowledge)	ECTS 2 2 1	
Remark	This course can be used for final thesis theme		
Prerequisites:	No prerequisites.		
Proposal made by	dipl. ing. Ognjen Staničić , 6.6.2017		

Code WEB/ISVU	23139/130905	ECTS	5.0	Academic year	2018/2019		
Name	Business Ethics and La	W			-		
Status	1st semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Redovni specijalisti informatike) - elective course1st semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Izvanredni specijalisti informatike) - elective course1st semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Redovni specijalisti informatike (smjer raarstvo)) - elective course1st semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Izvanredni specijalisti informatike (smjer raarstvo)) - elective course						
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	construction)	45+15 (0+0+15+0) 90		
Teachers	Lectures: Ljiljana Matus Seminar exercises: Ljilj	ško Antonić jana Matuško Antonić					
Course objectives	To introduce students t	to the theory of stakehole	ders and basics of civil la	aw			
Learning outcomes:	1.ability to standardise the notions of morals and ethics. Level:6,7 2.ability to present a theory of stakeholders . Level:6,7 3.ability to formulate the CSR as the heart of a business strategy. Level:6,7 4.ability to build ethical theories. Level:6,7 5.ability to formulate/to design a framework for understanding ethics in making decisions. Level:6,7 6.ability to standardise theOCD features. Level:6,7						
Methods of carrying out lectures	Case studies Discussion Questions and answers Interactive lessons	5					
Methods of carrying out seminars	Group problem solving Discussion, brainstorm	ing					
Course content lectures	1.Introduction to Civil L 2.Principles of Civil Law 3.The subjects and obj 4.Introduction to the la 5.Subjects civil obligati 6.Objects civil obligati 7.Reinforcement of civi 8.The sales contract, S 9.Construction contract 10.Loan Agreement, 2H 11.The agency agreem 12.Termination of an o 13.Introduction to busi 14.Convention on Hum 15.The right to freedon	Law, 2h, Learning outcomes outcomes ects of civil right, 2h, Lea word obligations, 2h, Lea ions relations, 2h, Learnin ons relations, 2h, Learnin il obligations relations, 2l ervices contract, 2h, Lea t, 2h, Learning outcomes n, Learning outcomes st, 2h, Learning outcomes ligation relations, 2h, Lea ness ethics, principles, 2 nan Rights, 2h, Learning on n of speech, work, family	nes:5 i:5 irrning outcomes:5 ing outcomes:5 ing outcomes:5 h, Learning outcomes:5 i:5 nes:5 earning outcomes:5 h, Learning outcomes:5 h, Learning outcomes:5 vilfe, 2h, Learning outcomes:5	mes:5			
Course content seminars	1. The sales contract., 2 2. Liability for defects si 3. Protection of private 4. The banking secret, 2 5. The responsibility of 6. Ineffectiveness of cor 7. Relatively be invalid 8. Services contract, 21 9. Construction contract 10. Loan Agreement, 21 11. The agency agreem 12. Breach of contract, 13. customer rights, 2h, 14. Right to work, 2h, L 15. negotiations, 2h, Le	2h, Learning outcomes:5 tufft, 2h, Learning outcom life, 2h, Learning outcom 2h, Learning outcomes:5 the contractor, 2h, Learn ntract, 2h, Learning outco contracts, 2h, Learning out h, Learning outcomes:5 t, 2h, Learning outcomes:5 n, Learning outcomes:5 n, Learning outcomes:5 earning outcomes:5 earning outcomes:5 arning outcomes:5	mes:5 hes:5 omes:5 outcomes:5 hutcomes:5 hes:5				
Required materials	Whiteboard with marke Overhead projector	ers					
Exam literature	Hans Jonas, The Impera Funky Business Kapital Etika u gospodarstvu : Business Ethics: Readir (McGraw-Hill Humanitie http://www.kurzweilai Građansko pravo: Mart Stvarno pravo: Nikola (ative of Responsibility, Th pleše samo s darovitima (religije, moral, poslovan ngs and Cases in Corpora es) het/ in Vedriš, Petar Klarić Gavella, Tatjana Josipović	ne University of Chicago a, Kjell A. Nordstrm Jonas ije) / Tibor Karpati (Ekono ate Morality, / W. Michael č, Igor Gliha, Vlado Belaj,	Press s Ridderstr#229;le (Diffe omski fakultet u Osijeku) l Hoffman, Robert E Fred Zlatan Stipković	ro) erick, Mark Schwartz		
Students obligations	maximum of 3 absence	es from exercises					
Knowledge evaluation during semester	Kolokvij#1#20#0\$Usm	nena provjera znanja#1#	£80 # 0\$				



Knowledge evaluation after semester	Writing a paper on subject and exam				
Student activities:	Aktivnost (Written exam) (Classes attendance) (Oral exam)	ECTS 3 1 1			
Remark	This course can be used for final thesis theme				
Prerequisites:	No prerequisites.				

Code WEB/ISVU	23151/130918	ECTS	6.0	Academic year	2018/2019		
Name	Business Information	System architektur	e and integration				
Status	2nd semester - Polyte Redovni specijalisti in specialization in Infor	chnic graduate pro formatike) - elective matics Engineering	fessional study prog e course2nd semeste (NOVI Izvanredni spo	ramme specialization in Informer er - Polytechnic graduate profes ecijalisti informatike) - elective	atics Engineering (NOVI ssional study programme course		
Teaching mode	Lectures + exercises work at home	(auditory + laborate	ory + seminar + met	codology + construction)	30+30 (15+15+0+0) 120		
Teachers	Lectures: dr. sc. Dark Auditory exercises: Ec	o Galinec , znan. su Imond Krusha , stru Edmond Krusha , s	r., prof. v. š. ıč.spec.ing.techn.inf. truč spec ing techn i	, predavač nf. predavač			
Course objectives	Students will receive	based knowledge in	the field of busines	s information systems architect	ure.		
Learning outcomes:	1.ability to estimate t	he feasibility of the	application integrati	on solutions within IS architect	ure of a business system.		
	Level:6,7 2.ability to understand the need for integration of applications within IS architecture of a business system. Level:7 3.ability to distinguish between different possibilities of integration solutions within IS architecture of a business system. Level:6,7 4.ability to provide a solution to integration of applications based on integration topologies and systems within IS architecture. Level:6,7						
	-				-		
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se str 1.3.OPĆI Koristiti tehr 1.4.OPĆI Povezati inž usluge.: 6h in 180h 1.5.OPĆI Identificirati, 1.6.OPĆI Osmišljavati 2.1.OSOBNE Znanje o 2.2.OSOBNE Odgovor 2.3.OSOBNE Etički i m 2.4.OSOBNE Kritička ć problema.: 7h in 180h 2.6.OSOBNE Kritička ć problema.: 7h in 180h 2.6.OSOBNE Iskustva 2.8.OSOBNE Profesior 2.10.OSOBNE Prilagoo 2.11.OSOBNE Prilagoo 2.11.OSOBNE Prilagoo 2.11.OSOBNE Prilagoo 2.11.OSOBNE Prilagoo 2.11.OSOBNE Fleksibi načela, pravnih normi 3.1.SPECINF Razumije 3.2.SPECINF Razumije 3.3.SPECINF Rovezati poslovnom okruženju 3.4.SPECINF Realizira' 180h 5.1.E-poslovanje Razu poslovnim okruženjim 5.2.E-poslovanje Prim	anim jezikom u liter ike, vještine i suvre enjerske aktivnosti l modelirati i rješava i provoditi pokuse, suvremenim pitanj nost, dosljednost, to noralni pristup radu. evaluacija argumen rada u projektnim t acijske vještine u ol dijivost novim tehno ost za nova znanja lnost i prilagodljivost i pravila struke.: 71 i pravila struke.: 71 relevantne specifič : 7h in 180h iti stečena znanja z ti kritičko razmišljar umijevati mjesto i ulo ia: 10h in 180h ijeniti znanja, meto ijeniti formalne meto	raturi i svakodnevnoj emene alate neophoc konstruiranja, proizv ati inženjerske proble analizirati i interpret jima struke i društva očnost, ažurnost.: 6h .: 7h in 180h ata, pretpostavki i po cimovima i industriji.: kviru struke te s klije nost.: 7h in 180h ologijama i tehnikam , iskustva i kulturne st u iznalaženju tehn h in 180h 1T u kontekstu orgar jerstva i tehnologija ne discipline kao što za samostalno usvaja nje te logičko stvarar logu IT u kontekstu co de i alate za formaliz	stručnoj komunikaciji. : 7h in 1 dne za inženjersku praksu.: 6h i odnje i marketinga s potrebam eme.: 6h in 180h irati dobivene podatke.: 6h in 1 .: 6h in 180h odataka u cilju stvaranja mišlje 6h in 180h odataka u cilju stvaranja mišlje 6h in 180h intima, na hrvatskom i englesko a kao dio procesa cjeloživotnog okolnosti.: 7h in 180h ičkih rješenja uz neupitno pošti nizacije, menedžmenta i poslovi sukladno stupnju obrazovanja: su informacijsko-računarsko in nje novih znanja: 9h in 180h nje mišljenja u poslovnim i inžen rganizacije, menedžmenta i poslovi staciju poslovnih informacijskih s	.80h n 180h a korisnika proizvoda i 180h nja i pridonošenja rješenju om jeziku.: 7h in 180h učenja.: 7h in 180h ivanje temeljnih etičkih nih procesa.: 7h in 180h 7h in 180h ženjerstvo i tehnologije u njerskim procesima: 9h in islovnih procesa u sustava: 9h in 180h n informacijskih sustava : 7h		
	5.4.E-poslovanje Upot 180h	rijebiti metode i ala	ate u modeliranju pro	ocesa i podatka poslovnih inforr	nacijskih sustava: 10h in		
Methods of carrying out lectures	Ex cathedra teaching Case studies Homework presentati	on	posiovnin mormacijs	אאוויז אטגעעע, און וווי בסטוו			
Methods of carrying	Traditional literature a	analysis					
out auditory exercises	Essay writing Discussion, brainstorr	ning					
Methods of carrying out laboratory exercises	Group problem solvin Essay writing Discussion, brainstorr Workshop	g ning					
Course content lectures	1.IS architecture fram 2.IS architecture fram 3.Business aarchitect 4.Information system 5.Introduction to ente 6.Real-Time Enterpris 7.History and develop 8.Event-Driven Archit 9.No classes 10.No classes 11.No classes	ework, 4h, Learning ework usability, 4h ure, information sys s architecture: infor rprise application ir e, 4h, Learning out oment of EAI , 4h, Le ecture, 2h, Learning	g outcomes:1 , Learning outcomes stems architecture, t mation architecture ntegration, 4h, Learn comes:2,3 earning outcomes:2, g outcomes:4,5	2 echnology architecture, 4h, Lea and applications architecture, 4 ing outcomes:2,3	arning outcomes:2,3 4h, Learning outcomes:2,3		

TVZ,

Zagreb University of Applied Sciences

	12.No classes 13.No classes 14.No classes 15.No classes
Course content auditory	 1.Introduction to creation of a written work in the field of architecture and integration of business IS., 2h, Learning outcomes:1 2.Examples of papers - approach of processing theoretical pieces related to the architecture and integration of business IS., 2h, Learning outcomes:2,3 3.Examples of papers - approach of analysis that shows an example of business practices., 2h, Learning outcomes:2,3 4.An example of architecture and integration using the canonical form of the data model., 2h, Learning outcomes:2,3 5.An example of architecture and integration using the canonical form of the data model., 2h, Learning outcomes:2,3 6.Presentation of written work and discussion., 2h, Learning outcomes:4,5 7.Presentation of written work and discussion., 1h, Learning outcomes:5 9.No classes. 10.No classes. 11.No classes. 12.No classes 13.No classes 14.No classes 15.No classes 15.No classes
Course content laboratory	 1.Introduction to the course and program Enterprise Architect, Zachman Framework and TOGAF., 1h, Learning outcomes:1 2.Exercises in the program Enterprise Architect, Zachman Framework and TOGAF., 1h, Learning outcomes:2,3 3.Exercises in the program Enterprise Architect, Zachman Framework and TOGAF. Generating documentation and code., 1h, Learning outcomes:2,3 4.Eexercises UML., 2h, Learning outcomes:2,3 5.Making simple examples of UML diagrams., 1h, Learning outcomes:2,3 6.Creating complex examples of UML diagrams., 1h, Learning outcomes:2,3 8.Making an skill task., 1h, Learning outcomes:3,4 9.Making an skill task., 1h, Learning outcomes:3,4 10.Making an skill task., 1h, Learning outcomes:3,4 12.Presentation of an skill task., 1h, Learning outcomes:5 13.No classes., Learning outcomes:3
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Tools
Exam literature	Op't Land M., Proper E., Waage M., Cloo J., Steghuis C.: Enterprise Architecture Creating Value by Informed Governance, Springer, 2009. Galinec D.: Aplikacijska integracija, radni materijal dostupan na webu, Tehničko veleučilište u Zagrebu, 2012. BuHunter R., Westerman G.,: The Real Business Value of IT: How ClOs Create and Commujnicate Value, Harvarde Business Press Series, 2009. * Khan R. N.: Business Process Management. A Practical Guide, Meghan-Kiffer Press, Tampa, FL, USA, 2004 * Krafzig D., Banke K., Slama D. : Enterprise SOA: Service-Oriented Architecture Best Practices, Prentice Hall PTR, Upper Saddle River, NJ, USA, 2004 * ITtoolbox : EAI Knowledge Base, http://eai.ittoolbox.com, Information Technology Toolbox, Inc., Scottsdale, AZ, USA, 2012
Students obligations	Maximum of 3 absences from exercises. Presented seminar paper
Knowledge	Seminar paper. Presentation. 100 points.
evaluation during semester	Evaluation: 90.01 - 100.00 points: excellent (5) 81.01 - 90.00 points: very good (4) 70.01 - 80.00 points: good (3) 60.01 - 69.00 points: sufficient (2).
Knowledge	Written exam.
evaluation after semester	Evaluation: 90.01 - 100.00 points: excellent (5) 81.01 - 90.00 points: very good (4) 70.01 - 80.00 points: good (3) 60.01 - 69.00 points: sufficient (2).
Student activities:	Aktivnost ECTS
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	College Professor Darko Galinec, PhD

Code WEB/ISVU	23183/130955	ECTS	6.0	Academic year	2018/2019
Name	Business intelligenc	e and big data and	alytics		
Status	3rd semester - Poly Redovni specijalisti	technic graduate p informatike) - elec	professional study progra tive course3rd semester	mme specialization in Informat - Polytechnic graduate profess	ics Engineering (NOVI ional study programme
	specialization in Info	ormatics Engineer	ing (NOVI Izvanredni spec	cijalisti informatike) - elective c	ourse
Teaching mode	Lectures + exercise work at home	s (auditory + labo	ratory + seminar + meto	dology + construction)	30+30 (15+15+0+0) 120
Teachers	Lectures:1. Prof. dr. Auditory exercises: Laboratory exercise	sc. Goran Klepac Prof. dr. sc. Goran s:Prof. dr. sc. Gora	Prof. v.š. Klepac Prof. v.š. an Klepac Prof. v.š.		
Course objectives	To learn students fo	or applying advance	ed analytical techniques	in business	
Learning outcomes:	1.Holistic anayticalò	model. Level:6,7	, i		
	2.Different methods 3.Adequate analytic 4.Analytical solution 5.Analitical solution	s. Level:6,7 cal solution model. n model. Level:6,7 . Level:6,7	Level:7		
Methods of carrying	Ex cathedra teachir	ıg			
out lectures	Case studies Demonstration Simulations				
	Discussion Questions and answ	vers			
Methods of carrying out auditory exercises	Computer simulatio Workshop	ns			
Methods of carrying out laboratory exercises	Workshop				
Course content	1.Basic terms. Busir	ness intelligence a	nd big data analytics., 2h	, Learning outcomes:1,2	
lectures	2. Data preprocessi	ng.Attribute releva	ance analysis., 2h, Learni	ng outcomes:1,2	
	3.Data preprocessir	ig.Attribute releva	nce analysis., 2h, Learnir	ig outcomes:1,2	
	5.Factor analysis, 2	h. Learning outcor	nes:2,3		
	6.Predictive model	development, 2h,	Learning outcomes:2,3		
	7.Predictive model	development, 2h,	Learning outcomes:3,4		
	8.Predictive model	development, 2h,	Learning outcomes:3,4		
	9.Profiling, 2h, Lear	ning outcomes:3,4	Л		
	11.Simulation mode	ls development u	,4 sing Bavesian networks. 2	2h. Learning outcomes: 3.4	
	12.Simulation mode	els development u	sing Bayesian networks, 2	2h, Learning outcomes:3,4	
	13.Unstructured dat	ta analysis , 2h, Le	earning outcomes:2,4	· · · · · ·	
	14.Social network a	nalysis, 2h, Learni	ng outcomes:2,4		
	15.Advanced analyt	ical model develo	pment, 2h, Learning outc	omes:2,4	
Course content	1 Introduction in pro	ogramming langua	ages for husiness intellige	nce and hig data analytics. 2h	Learning outcomes:1.2
auditory	2.Introduction in pro	ogramming langua	iges for business intellige	nce and big data analytics, 2h,	Learning outcomes:1,2
	3.Attribute relevance	e analysis , 2h, Le	arning outcomes:1,2		•
	4. Attribute relevance	e analysis , 2h, Le	arning outcomes:1,2		
	6 Predictive model	e analysis, 2n, Lea develonment 2h	l earning outcomes:1,2		
	7.Predictive model	development , 3h,	Learning outcomes:3,4,5		
	8		-		
	9				
	11.Simulation mode	el development			
	12				
	13				
	14				
	15				
Course content	1.Big data analytica	l model, 2h, Learr	ing outcomes:1		
laboratory	2.Big data analytica	l model, 2h, Learr	ing outcomes:1		
	3.Social network an	alysis, 2h, Learnin	g outcomes:3		
	4.Social network an	alysis, 2h, Learnin	g outcomes:3		
	6 Natural language	processing, 2h, Le	earning outcomes:3		
	7.Natural language	processing, 21, Le	arning outcomes:3		
	8.+	,	J		
	9.+				
	10.+				
	111.+ 12 +				
	13.+, 2h				
	14.+				
•					

	15.+
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Overhead projector
Exam literature	Klepac, G. (2014). Data Mining Models as a Tool for Churn Reduction and Custom Product Development in Telecommunication Industries. In P. Vasant (Ed.), Handbook of Research on Novel Soft Computing Intelligent Algorithms: Theory and Practical Applications (pp. 511-537). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-4450-2.ch017
	Klepac, G. (2013). Risk Evaluation in the Insurance Company Using REFII Model. In S. Dehuri, M. Patra, B. Misra, A. Jagadev (Eds.) Intelligent Techniques in Recommendation Systems: Contextual Advancements and New Methods (pp. 84-104). Hershey, PA: Information Science Reference. doi:10.4018/978-1-4666-2542-6.ch005
	Klepac, G. (2010). Preparing for New Competition in the Retail Industry. In A. Syvajarvi, J. Stenvall (Eds.) Data Mining in Public and Private Sectors: Organizational and Government Applications (pp. 245-266). Hershey, PA: Information Science Reference. doi:10.4018/978-1-60566-906-9.ch013
	Prof. dr. sc. Goran Klepac, : "SUSTAVI POTPORE ODLUČIVANJU", priručnik. Izdavač: Algebra d.o.o., 2011. ISBN 978-953-322-093-2
	Prof. dr. sc. Goran Klepac suradnik : KOMPETITIVNA ANALIZA poslovne i ekspertne kvantitativne analitičke tehnike (2011), dr. sc. Robert Kopal, Darija Korkut, Izdavači: Comminus, Effectus učilište.
	Klepac Goran, "Integrating Seasonal Oscillations into Basel II Behavioural Scoring Models" u knjizi , "Credit Scoring - Concepts, Perspectives and Models"; editors: Ravi Kumar, Jain B; The Icfai University Press, India, 2008, ISBN: 978-81-314-1577-1
	Klepac, Goran ; Mršić, Leo: Poslovna inteligencija kroz poslovne slučajeve, Liderpress/TimPress, Zagreb, 2006, ISBN: 953-95472-1-0
	Klepac, Goran ; Panian, Željko: Poslovna inteligencija, Masmedia, Zagreb, 2003, ISBN: 953-157-447-2
	Klepac, Goran: Primjena inteligentnih računalnih metoda u menadžmentu, Sinergija, Zagreb, 2001, ISBN: 953-6895-01-3
Students obligations	Attendance on classes
Knowledge evaluation during semester	Exams
Knowledge evaluation after semester	Project wit oral exam
Student activities:	Aktivnost ECTS (Oral exam) 1 (Project) 5
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Code WEB/ISVU	23152/130920	ECTS	6.0	Academic year	2018/2019			
Name	Business Process Mo	deling						
Status	2nd semester - Polyt Redovni specijalisti i specialization in Info	echnic graduate nformatike) - elec rmatics Engineer	professional study progra ctive course2nd semester ing (NOVI Izvanredni spec	mme specialization in Informat - Polytechnic graduate profess ijalisti informatike) - elective co	ics Engineering (NOVI ional study programme ourse			
Teaching mode	Lectures + exercises work at home	s (auditory + labo	ratory + seminar + meto	dology + construction)	30+30 (15+15+0+0) 120			
Teachers	Lectures:dr.sc. Mladen Mauher prof.v.šk. Auditory exercises: Edmond Krusha , struč.spec.ing.techn.inf., predavač Laboratory exercises: Edmond Krusha , struč.spec.ing.techn.inf., predavač							
Course objectives	to enable graduate s planner, business ex	students to work a cellence consulta	as business analyst, mana int	ager, strategic organization and	I ICT development			
Learning outcomes:	 1.to identify and clarify the taxonomy and ontology of business process. Level:7 2.to elaborate and explain the amin features of a business process model . Level:6,7 3.to compare business process domains and interactions, and clarify difussion and reintegration of business processes. Level:6,7 4.to identify business process specification standards and conceptual models of business processes. Level:7 5.to critically clerify the reasons of transformations of business processes to business services, and standardized models of business processes and business services. Level:7 6.to propose the sequence and ussage methods of business process execution languages, and universal business language messages. Level:7 							
Methods of carrying out lectures	Ex cathedra teaching Case studies Demonstration Modelling Discussion Questions and answe	g ers						
Methods of carrying out auditory exercises	Laboratory exercises Group problem solvii Discussion, brainstor Mind mapping Interactive problem Workshop	s, computer simul ng rming solving	ations					
Methods of carrying out laboratory exercises	Laboratory exercises Group problem solvin Essay writing Workshop	s, computer simul ng	ations					
Course content lectures	1.Business process t 2.Business process c 3.Conceptual modela 4.Process models an 5.Business process c outcomes:3 6.Definition scope of Learning outcomes:3 7.Modeling domains 8.Business Motivatio (BPDM); Business Protess 0.Process or Chestra 11.Business process Learning outcomes:5 12.Business process outcomes:5 13.Management arcl 14.Universal business	axonomy; Busine ontology; Generic a and terminology d interactions; Mi data features; Pro business process of business proces n Model (BMM); E ocess Maturity Mo hess Vocabulary a Oriented Modelin ation and choreog es and business s modeling langua hitectures of busi s process models project developm	ss process ontology, 2h, 1 model of business systen y; Functional and process odeling of data, organizat cess model structure and s; Business process perfor ess; Business process inte Business Model and Notati odel (BPMM), 2h, Learning and Rules (SBVR); Workflo ng Framework, 2h, Learnin raphy design; Choreograp services; Externalisation o ges (BPML); Business pro- ness process chains, 2h, L s; Universal business lang nent and implementation,	Learning outcomes:1 n and business processes, 2h, 1 decomposition, 2h, Learning o ion and operations , 2h, Learni features; Business process fou rmance specification; Business rraction and integration models ion (BPMN); Business Process D outcomes:4 w Management Facility; Production ng outcomes:4 ohy implementation, 2h, Learni f business processes; Service i cess execution languages (BPE Learning outcomes:6 uage (UBL), 2h, Learning outcomes:6 2h, Learning outcomes:6	Learning outcomes:1 Jtcomes:2 ng outcomes:2 ndations, 2h, Learning process determinants, 2h, , 2h, Learning outcomes:3 lefinition Metamodel tion Rules Representation ng outcomes:4 nteraction types, 2h, L), 2h, Learning mes:6			
Course content auditory	1.Introduction to bus 2.Business process r 3.Business process r 4.Simple business pr 5.Compound busines 6.Complex business 7.Business process C 8.Business process C 9.Laboratory assign 10.Laboratory assign 11.Laboratory assign 12.Laboratory assign 13.Laboratory assign 14.Laboratory assign	siness process mo nodeling notation nodeling notation rocess model - Ca ss process model - C CASE diagrammin CASE diagrammin ment design, 1h, 1 ment mentoring, ment mentoring, ment mentoring, ment code generation	beling, 1h, Learning outc (BPMN), 1h, Learning outc (BPMN), 1h, Learning out se study, 1h, Learning out - Case study, 1h, Learning Case study, 1h, Learning g examples, 1h, Learning g examples, 1h, Learning Learning outcomes:1,2,3, 1h, Learning outcomes:1 , 1h, Learning outcomes:1 , 1h, Learning outcomes:1 ration, 1h, Learning outcon	omes:1 tcomes:2 tcomes:2 g outcomes:3 outcomes:3 outcomes:3 outcomes:3 4 ,,2,3,4 ,,2,3,4 ,,2,3,4 mes:1,2,3,4 nes:1,2,3,4				

	15.Laboratory assignment presentation, 1h, Learning outcomes:1,2,3,4,6
Course content	1Introduction to business process modeling. 1h. Learning outcomes:1
laboratory	2Business process modeling notation. 1h. Learning outcomes:1
, ,	3Business process modeling notation, 1h, Learning outcomes:2
	4.Simple business process model design, 1h, Learning outcomes:2
	5.Compound business process model design, 1h, Learning outcomes:3
	6.Complex business process model design, 1h, Learning outcomes:3
	7.Complex business process model design, 1h, Learning outcomes:3
	8.Specification of laboratory assignment (USE CASE), 1h, Learning outcomes:1,2,3,4
	9.Specification of laboratory assignment (USE CASE), 1h, Learning outcomes:1,2,3,4
	10.Construction of laboratory assignment (Activity Diagram), 1h, Learning outcomes:1,2,3,4
	11.Construction of laboratory assignment (Activity Diagram), 1h, Learning outcomes:1,2,3,4
	12.Construction of laboratory assignment (Activity Diagram), 1h, Learning outcomes:1,2,3,4
	13.Construction of laboratory assignment (Activity Diagram), 1h, Learning outcomes:1,2,3,4
	14.Laboratory assignment documentation, 1h, Learning outcomes:1,2,3,4
	15.Laboratory assignment presentation, 1h, Learning outcomes:1,2,3,4,6
Required materials	Basic: classroom, blackboard, chalk
	General purpose computer laboratory
	Whiteboard with markers
	Overhead projector
Exam literature	1. Mathias Weske: Business Process Management: Concepts, Languages, Architectures, Springer-Verlag Berlin
Charles to the state of the state	Telefold 2007
Students obligations	10% lecture attendance
Knowledge	n/a
evaluation during	
semester	
Knowledge	laboratory assignment outcome (50%)
evaluation after	written exam (30%)
semester	
Student activities:	Aktivnost ECTS
	(written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Code WEB/ISVU	23189/130964	ECTS	6.0	Academic year	2018/2019
Name	Computerization of r	nedical records ar	nd records		
Status	3rd semester - Polyt Redovni specijalisti i specialization in Info	echnic graduate p nformatike) - elect rmatics Engineeri	rofessional study progra tive course3rd semester	mme specialization in Informat - Polytechnic graduate profess cijalisti informatike) - elective c	ics Engineering (NOVI ional study programme
Teaching mode	Lectures + exercises	s (auditory + labor	ratory + seminar + meto	odology + construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:1. Prof. dr. Laboratory exercises	sc. Miroslav Slami s: Biserka Klarić	ć profesor visoke škole		
Course objectives	To introduce student several medical reco	s with different wo	ays to store and display	medical documents, and learn	to form and manage
Learning outcomes:	1.to formulate the co 2.to classify the vari 3.to support system 4.to evaluate system 5.to propose a mode 6.to rearrange inforr 7.to build a new repo	omponents of elect ous types of elect maintenance mec of protection and of depersonaliza nation from electr ort based on the a	tronic medical records. I ronic medical records wi dical electronic documen d disposition of electronic tion of data for research onic medical records for vailable data in electron	Level:6,7 th regard to the purpose. Level tation. Level:7 c medical records. Level:7 purposes. Level:6,7 the purpose of determining. Le ic medical records. Level:6,7	:6,7 evel:6,7
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Demonstration Modelling Discussion	9			
Methods of carrying out laboratory exercises	Laboratory exercises Laboratory exercises Group problem solvi Discussion, brainston Mind mapping	s on laboratory eq s, computer simula ng rming	uipment ations		
Course content lectures	1.Introduction to the 2.Institutional level of 3.The inter-institutio 4.Electronic patient 1 5.Nursing document 6.The use of electron 7.The disposal and s 8.Monitoring the qua 9.No lecture. 10.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 14.No lecture. 15.No lecture.	use and manager of documentation nal level of docum records (EPR)., 4h ation., 4h, Learnin nic medical record ecurity managem lity of medical ins	ment of medical records - electronic medical records hentation - electronic hea , Learning outcomes:4 g outcomes:4,5 s in the decision making ent of medical records., titutions using electronic	Designing medical records., 4 rd (EMR)., 4h, Learning outcom alth records (EHR)., 4h, Learnin process., 4h, Learning outcom 4h, Learning outcomes:4,5,6 c medical records., 2h, Learning	h, Learning outcomes:1 les:2 g outcomes:3 les:4,5,6 g outcomes:4,5,6,7
Course content laboratory	1.Practical modeling 2.Analysis of data in 3.Analysis of data in outcomes:3 4.Analysis of data in 5.Analysis of data in 5.Analysis of data in data., 4h, Learning of 7.Examples of gener outcomes:5,6 8.Examples of gener outcomes:5,6,7 9.No lecture. 10.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 13.No lecture. 14.No lecture. 15.No lecture.	of electronic med electronic medica electronic patient olication of the nur protection in the p outcomes:4,5 ating reports from ating reports from	lical records., 4h, Learnin al records of hospital (EM al records in primary hea records (EPR) on the bar rsing documentation at o rocessing of electronic r a electronic medical reco a electronic medical reco	ng outcomes:1 IR) on the basis of test cases. , Ith care (EMR) on the basis of t isis of test cases. , 4h, Learning different levels of health care., , nedical records - procedures of ords for the purposes of decision ords for the purposes of quality	4h, Learning outcomes:2 est cases. , 4h, Learning outcomes:3,4 4h, Learning outcomes:4,5 depersonalization of the n making., 4h, Learning control., 2h, Learning
Required materials	Basic: classroom, bla Special purpose labo General purpose cor Special purpose corr Whiteboard with ma Overhead projector	ackboard, chalk oratory nputer laboratory puter laboratory rkers			
Evam literature	Nactauni materiie!!	prozontacija za	oi tuz br		
Students obligations	Attendance of 70% o	of the lectures and	1 80% exercises		



Knowledge evaluation during semester	No mid-term exam.					
Knowledge evaluation after semester	Evaluation of the written part of the seminar paper (70% points). Presentation of seminar paper (30% points).					
Student activities:	Aktivnost (Written exam)	ECTS 6				
Remark	This course can be used for final thesis theme					
Prerequisites:	No prerequisites.					

Code WEB/ISVU	23192/130967	ECTS	6.0	Academic year	2018/2019
Name	Database and knowled	ge base in health care			
Status	3rd semester - Polytecl Redovni specijalisti info specialization in Inform	hnic graduate profession prmatike) - elective coun natics Engineering (NOV	nal study programmo se3rd semester - Po I Izvanredni specijali	e specialization in Information lytechnic graduate profession sti informatike) - elective co	cs Engineering (NOVI onal study programme ourse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory +	seminar + metodolo	ogy + construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:1. Prof. dr. sc.	Miroslav Slamić profes	or visoke škole		
Course objectives	Understanding the info	rmation space data in t	he health care syste	m. Using the data in differen	nt models database.
Learning outcomes:	1.classify data models	and databases Level:6	,7	5	
	2.critically assess data 3.combine data in relat 4.to select technologie 5.classify structured, u 6.Suggest the use of el 7.to organize informati	structures in health car tional and non relationa s and tools for working nstructured and semi-st ectronic medical record on processing from ope	e. Level:7 l databases Level:6 with dimensional dat rructured data Leve s data in the docum n database of the W	,7 :abases. Level:7 :1:6,7 ent and graph databases L orld Health Organization. Le	evel:6,7 vel:6,7
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answers	i			
Methods of carrying out laboratory exercises	Laboratory exercises o Laboratory exercises, c Group problem solving Traditional literature ar Mind mapping Computer simulations Workshop	n laboratory equipment computer simulations nalysis			
Course content lectures	1.Introduction to the ar (relational, object)., 2h 2.Selected topics from to address problems in 3.Selected Topics in No outcomes:3,4 4.Selected topics in the knowledge base using 5.Integration and synta warehouse)., 4h, Learn 6.Significance of the us ontologies and semant 7.Document databases purposes of understand 8.View the world, 4h, L 9.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 13.No lecture. 14.No lecture.	rea of databases in the l , Learning outcomes:1 database design, data s health informatics., 4h, JSQL database and their e field of management a NoSQL and RDBMS data ax and semantic interop ing outcomes:2,3,4,5 se of structured, unstruct ic information in the en- s and electronic patient ding and decision-makir earning outcomes:5,6,7	health system. The a structures, modeling Learning outcomes importance and pla and engineering know abase., 4h, Learning erability of systems stured and semi-stru vironment of the hea record (ERP). Graph ng in the health care	irea most commonly used d and development of databa ce in the health care enviro wledge in the health care en outcomes:3,4,5 for data management. Dime ctured information, and the lth care system., 4h, Learni databases for geographic m system., 4h, Learning outco	atabases model ise management systems nment., 4h, Learning ivironment. Building a ensional base (data use of metadata, ng outcomes:4,5 happing of clinical data for omes:5,6
Course content laboratory Required materials	1.Analysis of the applic 2.Practical work on mo 3.Practical work on mo 4.Analysis of simple ex 5.Analysis of simple ex 6.Analysis of simple ex 8.Data Analysis of Simple ex 8.Data Analysis of Ope 9.No lecture. 10.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 14.No lecture. 15.No lecture.	ation of different mode deling data., 4h, Learnin deling data., 4h, Learnin amples of using NoSQL amples of connecting re d, unstructured and sem amples of using docum n Database World Healt	Is database., 2h, Lea ng outcomes:2 databases.; 4h, Lear elational and non rela ni-structured informa ent and graph datab h Organization and H	rning outcomes:1 ning outcomes:4,5 ational databases., 4h, Lear tion in the information envi ase in healthcare., 4h, Lear HMSS., 4h, Learning outcon	ning outcomes:4,5,6 ronment of health., 4h, ning outcomes:5,6 nes:5,6,7
	General purpose comp Special purpose comp Whiteboard with marke Overhead projector	uter laboratory iter laboratory ers			


Exam literature	Nastavni materijali - prezentacije na moj.tvz.hr				
Students obligations	Attendance of 70% of the lectures and 80% exercises				
Knowledge evaluation during semester	No mid-term exam.				
Knowledge evaluation after semester	Evaluation of the written part of the seminar paper (70% points). Presentation of seminar paper (30% points).				
Student activities:	AktivnostECTS(Written exam)6				
Remark	This course can be used for final thesis theme				
Prerequisites:	No prerequisites.				

Code WEB/ISVU	23637/157928	ECTS	6.0	Academic year	2018/2019
Name	Database modeling a	nd administra	ition		
Status	3rd semester - Polyte Redovni specijalisti in	echnic graduat formatike) - e	te professional study program elective course3rd semester -	me specialization in Informat Polytechnic graduate profess	ics Engineering (NOVI ional study programme
	specialization in Infor	matics Engine	eering (NOVI Izvanredni speci	jalisti informatike) - elective c	ourse
Teaching mode	Lectures + exercises work at home	(auditory + la	aboratory + seminar + metoc	lology + construction)	30+30 (30+0+0+0) 120
Teachers	Lectures:1. Željko Ko	vačević , stru	č.spec.ing.techn.inf.		
	Auditory exercises: Ž	eljko Kovačev lartina Petrov	ić , struč.spec.ing.techn.inf.		
Course objectives	Teach students on ho	w to use relat	tional databases with an emp	hasis on modeling, analytics a	and administration of
·····	professional database	es such as MS	SQL Server.		
Learning outcomes:	1.Install and configure	e database se	erver Level:6,7		
	2.Create ER database	e model. Leve	1:6,7		
	4.Create SOL quaries	. procedures a	and triggers. Level:6.7		
	5.Create database sc	hemas, users	and roles. Level:6,7		
	6.Create database re	plication. Lev	el:6,7		
	7.Create client applic	ation using Al	DO components. Level:6,7		
Methods of carrying	Ex cathedra teaching				
out lectures	Case studies				
	Simulations				
	Modelling				
	Discussion	rc			
	Seminar, students pre	esentation an	d discussion		
	p				
Methods of carrying	Laboratory exercises,	, computer sir	nulations		
out auditory exercises	Discussion, brainstori	ig mina			
	Computer simulations	S			
	Interactive problem s	olving			
Course content	1.Database types, AC	ID properties	Objects, Data types, SOL gu	eries, 4h. Learning outcomes:	1
lectures	2.ER model, Concepti	ual, logical an	d physical modeling, advance	ed SQL queries, 4h, Learning o	- outcomes:2,4
	3.Database normaliza	ation, indexes	, 3h, Learning outcomes:3		4
	4. VIEWS, Stored proce	ot Transactio	rs, scalar, aggregate and tabl	e functions, 4n, Learning outc	omes:4
	6.SQL Server adminis	stration(schen	nas, roles, user privilegues), 4	th, Learning outcomes:5	
	7.Developing DB clier	nt application	s usig ADO components, 4h, I	_earning outcomes:7	
	8.Concurrency in mul	ti-user enviro	nment, 3h, Learning outcome	25:7	
	10.No class				
	11.No class				
	12.No class				
	14.No class				
	15.No class				
Course content	1.Install and configure	e MS SOL dat	abase server. 3h. Learning ou	itcomes:1	
auditory	2.Conceptual, logical	and physical	database modeling, 4h, Learn	ning outcomes:2,4	
	3.Basic and advanced	d SQL queries	, 4h, Learning outcomes:2,4		
	5.Views, stored proce	edures and tri	agers, 4h. Learning outcomes	\$:2.4	
	6.Database replicatio	n, 4h, Learnir	ng outcomes:6		
	7.Database administr	ration, 4h, Lea	arning outcomes:5	7	
	9.No class	se client appli	cations, 4n, Learning outcom	es:7	
	10.No class				
	11.No class				
	12.NO Class				
	14.No class				
	15.No class				
Required materials	Basic: classroom bla	ckboard, chal	k		
	General purpose com	puter laborat	ory		
	Whiteboard with mar	kers			
	Overhead projector				
Exam literature	1. Radovan, M.: Baza	podataka, Inf	ormator, Zagreb, 1993.		
	2. Date, C.J.: An Intro	duction to Da	tabase Systems, Addison-We	sley publishing	
Students obligations	Company, New York. Maximum of 3 absen	1994. ces from ever	cises and classes		
Statenes obligations	addition of 5 absent				



Knowledge evaluation during semester	Practical work. Oral presentation. Written exam. 100 points. evaluation: 90.01 to 100.00 points: excellent (5) 81.01-90.00 points: very good (4) 70.01-80.00 points: good (3) 60.01-69.00 points: sufficient (2)					
Knowledge evaluation after semester	Practical work. Oral presentation. Written exam 100 points. evaluation: 90.01 to 100.00 points: excellent (5) 81.01-90.00 points: very good (4) 70.01-80.00 points: good (3) 60.01-69.00 points: sufficient (2)					
Student activities:	Aktivnost ECTS (Practical work) 6					
Remark	This course can be used for final thesis theme					
Prerequisites:	No prerequisites.					
Proposal made by	Željko Kovačević struč.spec.ing.techn.inf., 8.6.2016					

Code WEB/ISVU	23157/130925	ECTS	6.0	Academic year	2018/2019
Name	Design and manage	a portfolio of cap	ital projects	•	•
Status	2nd semester - Polyt Redovni specijalisti i specialization in Info	echnic graduate nformatike) - elec rmatics Engineer	professional study progra ctive course2nd semester ing (NOVI Izvanredni spec	mme specialization in Informat - Polytechnic graduate profess ijalisti informatike) - elective c	ics Engineering (NOVI ional study programme ourse
Teaching mode	Lectures + exercises work at home	s (auditory + labo	ratory + seminar + meto	dology + construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. dr.sc. Mla	aden Mauher prof	f.v.šk.		·
Course objectives	to teach students to platform	design and imple	ement capital project port	folio management system on s	elected technology
Learning outcomes:	1.to present element 2.to identify and sele 3.to create optimal of 4.to reasses the sens 5.to identify the com 6.to justify interoper	ts and composition ect capital project capital project por sitivity of capital aponents of capital ability requireme	on of capital project portfor c and portfolio manageme tfolio. Level:6,7 project portfolio. Level:6,7 al project portfolio techno nts for capital project por	olio. Level:6,7 ent methodology. Level:7 7 logy. Level:7 tfolio management sytem. Leve	el:7
Involvement of learning outcomes of the course in study programme:	1.6.OPĆI Osmišljavat 2.1.OSOBNE Znanje 2.4.OSOBNE Kritička problema.: 10h in 18 2.6.OSOBNE Iskustva 2.7.OSOBNE Predsta 3.1.SPECINF Razumij 6.1.E-uprava Razum uprave: 50h in 180h 6.3.E-uprava Uspost: 6.4.E-uprava Primije podsustava uprave: 6.5.E-uprava Primije	ti i provoditi poku o suvremenim pit evaluacija argun 30h a rada u projektni vljanje informacij jevati mjesto i ulc ijevati mjesto i ulc aviti kolaborativn niti formalne met 20h in 180h niti standarde into	se, analizirati i interpretir tanjima struke i društva.: nenata, pretpostavki i pod m timovima i industriji.: 5 a, ideja, problema i rješer ogu IT u kontekstu organiz ogu IT u kontekstu organi e tehnologije uredskog po ode na analizu zahtjeva k eroperabilnosti u sustavin	ati dobivene podatke.: 5h in 18 5h in 180h lataka u cilju stvaranja mišljenj sh in 180h nja stručnoj i općoj publici.: 5h racije, menedžmenta i poslovni zacije, menedžmenta i procesa oslovanja u podsustavima javne od projektiranja komponenti in na uprave: 20h in 180h	i0h a i pridonošenja rješenju in 180h h procesa.: 10h in 180h n u okruženjima javne e uprave: 50h in 180h formacijskih sustava i
Methods of carrying out lectures	Ex cathedra teaching Case studies Demonstration Discussion Questions and answe	g ers			
Methods of carrying out auditory exercises	Traditional literature Discussion, brainstor Mind mapping	analysis rming			
Methods of carrying out seminars	Data mining and kno Essay writing	owledge discovery	y on the Web		
Course content lectures	1.Introduction: Capit outcomes:1 2.Capital project ma 3.Capital project por 4.Capital project por 5.Capital project por 7.Capital project por 8.Interoperability of 9.n/a 10.n/a 11.n/a 12.n/a 13.n/a 14.n/a 15.n/a	al project, capital nagement metho tfolio compositior tfolio implementa tfolio sensitivity a tfolio sensitivity a tfolio organization capital project an	l project portfolio, project dology, 4h, Learning outc h and design, 4h, Learning ation and optimization, 4h analysis , 4h, Learning out and integration, 4h, Learn n and management, 4h, L Id portfolio management s	and portfolio management tec omes:2 g outcomes:2,3 , Learning outcomes:3 :comes:3,4 ning outcomes:5 earning outcomes:3,4,5,6 systems , 2h, Learning outcom	hnology, 4h, Learning es:6
Course content auditory	1.n/a 2.n/a 3.n/a 4.n/a 5.National capital pri 6.City/local governm 7.Public sector capita 8.Capital project por 9.n/a 10.n/a 11.n/a 12.n/a 13.n/a 14.n/a 15.n/a	oject portfolio Ca ent capital projec al project portfolio tfolio interoperab	se Study and discussion, 4 ct portfolio: Case Study ar o: Case Study and discuss ility: Case Study and disc	4h, Learning outcomes:1,2,3,4, nd discussion, 4h, Learning out sion, 4h, Learning outcomes:1,7 ussion, 3h, Learning outcomes	5,6 comes:1,2,3,4,5,6 2,3,4,5 :3,4,5

Course content	1.Seminar topic selection, 2h, Learning outcomes:1					
seminars	2.Web literature research, 2h, Learning outcomes:1,2					
	 3.Requirement analysis and achievement of capital project portfolio management in student working environment , 2h, Learning outcomes:1,2,3,4 4.Seminar work, 2h, Learning outcomes:1,2,3,4,5,6 					
	5.Seminar work, 2h, Learning outcomes:1,2,3,4,5,6					
	6.Seminar work, 2h, Learning outcomes:1,2,3,4,5,6					
	7.Seminar work, 2h, Learning outcomes:1,2,3,4,5,6					
	8.Seminar delivery, 1h, Learning outcomes:1,2,3,4,5,6					
	9.n/a					
	10.n/a					
	11.n/a					
	12.n/a					
	13.n/a					
	14.n/a					
	15.n/a					
Required materials	Basic: classroom, blackboard, chalk					
-	Overhead projector					
Exam literature	Bayney, R.M.: Enterprise Project Portfolio Management, J.Ross Publishing, 2012					
	Kaganova, O.: Guidebook on Capital Investment Planning in Local Government, Worldbank, 2011.					
Students obligations	course attendance 70%					
	auditory exercises attendance 70%					
Knowledge	no					
evaluation during						
semester						
Knowledge	written exam 50% points					
evaluation after	oral exam 30% points					
semester	seminar 20% points					
Student activities:	Aktivnost ECTS					
	(Written exam) 6					
Remark	This course can be used for final thesis theme					
Prerequisites:	No prerequisites.					
Proposal made by	Prof. Mladen Mauher, Ph.D.					

Code WEB/ISVU	23145/130912	ECTS	6.0	Academic year	2018/2019
Name	Digital culture		•		•
Status	2nd semester - Polyt Redovni specijalisti i specialization in Info	echnic graduate nformatike) - elec rmatics Engineeri	professional study program tive course2nd semester ing (NOVI Izvanredni spec	mme specialization in Informa - Polytechnic graduate profes ijalisti informatike) - elective	atics Engineering (NOVI ssional study programme course
Teaching mode	Lectures + exercises work at home	auditory + labo	ratory + seminar + meto	dology + construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:izv. prof. dr Auditory exercises:iz Seminar exercises:iz	. sc. Petar Jandrić v. prof. dr. sc. Pe v. prof. dr. sc. Pet	prof. v. šk. tar Jandrić prof. v. šk. tar Jandrić prof. v. šk.		
Course objectives	This course develops	s kritical understa	nding of digital cultures.		
Learning outcomes:	1.Formulate / define 2.Critically assess th 3.Critically assess de 4.Critically assess th 5.Formulate / define 6.Formulate / define 7.Critically assess th 8.Present conclusion 9.Write a critical sem	the main features e relationships be evelopment and m e relationships be organisational pa the main features e relationships be s at an appropria ninar on digital cu	s of digital cultures . Leve etween information techno- nedia representations of d etween virtual reality, mer aradigms in technology de s of hacker ethic . Level:6 etween technology and ide te level . Level:6,7 litures . Level:6,7	l:6,7 ologies and globalisation . Lev ligital cultures . Level:7 dia and identity . Level:7 velopment . Level:6,7 ,7 eology . Level:7	/el:7
Methods of carrying out lectures	Guest lecturer Case studies Modelling Discussion Questions and answe Seminar, students pr Other e-learning	ers resentation and d	iscussion		
Methods of carrying out auditory exercises	Group problem solvin Traditional literature Data mining and kno Essay writing Discussion, brainstor Other e-learning	ng analysis wledge discovery ming	r on the Web		
Methods of carrying out seminars	Group problem solvin Traditional literature Data mining and kno Essay writing Discussion, brainstor Other e-learning	ng analysis wledge discovery ming	v on the Web		
Course content lectures	1.Introduction to digi 2.Technologies and g 3.Developement and 5.Virtual reality, 2h, 6.Media and identity 7.Feminist critique o 8.Postmodernism, 2 9.Liquid modernity, 2 10.Organisational pa 12.Hacker ethic and 13.Hacker ethic and 14.Technology and id 15.The role of inform	ital cultures. , 2h, globalisation , 2h, I media represent Learning outcome , 2h, Learning out f technologies , 2 h, Learning outco 2h, Learning outco 2h, Learning outco the spirit of inforr the spirit of inforr the spirit of inforr deology , 2h, Lear nation scientists in	Learning outcomes:1,2,8 Learning outcomes:1,2,8 Lations of digital cultures (sations of digital cultures (es:4,8,9 ttcomes:4,7,8,9 ones:4,7,8,9 ology development (1), 2 ology development (1), 2 ology development (1), 2 nation age (1), 2h, Learn mation age (2), 2h, Learn rning outcomes:5,6,7,8,9 n digital cultures, 2h, Learn	,9 ,9 1) , 2h, Learning outcomes:1 2) , 2h, Learning outcomes:1 ,8,9 h, Learning outcomes:5,7,8,9 h, Learning outcomes:5,7,8,9 ing outcomes:6,7,8,9 ning outcomes:1,2,3,4,5,6,7,	,2,3,8,9 ,2,3,8,9) 8,9
Course content auditory	1. Individual coursew 2. Individual coursew 3. Individual coursew 4. Individual coursew 5. Individual coursew 6. Individual coursew 8. Individual coursew 9. Individual coursew 10. Individual coursew 11. Individual coursew 12. Individual coursew 13. Individual coursew 14. Individual coursew	ork , 2h, Learning ork , 2h, Learning work , 2h, Learnin work , 2h, Learnin	outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,9 outcomes:1,2,3,4,5,6,7 goutcomes:1,2,3,4,5,6,7 goutcomes:1,2,3,4,5,6,7 goutcomes:1,2,3,4,5,6,7 goutcomes:1,2,3,4,5,6,7 goutcomes:1,2,3,4,5,6,7	8,9 9,9 9,9 9,9 9,9 9,9 8,9 8,9	
Course content seminars	1.Individual coursew 2.Individual coursew	ork , 2h, Learning ork , 2h, Learning	outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8	3,9 3,9	

	 3.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 4.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 5.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 6.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 7.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 8.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 9.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 10.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 11.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 12.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 13.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 14.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 15.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9 15.Individual coursework , 2h, Learning outcomes:1,2,3,4,5,6,7,8,9
Required materials	Special equipment no equipment
Exam literature	 Assange, J.; Appelbaum, J.; Mller-Maguhn, A. i Zimmermann, J. (2012). Cypherpunks: Freedom and the Future of the Internet. New York: OR Books. Bauman, Z. (2011). Tekuća modernost. Zagreb: Pelago. Chomsky, N. (2003). Mediji, propaganda i sistem. Zagreb: Društvo za promicanje književnosti na novim medijima i Što čitaš?. Haraway, D. (1991). A Cyborg Manifesto. U D. Haraway, Simians, Cyborgs, and Women: The Reinvention of Nature. New York: Routledge. Himanen, P. (2002). Hakerska etika i duh informacijskog doba. Prvo izdanje. Zagreb: Jesenski i Turk. Jandrić, P. i Boras, D. (2012). Kritičko e-obrazovanje: borba za moć i značenje u umreženom društvu. Zagreb: FF Press i Tehničko veleučilište u Zagrebu. Lanier, J. (2011). You Are Not a Gadget: A Manifesto. London: Vintage. Peović Vuković, K. (2012). Mediji i kultura: ideologija medija nakon decentralizacije. Zagreb: Jesenski i Turk. Raymond, E. C. (2002). The Cathedral and the Bazaar. Shirky, C. (2011). Cognitive Surplus: Creativity and Generosity in a Connected Age. London: Penguin. Stallman, R. M. (2002). Free Software, Free Society: Selected Essays of Richard M. Stallman. Prvo izdanje. Boston: Free Software Foundation. Standing, G. (2011). The Precariat: The New Dangerous Class. London: Bloomsbury Academic. Turkle, S. (2012). Alone Together: Why We Expect More from Technology and Less from Each Other. New York: Basic Books.
Students obligations	(1)Participation (0-30 points) (2)Coursework (0-70 points) A minimum of 15 points in participation is required for successful completion of the course!
Knowledge evaluation during semester	Continuous assessment of online activity.
Knowledge evaluation after semester	Coursework
Student activities:	Aktivnost ECTS (Seminar Work) 4 (Classes attendance) 2
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	Dr Petar Jandrić prof

Code WEB/ISVU	23137/130903	ECTS	5.0	Academic year	2018/2019			
Name	Digital Economy				-			
Status	Ist semester - Polytechnic graduate professional study programme specialization in informatics Engineering (NOVI Redovni specijalisti informatike) - elective courselst semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Izvanredni specijalisti informatike) - elective courselst semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Redovni specijalisti informatike (smjer raarstvo)) - elective courselst semester - Polytechnic graduate professional study programme specialization in Informatics Engineering (NOVI Izvanredni specijalisti informatike (smjer raarstvo)) - elective course							
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	construction)	30+30 (0+0+30+0) 90			
Teachers	Lectures:mr.sc. Sergej Seminar exercises: Din Seminar exercises: Oliv Seminar exercises:mag	Lugović MBA ıko Horvat struč.spec.ing vera Međugorac g.oec Kristina Perec	.techn.inf.					
Course objectives	The aim of the course i	is to introduce students w	with the development of	digital economy in the p	latform economy model			
Learning outcomes:	1.Analyze the underlyin 2.Formulate the underlyin production. Level:6,7 3.Assess the underlying 4.Evaluate new models 5.Compare old and new	ng concepts related to the lying factors that determ g factors that affect the s and forms of economic w factors that determine	e development of the pla ine the difference betwee economic trends in the p development in the post economic development i	atform economy. Level:6 en the classic linear and ost-industrial society. Le -industrial society. Leve in the platform economy	5 circular model of vel:6,7 :7 /. Level:6,7			
Methods of carrying out lectures	Ex cathedra teaching Seminar, students pres	sentation and discussion						
Methods of carrying out seminars	Traditional literature ar Data mining and knowl Essay writing	nalysis ledge discovery on the W	/eb					
Course content lectures	1. Defining the business 2. Defining changes wit 3. The process of transf 4. Capitalization of a co Learning outcomes:2 5. Colloquium, 3h, Learn 6. The platform strategy 7. Linear business mode 8. Platforms change ind 9. Architecture platform 10. Colloquium, 3h, Lea 11. Platform launch mo 12. Metrics on platform 13. Management Platfou 14. Monetization on pla 15. Colloquium, Learnin	s model of the platform e hin the industry under th forming a classic linear b impany from a platform r ning outcomes:2 y is not a software strate el. A platform-based busi fustrial environments, 3h h. Network effect, 3h, Lea arning outcomes:4 dels, Learning outcomes:5 m Strategies, Learning outcomes tforms, Learning outcomes and outcomes:5	 conomy, 3h, Learning ou le influence of the platfou usiness into a platform n model. The value of brand legy, a historical review st iness model, 3h, Learning Learning outcomes:3 arning outcomes:4 :4 outcomes:5 les:5 	Itcomes:1 rm economy, 3h, Learnin nodel. Platform model, 3 ds from the platform eco rategy, 3h, Learning out g outcomes:3	ng outcomes:1 h, Learning outcomes:2 onomy model, 3h, comes:3			
Course content seminars	1. Explain and put into 0 2. Explain the basics of 3. Determining key mar economy model, Learn 4. Determining the key 5. Determining Key Fact 6. Determining Key Fact 7. Evaluate and analyze 9. Evaluate and analyze 9. Evaluate and identify 10. Evaluate and identify Learning outcomes:4 11. Evaluate the underl 12. Evaluate the underl 13. Evaluate the underl 14. Evaluate the underl 15. Determiniranje tem	context the development the development of diffe nagement strategies in the ing outcomes:2 factors that have affected tors Affecting the Value of tors Affecting Manageria e the underlying factors t / the underlying factors t / the underlying factors t fy Fundamental Factors I lying metric factors in the lying factors of manageri lying factors of manageri lying factors of ecosyster relinih benika koji utjena	t of economic systems the erent models of the econo- he process of transformir ed the change of business of Brands in Platform Eco- Il Processes Managing the that affect the architectur that affect building networ that affect platform launce Determining the Power of e different phase metrics th and maturity of the platform development as a man na monetizacije na platfor	rough history, 30h, Lear omy of the platform, Lear og classical linear busine s paradigm, Learning out onomics, Learning outcomes:3 re of the platform, Learn ork effect, Learning outco th strategies, Learning o f Network Effect After La on platforms, Learning atform, Learning outcom orm economy, Learning orgement strategy, Lear ormi, Learning outcome	ning outcomes:1 arning outcomes:1 ess into a platform atcomes:2 mes:2 ning outcomes:3 outcomes:4 aunching Platforms, outcomes:4 es:5 outcomes:5 ning outcomes:5 s:5			
Required materials	Basic: classroom, black Overhead projector	oboard, chalk						
Exam literature	Peitz, Martin, and Joel V Varian, Hal R., and Carl School Press, Cambridg Benkler, Yochai. The we 2006. Coyle, Diane. The weig Negroponte, Nicholas. Tapscott, Don, Alex Low McGraw-Hill Profession	Waldfogel, eds. The Oxfo I Shapiro. "Information ru ge (1999). ealth of networks: How s Intless world: strategies f Being digital. Random Ho wy, and David Ticoll. Blue nal, 1998.	rd Handbook of the Digit ules: a strategic guide to ocial production transfor for managing the digital ouse LLC, 1996. eprint to the Digital Econ	al Economy. Oxford Univ the network economy." ms markets and freedor economy. Mit Press, 199 omy: Creating Wealth ir	versity Press, 2012. Harvard Business n. Yale University Press, 19. n the Era of E-business.			



Students obligations	Attendance at lectures; seminar work				
Knowledge evaluation during semester	Colloquium				
Knowledge evaluation after semester	Written exam				
Student activities:	Aktivnost (Classes attendance) (Seminar Work) (Constantly tested knowledge) (Research) (Written exam)	ECTS 1 1 1 1 1 1			
Remark	This course can be used for final thesis theme				
Prerequisites:	No prerequisites.				
Proposal made by	PhD Joško Lozić, 05.06.2018.				

Code WEB/ISVU	23179/130950	ECTS	6.0	Academic year	2018/2019				
Name	Digital Image Processir	ng							
Status	3rd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate profession ormatike) - elective cours patics Engineering (NOVI	al study programme spe se3rd semester - Polytec Izvapredni specijalisti in	cialization in Informatics hnic graduate profession formatike) - elective cour	Engineering (NOVI al study programme				
Teaching mode	Lectures + exercises (a	auditory + laboratory + s	seminar + metodology +	- construction)	30+30 (15+15+0+0)				
Teachers	Lectures:1. Prof.dr.sc. 1 Lectures:2. Sanja Kralj Lectures:3. Milan Bajić Auditory exercises: Mil Auditory exercises:Pro Auditory exercises: San Laboratory exercises: 1 Laboratory exercises:	Slavica Ćosović Bajić ević , dipl.ing., v. pred. an Bajić f.dr.sc. Slavica Ćosović B nja Kraljević , dipl.ing., v. Milan Bajić Tamara Ivelja mag. ing. g	ajić pred. eod. et. geoinf.		1				
Course objectives	To transfer to students	the technical knowledge	e related to digital proce	ssing and analysis of ima	ige				
Learning outcomes:	1.ability to formulate th 2.ability to choose the 3.ability to generate ne 4.ability to choose ope 5.ability to provide a cr Researcher, TNTmipsF 6.ability to propose pro 7.ability to interpret im	1.ability to formulate the possibilities of digital image processing implementation . Level:6,7 2.ability to choose the area of implementation, depending on a course module chosen. Level:7 3.ability to generate new information as a result of a processing . Level:6,7 4.ability to choose open source programs and present images related to the area chosen. Level:7 5.ability to provide a critical review of the possibilities of implementation of various programs (ImageJ, IrAnalyser, FLIR Researcher, TNTmipsFree,Multispec). Level:7 6.ability to propose procedures of a quantity based digital image processing. Level:6,7 7.ability to interpret images for various engineering needs. Level:6,7							
Methods of carrying out lectures	Ex cathedra teaching Simulations								
Methods of carrying out auditory exercises	Laboratory exercises o Laboratory exercises, o Group problem solving Data mining and know Computer simulations	n laboratory equipment computer simulations ledge discovery on the W	/eb						
Methods of carrying out laboratory exercises	Laboratory exercises o Laboratory exercises, o Discussion, brainstorm Workshop	n laboratory equipment computer simulations ing							
Course content lectures	 Digital images, defin Digital images, defin Electro optical digital sensors., 4h, Learning Principles and methor reduction., 4h, Learnin Principal component Learning outcomes:3,4 The application of im Learning outcomes:1,2 The application of so HTML5 image proces No classes. 	itions, formats, analysis of itions, formats, analysis of l cameras and principles outcomes:4 ods of global and local pro g outcomes:3,4 analysis. Image Compres analysis. Ima	of the characteristics., 4 of the characteristics., 4 imaginary acquisitions. ocessing and image ana ssion. Basic methods of dustry, radars, surveillar d analyzing images., 4h, mes:6,7	h, Learning outcomes:1,2 n, Learning outcomes:1,2 Multispectral, hyperspect lysis. Enrichment, filtering classification. The spatial nce systems in buildings, Learning outcomes:1,2,4	2 2 rral and thermal IR g, extraction and l transformation., 4h, and in space., 4h, 4,5				
Course content auditory	L.No classes. 2.No classes. 3.No classes. 4.No classes. 5.No classes. 6.No classes. 6.No classes. 7.No classes. 8.Digital images, defin 9.Digital images, defin 10.Electro optical digit sensors., 2h, Learning 11. Principles and metl reduction., 2h, Learning 12. Principal component Learning outcomes: 3,4 13.The application of is 14.The application of s	itions, formats, analysis o itions, formats, analysis o al cameras and principles outcomes:4 hods of global and local p g outcomes:3,4 nt analysis. Image Compr mage processing in the in 2,7 ooftware for processing an	of the characteristics., 1 of the characteristics., 2 s imaginary acquisitions processing and image ar ression. Basic methods o ndustry, radars, surveilla nd analyzing images., 21	h, Learning outcomes:1,2 h, Learning outcomes:1,2 . Multispectral, hyperspec nalysis. Enrichment, filter of classification. The spati ance systems in buildings n, Learning outcomes:1,2	2 ctral and thermal IR ing, extraction and ial transformation., 2h, s, and in space., 2h, 2,4,5				

	15.The application of software for processing and analyzing images., 2h, Learning outcomes:1,2,4,5
Course content	1.No classes.
laboratory	2.No classes.
	3.No classes.
	4.No classes.
	5.No classes.
	6.No classes.
	/ No classes.
	9.Application of stereoscopic methods to achieve a virtual 3D effect., 2h, Learning outcomes:3,4,5,6,7 10.Detection of objects smaller than the area of spatial resolution of moving by principal component analysis (PCA), 2h, Learning outcomes:3,4,5,6,7 11.Detection of objects smaller than the area of spatial resolution of moving by principal component analysis (PCA), 2h, Learning outcomes:3,4,5,6,7 12.Technique of producing and reproduction of infrared images., 2h, Learning outcomes:4,5,6,7 13.Technique of producing and reproduction of infrared images., 2h, Learning outcomes:4,5,6,7 14.The presentations student papers., 2h, Learning outcomes:1,2,3,4,5,7
	15.The presentations student papers., 2h, Learning outcomes:1,2,3,4,5,6,7
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Whiteboard with markers Overhead projector Video equipment
Exam literature	Lisin A. K. 1090. Eurodemontals of Digital Image Processing, Prontance (Hall
	 J. A. Richards, J. Xiuping, Remote sensing and image interpretation, Ill-rd edition, John Wiley and Sons, New York, 1994. J. A. Richards, J. Xiuping, Remote Sensing Digital Image Analysis, An Introduction, Berlin, 1999. G. C. Holst, CCD arrays, cameras and displays, SPIE Optical Engineering Press, Bellingham, USA, 1996
	5. R. Steinmetz, K. Nahrstedt - Multimedia Applications (University of Illinois, Department of computer science)
Students obligations	Done exercises, defined project / seminar task
Knowledge evaluation during semester	Redovitost pohaa#10#10#30\$Seminarski rad#1#90#70\$
Knowledge evaluation after semester	Seminarski rad#1#100#70\$
Student activities:	Aktivnost ECTS (Written exam) 6
Remark	This course can be used for final thesis theme
Prereguisites:	No prerequisites.
Proposal made by	01 06 2017
i toposat made by	p1:0:2017.

Code WEB/ISVU	23143/130910	ECTS	6.0	Academic year	2018/2019
Name	Documents and Securit	ties Design			
Status	2nd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate professio prmatike) - elective cou natics Engineering (NOV	onal study programme s rse2nd semester - Polyt /I Izvanredni specijalisti i	pecialization in Informatio echnic graduate professio informatike) - elective co	cs Engineering (NOVI onal study programme urse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory +	seminar + metodology	+ construction)	30+30 (30+0+0+0) 120
Teachers	Lectures:1. Aleksandra Lectures:Prof. dr. sc. Ja Auditory exercises: Ale Auditory exercises: Ana	Bernašek Petrinec na Žiljak Gršić , mag. d ksandra Bernašek Petri a Hoić	esign nec		·
Course objectives	The acquisition of new Introduction to the pro	knowledge in the field cess of individualizatior	of security graphics, des and development of ne	ign graphic material and w solutions, which are di	visual communication. fficult to forge
Learning outcomes:	1.analyzing of securitie 2.analyzing of docume 3.distinguish between 4.creating required sec 5.managing of screen 6.creating complex gra 7.form and implement 8.create different typo 9.Color management in 10.constructing individ 11.designing an individ	es. Level:6 nts. Level:6 vector and raster graph urities elements. Level transformations. Level; uphics solutions, line gra- new forms of protection graphic solutions, the n n a screen graphics. Level ualized solutions with E lualized graphics. Level	nics. Level:6 :6,7 aphics. Level:6,7 n. Level:6 nicrotext typography. Le vel:6,7 Bezier curves. Level:6,7 :6	vel:6,7	
Involvement of learning outcomes of the course in study programme:	1.1.0PĆI Služiti se stran 1.3.0PĆI Koristiti tehnii 1.5.0PĆI Identificirati, r 1.6.0PĆI Osmišljavati i 2.1.0SOBNE Znanje o s 2.2.0SOBNE Odgovorn 2.4.0SOBNE Kritička ev problema.: 10h in 180H 2.7.0SOBNE Predstavlj 2.8.0SOBNE Predstavlj 2.8.0SOBNE Predstavlj 2.10.0SOBNE Prilagodl 2.11.0SOBNE Otvorend 2.12.0SOBNE Fleksibilr načela, pravnih normi i 7.3.Dizajn Primijeniti na sadržaje i medije.: 20h 7.4.Dizajn Procijeniti po perspektivu, najbolju p 7.5.Dizajn Koristiti širol komunikacijskih format	nim jezikom u literaturi ke, vještine i suvremen modelirati i rješavati inž provoditi pokuse, anali suvremenim pitanjima s ost, dosljednost, točnos valuacija argumenata, p n anje informacija, ideja, cijske vještine u okviru alna i ljudska osobnost. jivost novim tehnologij ost za nova znanja, isku nost i prilagodljivost u iz i pravila struke.: 10h in a kreativan način alate in 180h otencijalna multimedijsl raksu programiranje te k raspon aktualnih med ta.: 10h in 180h	i svakodnevnoj stručnoj e alate neophodne za in ženjerske probleme.: 101 zirati i interpretirati dob struke i društva.: 10h in st, ažurnost.: 10h in 1800 pretpostavki i podataka u problema i rješenja stru struke te s klijentima, n : 10h in 180h ama i tehnikama kao dio istva i kulturne okolnosti znalaženju tehničkih rješ 180h i načela digitalnog grafic ka rješenja s obzirom na utjecaj na okolinu.: 10h ija, naprednih informaci	komunikaciji. : 10h in 18 ženjersku praksu.: 10h in n in 180h ivene podatke.: 20h in 18 180h h u cilju stvaranja mišljenja čnoj i općoj publici.: 10h a hrvatskom i engleskom o procesa cjeloživotnog ud i.: 10h in 180h šenja uz neupitno poštiva čkog dizajna za širok rasp njihovu izvedivost, logiči in 180h jskih tehnologija, tehnika	i0h 180h J0h i pridonošenja rješenju in 180h i jeziku.: 10h in 180h čenja.: 10h in 180h nje temeljnih etičkih pon korisnika i različite ku osnovu, povijesnu i, alata te audio-vizualnih
Methods of carrying out lectures	Ex cathedra teaching Demonstration Discussion The lectures with intera	active computer project	tion. Studving the theore	etical structure and appli	cation in practice
Methods of carrying out auditory exercises	Laboratory exercises, c Group problem solving Discussion, brainstorm	computer simulations			
Course content lectures	1.Introduction to secur 2.Basics of vector grap 3.Analysis of the basic 4.Designing security gr 5.Designing of docume 6.Modern achievement 7.Designing personaliz 8.The mutant screens, 9.The line graphic on d 10.Attempts in design 11.The microtext typoo 12.Intellectual property 13.Critical review of co 14.Advantages of good	ity graphics, 2h, Learni hics, 2h, Learning outco elements on securities raphics, 2h, Learning out ints and securities, 2h, is in security design, 2h ed raster solutions, 2h, 2h, Learning outcomes ocuments and securitie falsification, ways of fal graphy, 2h, Learning ou y in the field of design, ntemporary design solut visual communication n and design of securitie	ng outcomes:3 omes:3 and documents, 2h, Lea utcomes:6 Learning outcomes:1,2,6 , Learning outcomes:7,9 Learning outcomes:5,6, :5,6,9 es, 2h, Learning outcomes lsifying, 2h, Learning out tcomes:8,10 2h, Learning outcomes: utions, 2h, Learning outcomes es, 2h, Learning outcomes es, 2h, Learning outcomes	arning outcomes:1,2,4 5,7,11 9,10 7,10,11 es:1,2 tcomes:6 5,11 :omes:1,2 :8,9,10,11 hes:5,8,9,10,11	
Course content auditory	1.Designing basic elem 2.Designing basic elem 3.Analysis and compar 4.Creating graphics wit 5.Creating line graphic 6.Working with color in 7.Creating monochrom	nents in the security gra- nents in the security gra- ison of new and old sec th bezier curve, 2h, Lea s, 2h, Learning outcom a line graphics, 2h, Le e screen graphics, 2h,	aphics (Part 1), 2h, Learr aphics (Part 2), 2h, Learr curities on the device for rning outcomes:10 es:6,10 arning outcomes:9 Learning outcomes:6,9	ing outcomes:1,2,3,4 ning outcomes:1,2,3,4 digital forensics, 2h, Lea	rning outcomes:1,2

	8.Creating a multi-color screen graphics, 2h, Learning outcomes:6,9					
	9.Working with screen mutants, 2h, Learning outcomes:5,6					
	10. Working with interoutypography, 2n, Learning outcomests					
	11. Derining the project; designing documents and securities, 2/n, Learning outcomes:4,6,7,8,9,10,11					
	12. Presentation of plan for design development, 2n, Learning outcomes:o					
	13. Development, analysis and progress of the project / design, 2n, Learning outcomes:11					
	14. These nation of the project 21, Learning outcomes: $1, 2, 3, 4, 3, 7, 7, 3, 9, 10, 11$					
	13. Freschrauon of the project, 21, Leaning outcomes. 1,2,3,4,3,0,7,8,3,10,11					
Required materials	Basic: classroom, blackboard, chalk					
	Special purpose computer laboratory					
	Whiteboard with markers					
	Overhead projector					
	Video equipment					
	The device for digital forensics					
Exam literature	1. J. Žiljak Vujić, Sigurnosna grafika, Tehničko veleučilište u Zagrebu, ISBN: 978 953 7048 33 4, 2014					
	2. Tomiša, Mario; Milković, Marin, "Grafički dizajn i komunikacija", , Varaždin, Veleučilište u Varaždinu, 2013.					
	3. Golden marketing-Tehnička knjiga, "Teorija i povijest dizajna: kritička antologija", Zagreb, Arhitektonski fakultet					
	Sveučilišta u Zagrebu, 2012.					
Students obligations	Regular attendance in both lectures and exercises, constantly tested knowledge					
Knowledge	Research + practical work + seminar paper					
evaluation during						
semester						
Knowledge	Presenting of seminar paper, oral exam					
evaluation after						
semester						
Student activities:	Aktivnost ECTS					
	(Classes attendance) 1					
	(Seminar Work) 1					
	(Practical work) 1					
	(Constantly tested knowledge) 1					
	(Research) 1					
	(Oral exam) 1					
Remark	This course can be used for final thesis theme					
Prerequisites:	No prerequisites.					
Proposal made by	Aleksandra Bernašek Petrinec, lecturer					

Code WEB/ISVU	23153/130921	ECTS	6.0	Academic year	2018/2019
Name	E-business, economics,	organization and manage	gement		
Status	2nd semester - Polytech Redovni specijalisti info specialization in Informa	nnic graduate professior rmatike) - elective cours atics Engineering (NOVI	al study programme e2nd semester - Poly Izvanredni specijalist	specialization in Informatic ytechnic graduate professio i informatike) - elective cou	s Engineering (NOVI nal study programme ırse
Teaching mode	Lectures + exercises (a work at home	uditory + laboratory + s	seminar + metodolog	y + construction)	30+30 (0+0+30+0) 120
Teachers	Lectures:1. mr.sc. Serge Seminar exercises: Dinl	ej Lugović MBA <o horvat="" struč.spec.ing<="" th=""><th>.techn.inf.</th><th></th><th></th></o>	.techn.inf.		
Course objectives	To introduce students to a product by using ne	o the influence of new te ew technologies	echnologies on busin	ess; to teach students how	to create an added value
Learning outcomes:	1.ability to choose the t 2.ability to measure the 3.ability to classify tech 4.ability to combine sev 5.ability to discover nev	poest business practice of a influence of technologi nologies relevant for rur veral technologies to rea w areas of business exce	otion in the Internet e es on business result nning business. Leve ch a business goal. L ellence by using the l	environment. Level:7 s. Level:7 I:6,7 .evel:6,7 nternet technologies. Level	.6,7
Methods of carrying out lectures	Ex cathedra teaching Simulations				
Methods of carrying out seminars	Laboratory exercises, c Traditional literature an	omputer simulations alysis			
Course content lectures	1.Course introduction, 3 2.Mutation of Capital, 3 3.Transaction Cost Theo 4.Information Rules (Ba 5.Virtual Value Chain, 3 6.12 strategies for digit 7.Open Innovation, 3h, 8.Crowdsourcing and Ci 9.Long Tail and Freemiu 10.ICT and Business Str 11.na 12.na 13.na 14.na 15.na	3h, Learning outcomes:1 h, Learning outcomes:2, ory, 3h, Learning outcom sed on Carl Shapiro and h, Learning outcomes:2, al age, 3h, Learning out Learning outcomes:1,4, rowdfunding, 3h, Learning um, 3h, Learning outcom rategy, 3h, Learning outcom	,2 4 hes:2,3 Hal Varian, 3h, Learn 4 comes:1 5 ng outcomes:2,4,5 hes:2,4 comes:3,4	ning outcomes:4	
Course content seminars	1.Seminar, 30h, Learnir 2.na 3.na 4.na 5.na 6.na 7.na 8.na 9.na 10.na 11.na 12.na 13.na 14.na 15.na	ng outcomes:1,2,3,4,5			
Required materials	Basic: classroom, black Overhead projector	board, chalk			
Exam literature	INFORMACIJSKOM TEHN	IOLOGIJOM DO POSLOVN	IOG USPJEHA, Sprem	ić, Mario; Srića, Velimir	
Students obligations	70% attendance, semin	ar			
Knowledge evaluation during semester	Seminar				
Knowledge evaluation after semester	Seminar				
Student activities:	Aktivnost (Written exam)		ECTS 6		
Remark	This course can be used	d for final thesis theme			
Prerequisites:	No prerequisites.				
Proposal made by	mr.sc. Sergej Lugović M	IBA, 11.7.2014			

Code WEB/ISVU	23187/130959	ECTS	6.0	Academic year	2018/2019
Name	E-marketing				-
Status	3rd semester - Polytech	nic graduate profession	al study programme spe	cialization in Informatics	Engineering (NOVI
	Redovni specijalisti info	rmatike) - elective cours	e3rd semester - Polytec	hnic graduate profession	nal study programme
T	specialization in Inform	atics Engineering (NOVI	Izvanredni specijalisti in	formatike) - elective cou	rse
leaching mode	Lectures + exercises (a	iuditory + laboratory + s	seminar + metodology +	construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. Vieran Buše	lić viši predavač			120
	Auditory exercises: Vjer	ran Bušelić viši predavač			
	Seminar exercises: Vjer	ran Bušelić viši predavač			
Course objectives	To understand marketir	ng strategy working on i	ndividual cases of marke	ting planning	
Learning outcomes:	1.strategic role of mark	eting. Level:6,7			
	2.product analysisy. Le	vel: /			
	4.SWOT analysis. Level	:6.7			
	5.product promotion by	use of interastive wwb	2.0 communication char	nels and tools. Level:6,7	1
	6.communication plan.	Level:6,7			
	7.pitch in front of invest	tor. Level: /			
Involvement of	1 1 OPĆI Služiti se strar	nim jezikom u literaturi i	svakodnevnoj stručnoj k	romunikaciji · 10h in 180)h
learning outcomes	1.3.0PĆI Koristiti tehnik	ce, vještine i suvremene	alate neophodne za inže	enjersku praksu.: 10h in	180h
of the course in	1.4.OPĆI Povezati inžen	ijerske aktivnosti konstru	uiranja, proizvodnje i ma	rketinga s potrebama ko	orisnika proizvoda i
study programme:	usluge.: 40h in 180h		and the summer start shall be		04
	1.6.0PCI OSMISIJAVATI I 2.1.0SOBNE Znanje o s	provoditi pokuse, analizi	rati i interpretirati dobiv ruke i društva : 10b in 19	ene podatke.: 10n in 180 806	JU
	2.2.OSOBNE Odgovorno	ost. dosliednost. točnost	. ažurnost.: 10h in 180h	5011	
	2.3.OSOBNE Etički i mo	ralni pristup radu.: 10h i	n 180h		
	2.4.OSOBNE Kritička ev	aluacija argumenata, pr	etpostavki i podataka u	cilju stvaranja mišljenja i	i pridonošenja rješenju
	problema.: 20h in 180h	ada u projektnim timovir	na i industriji · 10h in 18	Ωb	
	2.7.OSOBNE Predstavlia	anie informacija, ideja, p	roblema i riešenia stručr	noi i općoi publici.: 10h ir	n 180h
	2.8.OSOBNE Komunikad	cijske vještine u okviru s	truke te s klijentima, na	hrvatskom i engleskom	jeziku.: 10h in 180h
	2.9.OSOBNE Profesiona	Ina i ljudska osobnost.:	10h in 180h		
	2.10.0SOBNE Prilagodlj	ivost novim tehnologijar	na i tehnikama kao dio p tua i kulturna akalpasti i	procesa cjeloživotnog uče	enja.: 10h in 180h
	2.12.OSOBNE Fleksibiln	ost i prilagodlijvost u izr	alaženiu tehničkih rieše	nia uz neupitno poštivan	ie temelinih etičkih
	načela, pravnih normi i	pravila struke.: 10h in 1	80h	· /• •- ··•• /• ··· /• •• ···	,
Methods of carrying	Ex cathedra teaching				
out lectures	Guest lecturer				
	Demonstration				
	Simulations				
	Modelling				
	Discussion				
	Questions and answers	h			
	nomework presentation				
Methods of carrying	Group problem solving				
out auditory	Traditional literature an	alysis			
exercises	Data mining and knowle Discussion, brainstermi	edge discovery on the W	leb		
	Interactive problem sol	vina			
	Workshop	5			
Methods of carrying	Traditional literature an	alysis			
out seminars	Essay writing				
Course content	1.Overview, experience	e, working pace, teme to	practice and work . 2h.	Learning outcomes:1.2.3	3.4.5.6.7
lectures	2.Marketing essentials,	2h, Learning outcomes:	1	J , , ,	, ,-,-,
	Marketing planning, 2h	, Learning outcomes:1			
	3.Strategic marketing, . Strategic planning, 2h	2h, Learning outcomes: J	215		
	4.Product analysis. 2h.	Learning outcomes:2,2,	5,7,5		
	Customer analysis, 2h,	Learning outcomes:3			
	5.SWOR analysis, 2h, Le	earning outcomes:2,3,4			
	Main marketing goal , 2	h, Learning outcomes:2	,3,4,5		
	Internet as commnuicat	tion channel and web 2.0	0 tools. 2h. Learning out	comes:6	
	7.Marketing pitch, 4h, L	earning outcomes:2,3,4	,5,6,7		
	8.Pitching and presenta	ation skills, 4h, Learning	outcomes:1,2,3,4,5,6,7		
	9.No lectures				
	11.No lectures				
	12.No lectures				
	13.No lectures				
	14.No lectures				
1	TO IND IECCULES				

Course content auditory	 Introduction, teme to practice and work , 1h, Learning outcomes:1,2,3,4,5,6,7 Strategic planning, 1h, Learning outcomes:1 Product analysis, 2h, Learning outcomes:2 Customer analysis, 2h, Learning outcomes:3 SWOT analysis and main marketing goal, 2h, Learning outcomes:2,3,4
	6.Marketing promotion, internet web 2.0 tools, in, Learning outcomes:5 7.Pitch planning, 2h, Learning outcomes:1,2,3,4,5,6,7 8.Pitching, 4h, Learning outcomes:1,2,3,4,5,6,7 9.No activity
	10.No activity 11.No activity 12.No activity 13.No activity
	14.No activity 15.No activity
Course content seminars	1.Marketing plan proposal - work in progress, 1h, Learning outcomes:1 2.Marketing plan proposal - work in progress, 2h, Learning outcomes:1
Required materials	 3.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2 4.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3 5.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3,4 6.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3,4,5 7.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3,4,5,6,7 8.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3,4,5,6,7 8.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3,4,5,6,7 8.Marketing plan proposal - work in progress, 2h, Learning outcomes:1,2,3,4,5,6,7 9.No activity 10.No activity 11.No activity 12.No activity 13.No activity 14.No activity 15.No activity 15.No activity 15.No activity 16.Marketing plan proposal - kethodic distribution of the progress distributio
	Video equipment
Exam literature	upravijanje marketingom, Phipiip Kotier Marketinški planovi i kako ih koristiti, Malcom Mc Donald Strategije marketinga, Nataša Renko Interaktivni marketing, Vlašić, Mandell, Mumel Gerilski marketing, Jay Conrad Levinson Prezentacijom do uspjeha, Jerry Weissman
Students obligations	50% attendance
Knowledge	Marketing pitch - 50%
evaluation during semester	Marketing plan proposal - 50%
Knowledge evaluation after semester	Oral exam
Student activities:	Aktivnost ECTS (Written exam) 5 (Written exam) 1
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Code WEB/ISVU	23184/130956	ECTS	6.0	Academic year	2018/2019
Name	Engineering and desigr	n of information systems			
Status	3rd semester - Polytech Redovni specijalisti info specialization in Inform	nnic graduate profession prmatike) - elective cours atics Engineering (NOVI	al study programme spe se3rd semester - Polytec Izvanredni specijalisti inf	cialization in Informatics hnic graduate professior formatike) - elective cou	; Engineering (NOVI nal study programme rse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	construction)	30+30 (15+15+0+0) 120
Teachers	Lectures:1. mr.sc. Mari Auditory exercises: Edr Auditory exercises:mr.s Laboratory exercises: E Laboratory exercises:m	nko Žagar viši predavač nond Krusha , struč.spec sc. Marinko Žagar viši pr Edmond Krusha , struč.sg nr.sc. Marinko Žagar viši	ing.techn.inf., predavač edavač vec.ing.techn.inf., predav predavač	ač	
Course objectives	Acquiring of basic know	vledge in the field of des	igning information system	ms.	
Learning outcomes:	1. compare methodolog 2.ability to combine me 3.ability to choose a de 4.ability to lead a proje 5.ability to estimate the	gies for information syste ethods and techniques in evelopment model of an ict of an information syst e possibilities of using th	em development). Level: the development of an i information system in a s tem development. Level: e CASE tools. Level:7	6,7 information system. Lev specific organisation sys 6,7	el:6,7 tem. Level:7
Involvement of learning outcomes of the course in study programme:	1.3.OPĆI Koristiti tehnil 1.4.OPĆI Povezati inžer usluge.: 5h in 180h 2.1.OSOBNE Znanje o s 2.2.OSOBNE Odgovorn 2.7.OSOBNE Predstavlj 2.8.OSOBNE Komunika 2.10.OSOBNE Prilagodl 2.11.OSOBNE Otvorenc 3.1.SPECINF Razumijev 3.3.SPECINF Povezati rr poslovnom okruženjima 5.2.E-poslovanje Razum poslovnim okruženjima 5.2.E-poslovanje Primiji 25h in 180h 5.4.E-poslovanje Upotri 180h	ve, vještine i suvremene njerske aktivnosti konstru suvremenim pitanjima st ost, dosljednost, točnost anje informacija, ideja, p cijske vještine u okviru s jivost novim tehnologijar ost za nova znanja, iskus rati mjesto i ulogu IT u ko elevantne specifične diso 5h in 180h ti stečena znanja za sam nijevati mjesto i ulogu IT ti 25h in 180h eniti znanja, metode i ala eniti formalne metode na ijebiti metode i alate u m vati komponente poslovi	alate neophodne za inže uiranja, proizvodnje i ma ruke i društva.: 5h in 180 , ažurnost.: 5h in 180h roblema i rješenja stručr truke te s klijentima, na na i tehnikama kao dio p tva i kulturne okolnosti.: ontekstu organizacije, me cipline kao što su informa ostalno usvajanje novih z u kontekstu organizacije ate za formalizaciju poslo a analizu zahtjeva kod pr nodeliranju procesa i pod	njersku praksu.: 10h in rketinga s potrebama ko oj i općoj publici.: 10h in hrvatskom i engleskom procesa cjeloživotnog uči 5h in 180h enedžmenta i poslovnih acijsko-računarsko inžen znanja: 5h in 180h e, menedžmenta i poslov pvnih informacijskih sust ojektiranja poslovnih informac atka poslovnih informac a: 15h in 180h	180h Irisnika proizvoda i 180h jeziku.: 5h in 180h enja.: 5h in 180h procesa.: 5h in 180h jerstvo i tehnologije u mih procesa u ava: 20h in 180h formacijskih sustava : ijskih sustava: 30h in
Methods of carrying out lectures	Ex cathedra teaching Case studies Demonstration Simulations Modelling Discussion Questions and answers Seminar, students pres	; entation and discussion			
Methods of carrying out auditory exercises	Group problem solving Discussion, brainstormi Interactive problem sol Workshop	ing ving			
Methods of carrying out laboratory exercises	Laboratory exercises, c Workshop	computer simulations			
Course content lectures	1.Introduction to unform Models of information s 2.Models of information s 3.Process modelling, de Data flowchart, 2h, Lea 4.UML - usage diagram Program development: 5.Data modelling, entit Relational data model, 6.OO design, 2h, Learn Resource modelling, 2t 7.Development of of a Testing, implementatio 8.CASE tools, 2h, Learn 9. No lecture 10. No lecture 11. No lecture 12. No lecture 13. No lecture	mation system design, 2 system life cycle, 2h, Lea n system development, 2 ineering, 2h, Learning ou ecomposition method, 2 irning outcomes:2,3,4 , acitivity diagram, 2h, L action dagram, decision y relationship model, 2h 2h, Learning outcomes:2,3 n, Learning outcomes:2,3 system by using the proi n and maintenance of in ing outcomes:5	h, Learning outcomes:1 Irning outcomes:1 Ph, Learning outcomes:1 h, Learning outcomes:2,7 earning outcomes:2,3,4 trees and tables, naviga , Learning outcomes:2,3,2 2,3,4 8,4 totype method , 2h, Lear formation systems, 2h, L	3,4 ation diagrams, 2h, Lear 4 ning outcomes:2,3,4,5 earning outcomes:2,3,4	ning outcomes:2,3,4 .,5

	14. No lecture 15. No lecture
Course content auditory	 Structure of a practical work that has been done by student, 2h, Learning outcomes:1,2,4 Structure of a business system, organisation of the existing information system, 2h, Learning outcomes:1,2,4 List of users requests, 2h, Learning outcomes:2,3,4 Document flow diagram, 2h, Learning outcomes:2,3,4,5 Workflow diagrams, 2h, Learning outcomes:2,3,4,5 Logical data model; entity descriptionm, attributes description, class diagram, 2h, Learning outcomes:2,3,4,5 Concept design of an information system, 1h, Learning outcomes:2,3,4,5 Concept design of an information system, 1h, Learning outcomes:2,3,4,5 In. <li< th=""></li<>
Course content laboratory	 Structure of a business system, organisation of the existing infiormation system, 2h, Learning outcomes:2,3,4 Business process model, 2h, Learning outcomes:2,3,4 Decomposition of business processes, 2h, Learning outcomes:2,3,4,5 AData flow diagrams, 2h, Learning outcomes:2,3,4,5 Activity diagram, 2h, Learning outcomes:2,3,4,5 Logical data model; entity description,. attributes description, class diagram, 2h, Learning outcomes:2,3,4,5 Database architecture and user interfaces of business applications, reports, 2h, Learning outcomes:2,3,4,5 Concept design of an information system, 1h, Learning outcomes:2,3,4,5 In. 11. 12. 13. 14. 15.
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Whiteboard with markers Overhead projector Video equipment
Exam literature	Obavezna: Obavezna: 1. Prezentacije i radni materijali s predavanja i vježbi, dostupni na web-u TVZ-a 2. Klarin, Klasić: Projektiranje informacijskih sustava,Intus informatika, Zagreb, 2012 3. Klasić, Klarin: Informacijski sustavi- načela i praksa, Intus informatika, Zagreb , 2007 Additional literature: 1. J. Martin: Information Engineering II - Planning and Analisys, Prentice Hall, Englewood Cliffs, NY 1990. 2. R. Barker: CASE*METHOD Entity Relationship Modelling, Addison-Wesley Publishing Company, 1991. 3. R. Barker: CASE*METHOD Function and Process Modelling, Addison-Wesley Publishing Company, 1991 4. Van Vliet, H.: Software Engineering, John Wiley and Sons, USA, 2001
Students obligations	Make seminar- practical example (project) according to defined tasks and rules, and realize minimum 11 points of possible 20
Knowledge evaluation during semester	Theoretical part of all learning outcomes, max. 80 points Four exams each 20 points, pass >10 points Each exam will have correction. Exercises, make seminar - project - practical example according to defined rules, max. 20 points. Each student makes its own project. During semestar students present finished parts of their work (minimum one presentation on exercises)
Knowledge evaluation after semester	Prerequisite: seminar -project - min 11 points Theoretical part of all learning outcomes, max. 80 points Classical exa.m 80 points Pass (theory) Classical exam >40 points Summary, max. 100 points. 91 100 = 5 81 90 = 4 71 80 = 3 61 70 = 2 60 and less, not enough
Student activities: Remark	AktivnostECTS(Written exam)1(Oral exam)1(Seminar Work)1(Research)1(Classes attendance)1(Practical work)1This course can be used for final thesis theme



Study programme for academic year 2018/2019

Prerequisites: No prerequisites.

Code WEB/ISVU	23182/130954	ECTS	6.0	Academic year	2018/2019
Name	ERP and CRM business	information svs	tems		•
Status	3rd semester - Polytec Redovni specijalisti infr specialization in Inform Polytechnic graduate p specijalisti informatike specialization in Inform	hnic graduate pr ormatike) - elect natics Engineerin professional stud) - elective cours natics Engineerin	ofessional study progra ive course3rd semester g (NOVI Redovni specija y programme specializa e3rd semester - Polyteo g (NOVI Izvanredni speci	mme specialization in Informati - Polytechnic graduate professi alisti informatike) - elective cour tion in Informatics Engineering chnic graduate professional stud cijalisti informatike) - elective co	cs Engineering (NOVI onal study programme se3rd semester - (NOVI Izvanredni y programme ourse
Teaching mode	Lectures + exercises (a work at home	auditory + labora	atory + seminar + meto	odology + construction)	30+30 (0+15+15+0) 120
Teachers	Lectures:1. mr.sc. Mari Laboratory exercises:p Laboratory exercises:n	nko Žagar viši p rof. Marta Alić nr.sc. Marinko Ža	redavač agar viši predavač		
Course objectives	To introduce students practical usage	to the roles of th	e ERP and CM systems	in companies, the ways of their	implementation and
Learning outcomes:	1.ability to standardise 2.Present organization 3.ability to present the 4.ability to formulate/t 5.ability to develop a r 6.ability to organize co 7.lead a project of imp 8.ability to formulate/t 9.ability to standardise	the ERP and CR al structure of the implementation o design the arcl methodology of ti mpany . Level:6 lementation ERP o design a project the change man	M systems. Level:6,7 e company. Level:6,7 on trade companies. Lu nitecture of ERP system he ERP and CRM systen ,7 /CRM. Level:6,7 ct structure different in nagement. Level:6,7	evel:6,7 s. Level:6,7 ns implementation. Level:6,7 regard with other information pr	ojects. Level:6,7
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se stra 1.6.OPĆI Osmišljavati i 2.2.OSOBNE Odgovorn 2.3.OSOBNE Etički i mu 2.4.OSOBNE Kritička ei problema.: 10h in 1801 2.6.OSOBNE Iskustva r 2.7.OSOBNE Predstavlj 2.8.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 3.1.SPECINF Razumijev 3.3.SPECINF Povezati r poslovnom okruženju: 3.4.SPECINF Upotrijebi 4.3.E-zdravstvo Primije informacijskih sustava 5.1.E-poslovanje Razur poslovnim okruženjima 5.2.E-poslovanje Primij 5.3.E-poslovanje Primij 5.3.E-poslovanje Upotr 180h 5.4.E-opslovanje Upotr 180h 5.5.E-poslovanje Održa 6.1.E-uprava Razumijeu uprave: 5h in 180h 6.3.E-uprava Vspostav 6.4.E-uprava Primijenit podsustava uprave: 5h 6.5.Dizajn Identificirati 7.5.Dizajn Koristiti širok	nim jezikom u lit provoditi pokuse ost, dosljednost, oralni pristup rad valuacija argume n ada u projektnim anje informacija cijske vještine u alna i ljudska osci jivost novim teh ost za nova znan vati mjesto i ulog elevantne specif 10h in 180h ti stečena znanja, miti formalne me is: 10h in 180h mijevati mjesto i i: 10h in 180h eniti znanja, me eniti formalne m ijebiti metode i a vati komponente vati komponente vati komponente vati komponente vati komponente vati komponente vati komponente vati mjesto i ulog i to kolaborativne i formalne metoci i n 180h i implementirati k raspon aktualn ta.; 5h in 180h	eraturi i svakodnevnoj s e, analizirati i interpretii točnost, ažurnost.: 10h lu.: 10h in 180h enata, pretpostavki i por n timovima i industriji.: 1 , ideja, problema i rješe okviru struke te s klijer obnost.: 10h in 180h nologijama i tehnikama ja, iskustva i kulturne o u IT u kontekstu organi ične discipline kao što s a za samostalno usvajar etode na analizu zahtjev ulogu IT u kontekstu or tode i alate za formaliza jetode na analizu zahtjev ulogu IT u kontekstu or tode i alate za formaliza jetode na analizu zahtjev ulogu IT u kontekstu organ tehnologije uredskog p de na analizu zahtjeva l optimalne tehnike kom ih medija, naprednih in	stručnoj komunikaciji. : 10h in 1: rati dobivene podatke.: 10h in 1: n 180h dataka u cilju stvaranja mišljenja 5h in 180h nja stručnoj i općoj publici.: 5h i itima, na hrvatskom i engleskon kao dio procesa cjeloživotnog u kolnosti.: 5h in 180h zacije, menedžmenta i poslovnil su informacijsko-računarsko inže nje novih znanja: 10h in 180h ra kod projektiranja komponenti ganizacije, menedžmenta i poslovnih i isesa i podatka poslovnih informacijskih su va kod projektiranja poslovnih i izacije, menedžmenta i procesa oslovanja u podsustavima javne kod projektiranja komponenti informacijal formacijskih tehnologija, tehnika	B0h B0h B0h a i pridonošenja rješenju n 180h n jeziku.: 5h in 180h čenja.: 5h in 180h n procesa.: 10h in 180h n procesa.: 10h in 180h nijerstvo i tehnologije u zdravstvenih ovnih procesa u stava: 5h in 180h nformacijskih sustava : 5h ncijskih sustava: 5h in u okruženjima javne uprave: 5h in 180h formacijskih sustava i ma na WEB-u.: 5h in 180h a, alata te audio-vizualnih
Methods of carrying out lectures	8.5.PROGING Funkcion Ex cathedra teaching Guest lecturer Case studies Demonstration Simulations Discussion Questions and answers	irati u timskom i	multidisciplinarnom ok	ruženju.: 5h in 180h	
Methods of carrying out laboratory exercises	Laboratory exercises o Laboratory exercises, o Group problem solving Essay writing Discussion, brainstorm Workshop Other Individual work assigni	n laboratory equ computer simula ing ment	ipment tions		

Methods of carrying	Laboratory exercises on laboratory equipment
out seminars	Laboratory exercises, computer simulations
	Group problem solving
	Essay writing
	Other
	Independent or group work on the prepared model in the cloud
Course content	1.Introduction, 2h, Learning outcomes:1
lectures	History of development ERP and CRM, 2h, Learning outcomes:1
	2.The importance and role ERP, 2h, Learning outcomes:1
	The importance and role CRM, 2h, Learning outcomes:1
	3.Organizational structure of the company, 2h, Learning outcomes:2
	Business processes in the company, 2h, Learning outcomes:2,3
	4.Reasons for implementation ERP. 2h. Learning outcomes:2
	Reasons for implementation CRM, 2h. Learning outcomes:2
	5. The role of ERP systems in connecting business processes, 2h, Learning outcomes: 2, 3, 6
	The role of CRM systems in connecting business processes, 2h. Learning outcomes: 3.5
	6.Process management in ERP systems, 2h. Learning outcomes: 2.4
	Process management in CBM systems 2h, Learning outcomes: 24
	T The architecture of the ERP system. 1h. Learning outcomes:2.4
	The architecture of the CRM system 1h Learning outcomes:2.4
	ERP implementation methodology 1h Learning outcomes:2.4
	CRM implementation methodology. 1b. Learning outcomes: 2.4
	B Project management for CRM implementation the Learning outcomes:4
	Scope definition milestones change management the Learning outcomes 4.7
	O No locture
	II.NO recture.
	12 Nome producines.5
	12. Nema predavanja
	13. Ne na predavanja
	14.No lecture.
	IS.NO lecture.
Course content	1 The explored use of the EDD system 2h Learning systematical
Course content	1. The architecture of the CRM system, 2h, Learning outcomes:4
laboratory	The architecture of the END system, 2h, Learning outcomes:4
	2. runctionality of the CPM system, Sh, Learning outcomes:1,4
	Functionality of the CKM system, 5h, Learning outcomes:1,4
	3.EEP Implementation methodology, 1h, Learning outcomes:5,7
	CKW implementation methodology, In, Learning outcomes:5,7
	4. Project management, 3n, Learning outcomes: 1,8,9
	5.No exercise
	6.No exercise
	7.No exercise
	8.No exercise
	9.No exercise
	10.Nema nastave
	11.No exercise
	12.No exercise
	13.Nema nastave
	14.No exercise
	15.Nema nastave
Course content	1.Setup Company model, 2h, Learning outcomes:2
seminars	Setup sales teams, 2h, Learning outcomes:2
	2.Preparation and launch marketing campaigns, 2h, Learning outcomes:2
	Preparation and development of the sales funnel, 2h, Learning outcomes:2
	3.Reports preparation, 2h, Learning outcomes:2,3
	Presentation of tasks and assign tasks, 2h, Learning outcomes:2,3
	4.Presentation solutions, 3h, Learning outcomes:2,3
	5.Nema nastave
	6.No exercise
	7.No exercise
	8.No exercise
	9.No exercise
	10.No exercisee
	11.No exercise
	12.No exercise
	13.No exercise
	14.No exercise
	15.No exercise
Required materials	Special purpose laboratory
	Overhead projector
	Independent or group work on the prepared model in the cloud
Exam literature	1. Materijali sa predavanja, prezentacije
	2. E. Callaway: Enterprise Resource Planning - Integrating Applications and Business Processes 3. Across the Enterprise,
	Computer Technology Research, 1999.
	4. C. A. Ptak: ERP - Tools, Techniques, and Applications for Integrating the Supply Chain, The St. Lucie Press, 2000.
I	1 I I I I I I I I I I I I I I I I I I I

	5. Bitrix24 CRM korisnička dokumentacija				
Students obligations	maximum of 3 absences from exercises				
Knowledge evaluation during semester	Kolokvij, teorijska pitanja#2#100#100\$				
Knowledge evaluation after semester	Essay writing Final exam				
Student activities:	Aktivnost (Written exam) (Oral exam) (Project) (Seminar Work) (Research) (Practical work)	ECTS 1 1 1 1 1 1 1			
Remark	This course can be used for final thesis theme				
Prerequisites:	No prerequisites.				
Proposal made by	mr.sc. Marinko Žagar 7.3.2014.				

Code WEB/ISVU	23203/130978	ECTS	24.0	Academic year	2018/2019
Name	Graduation Thesis			-	_
Status	4th semester - Polytec Redovni specijalisti inf specialization in Inforn Polytechnic graduate p informatike (smjer raa specialization in Inforn	hnic graduate professio formatike) - elective cou natics Engineering (NOV professional study progr rstvo)) - elective course natics Engineering (NOV	nal study programme sp rse4th semester - Polyte 1 Izvanredni specijalisti i amme specialization in I 4th semester - Polytechr 1 Izvanredni specijalisti i	ecialization in Informatic chnic graduate professio nformatike) - elective co nformatics Engineering (nic graduate professional nformatike (smier raarst	s Engineering (NOVI nal study programme urse4th semester - NOVI Redovni specijalisti study programme vo)) - elective course
Teaching mode	Lectures + exercises (work at home	auditory + laboratory +	seminar + metodology	+ construction)	60+360 (360+0+0+0) 300
Teachers	Lectures:1. Prof. dr. sc	. Miroslav Slamić profes	or visoke škole		
Course obiectives	To teach students how	, to use the acquired kn	owledae in solvina enain	eering tasks	
Learning outcomes:	1.ability to analyse a s 2.ability to prepare the 3.ability to establish th 4.ability to provide one 5.ability to formulate of 6.ability to format task 7.ability to prepare a p 8.ability to present a v	ubject related to the field e sources (literature, etc e differences between e's own solution. Level:6 conclusions. Level:6,7 < based documents . Lev presentation of a work re vork related to the field	Id of expertise. Level:6). Level:6,7 and similarities with a cu i,7 vel:6 elated to the field of exp of expertise to the audie	ertise. Level:6,7 erce. Level:6,7	
Methods of carrying out lectures	Other				
Methods of carrying out auditory exercises	Other				
Course content lectures Course content auditory	1.Analysis of literature 2.The research achiev 3.Processing of releval 4.Working out problem 5.Presentation of resul 6.Conclusions, 10h, Le 7. 8. 9. 10. 11. 12. 13. 14. 15. 1.Writing a thesis., 244 2.Preparing for the sul 3.Corrections after rea 4.	2, 10h, Learning outcom ements in a given area, nt questions, 10h, Learn rs on a practical exampl lts, 10h, Learning outco earning outcomes:5 0h, Learning outcomes:4 0h, Learning outcomes:4 omission of work., 60h, 1 eding by povjerenstva.Pr	es:1,2 10h, Learning outcomes ing outcomes:3,4 e., 10h, Learning outcom mes:4 6 6 Learning outcomes:6 iprema presentations., 6	50h, Learning outcomes:	7,8
	5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.				
Required materials	Special equipment				
Exam literature	Prema dogovoru sa mo	entorom			
Students obligations	Mono	es from exercises			
Knowledge evaluation during semester	None				
Knowledge evaluation after semester	Public defending of Ma	aster thesis before a con	nmittee		
Student activities:	Aktivnost (Practical work)		ECTS 24		
Remark	This course can not be	e used for final thesis the	eme		
Prerequisites:	No prerequisites.				
Proposal made by	Miroslav Slamić, 26.4.	2014.			

Code WEB/ISVU	23188/130963	ECTS	6.0	Academic year	2018/2019	
Name	Health Care Informatio	n Systems life cycle				
Status	3rd semester - Polytecl Redovni specijalisti info specialization in Inform	nnic graduate profession ormatike) - elective cour atics Engineering (NOVI	al study programme s se3rd semester - Polyt Izvanredni specijalisti	pecialization in Informatio echnic graduate professio informatike) - elective co	cs Engineering (NOVI onal study programme ourse	
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + :	seminar + metodology	/ + construction)	30+30 (0+30+0+0) 120	
Teachers	Lectures:1. Prof. dr. sc. Lectures:dr.sc. Miroslav Laboratory exercises:d Laboratory exercises:P	Miroslav Slamić profesc v Mađarić dipl.inž.el. r.sc. Miroslav Mađarić di rof. dr. sc. Miroslav Slam	r visoke škole pl.inž.el. ić profesor visoke ško	le		
Course objectives	The aim of the course i health care environmen short, students need to	s to teach students the ont through several stage learn a life cycle of IS d	entire process of the ir s of planning and define evelopment in healtho	nplementation of informa nition of the information s care.	tion systems in the system until retirement. In	
Learning outcomes:	 1.to create a plan of elements of lifecycle of information systems in health care. Level:6,7 2.to formulate / to form requirements for the the implementation of information system in the health care environment. Level:6,7 3.to evaluate the suggested solutions in the healthcare information system. Level:7 4.choose the hardware platform and define the management plan and upgrade hardware platforms. Level:7 5.devise a plan for maintenance of the information system in the health care environment. Level:6,7 6.to develop standards for testing software applications of information system. Level:6,7 7.design a plan for the retirement of information system. Level:6,7 					
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answers	;				
Methods of carrying out laboratory exercises	Laboratory exercises, c Traditional literature ar Data mining and knowl Discussion, brainstorm Mind mapping	computer simulations halysis edge discovery on the V ing	/eb			
Course content lectures	1.Planning and lifecycle 2.Defining requirement processes in the health variety of hardware pla implementation of tech ensures procurement of 3.Launch of the procur solutions such as syste market (of the shelf)., 4.Methods of evaluatio Learning outcomes:3,4 5.The steps of develop system. Defining mode outcomes:3,4,5 6.Methodology integrat ensure business contin 7.System Maintenance 4h, Learning outcomes 8.Retirement Informati and hardware., 4h, Lea 9.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 14.No lecture.	e management of the inf s for supply and installa a care environment as flo ttforms, assessing of life inology solutions (eg. ph of latest technologies). , , ement process and the i m developed exactly ac 4h, Learning outcomes: 3 n of the solutions and ris ment and / or implement is of infrastructure mana cion technology (hardwa uity , 4h, Learning outco including upgrade / repl :5,6 on System including dat arning outcomes: 7	ormation systems in h tion of the information ow and storage of data cycle IS and definitior ased steps implement 4h, Learning outcomes ntroduction of an infor cording to user specifi sk assessment. The de tation IS together with agement and insuranc re and software) in the mes:4,5 acement technologies a migration and system	ealth care., 2h, Learning system which includes th during the implementati of warranty terms. Defin ation of server platforms s:2 mation system through e cations or developed syst velopment of standards for the supplier / manufactu e flexibility of using IS. , 4 e system and manage upg s, debugging software and ms, updating data wareho	outcomes:1 ne definition of all on process. Defining a ing a way of according to the needs valuation of different em available on the or software testing. , 4h, rer. User education th, Learning grades and costs to a hardware malfunction. , buses, uninstall software	
Course content laboratory	1. Development the pla 2. Process modeling. De 3. Process modeling. De 4. Defining requirement 5. Defining requirement 6. Making basic elemen 7. Creating a training pl 8. Creating a retiremen 9. No lecture. 10. No lecture. 12. No lecture. 13. No lecture. 13. No lecture. 14. No lecture.	n of the IS lifecycle man efining data model. Defir efining data model. Defir es on the hardware platfor s for software platform., ts of requests to initiate an, maintenance and sy t plan IS. Creating a plar	agement., 4h, Learnin ing the architecture o ing the architecture o orm., 4h, Learning out 4h, Learning outcome the procurement IS., 4 stem upgrades., 4h, L to build a data wareh	g outcomes:1 f IS., 4h, Learning outcom f IS., 4h, Learning outcom comes:2 es:2,3 4h, Learning outcomes:3,4 earning outcomes:4,5,6 iouse., 4h, Learning outco	ies:2 ies:2 4,5 imes:7	

	15.No lecture.	
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Whiteboard with markers Tools	
Exam literature	Nastavni materijali - prezentacije na moj.tvz.hr. Studije slučaja. (moj.tvz.hr)	
Students obligations	Attendance of 70% of lectures and of 80% of exercises.	
Knowledge evaluation during semester	No mid-term exam.	
Knowledge evaluation after semester	Written exam (30% points). Term paper (50% points) An oral exam (20% points)	
Student activities:	Aktivnost (Written exam)	ECTS 6
Remark	This course can be used for final thesis theme	
Prerequisites:	No prereguisites.	

Code WEB/ISVU	23160/130929	ECTS	6.0	Academic year	2018/2019	
Name	Health Information Sub	systems				
Status	2nd semester - Polytecl Redovni specijalisti info specialization in Inform	hnic graduate profession rmatike) - elective cours atics Engineering (NOVI	al study programme sp e2nd semester - Polyte Izvanredni specijalisti ir	ecialization in Informatics chnic graduate profession nformatike) - elective cou	Engineering (NOVI nal study programme rse	
Teaching mode	Lectures + exercises (a work at home	uditory + laboratory + s	eminar + metodology -	+ construction)	30+30 (0+30+0+0) 120	
Teachers	Lectures:1. Prof. dr. sc. Lectures:dr.sc. Miroslav Laboratory exercises: K	Miroslav Slamić profeso v Mađarić dipl.inž.el. rešimir Majdenić	r visoke škole		•	
Course objectives	Students will become fa operation of laboratorie integration, since it can interoperability.	amiliar with a wide range es (LIS), Radiology (RIS a not possibly work witho	e of service ("ancillary") nd PACS), pharmacy, tra ut being connected to e	systems in health care, was ansfusion, food and so or each other for the purpos	vhich allow the 1. The emphasis is on e of functional	
Learning outcomes:	Lto classifie information sub-systems in health care with respect to the purpose, role and level of integration with other nformation systems. Level:6,7 2.to formulate requirements for upgrading and improving information subsystems in health. Level:6 3.to integrate the basic components of information subsystems in the work processes of the health system. Level:6,7 4.planning computer equipment to support the information subsystems. Level:6,7 5.to prepare a variety of reports from information subsystems. Level:6,7 6.to plan system of maintenance information subsystems in health. Level:6,7 7.to choose in the procurement process of IT equipment for the purposes of information subsystems. Level:7					
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Demonstration Discussion					
Methods of carrying out laboratory exercises	Laboratory exercises, c Data mining and knowle Discussion, brainstormi Computer simulations Workshop	omputer simulations edge discovery on the W ng	/eb			
Course content lectures	1.Introductory lecture - (LIS, RIS / PACS, pharm interoperability., 4h, Le 2.Processes in medical medical biochemical ac norms., 4h, Learning ou 3.Management of labor Biochemistry laboratory 4.Laboratory Informatic and processes of medic of the LIS., 4h, Learnin 5.Supporting processes quality control). Standa Interoperability, scalabi for data storage., 2h, Le 6.Radiology informatior RIS subsystem. Informa results of processing ra materials. Storage of in archiving image radiolo subsystems. Communic 7.Inforamtion subsyster 8.The other , 4h, Learni 9.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 13.No lecture. 14.No lecture. 15.No lecture.	a wide picture on the co acy, transfusion, nutritio arning outcomes:1 biochemistry laboratory tivities. The organizatior ticcomes:1,2 atory equipment. Standa y systems in hospitals ar on System (LIS) - The imp cal biochemical laborator g outcomes:3,4 and procedures (process rds and norms. Connect ility and security of the L earning outcomes:4,5 n subsystems RIS / PACS ation processes in the RIS diology images. Workflo nage material. Connect v gical materials with vari cation with PACS. , 6h, Le ms of pharmacy, nutritio ng outcomes:4,5,6,7	imputer ancillary system n). Functionl integration systems - the big pictur and management of m ard procedures and proc of primary health care., portance of the laborato ries and microbiology la s automation, reports o of the LIS with HIS or or IS. Interfaces of the lab - Processes in the radic 5 from the registration or win radiology departme with BIS and a PACS (ste ous radiological modalit earning outcomes:5,6 n and transfusion., 2h, 1	ns in health care as an exp n of the information subsy re on legislation, process hedical biochemical labor cesses. Safety measures 4h, Learning outcomes:2 ory information system to boratories. Components of boratories. Components of ther subsystems. Intrefact oratory instruments and ological treatment of the p of the patient, treatment ents. Management of the andards and protocols). P ties. Architecture PACS. In Learning outcomes:4,5,6,	tra service systems (stems and es and procedures in atory, ethics and and security. Medical ,3 support the procedures of the LIS. Architecture , statistical reports, e protocols. devices. Backup policies patient. Architecture of and reports on the modalities and ACS as a system for itegration with other 7	
Course content laboratory	1.Modeling of the general 2.Process modeling and 3.Working in testing en 4.Work in the test envir outcomes:4,5 5.Operation in test envir 6.Operation in test envir 7.Working in testing en outcomes:3,4,5,6 8.Detailed analysis of th 9.No exercise	ral process and data flow d data flow in biochemica vironment of the laborator ironment of radiology inf ironment of radiology inf vironment other informa he architecture of one of	v in health information s al laboratory systems., 4 ory information subsyst y and hospital information formation subsystem (P, formation subsystem (P, tion subsystems (pharm the information subsyst	subsystems., 4h, Learning 4h, Learning outcomes:2, tem (LIS)., 4h, Learning o ion subsystem (LIS-BIS)., IS)., 4h, Learning outcom ACS)., 4h, Learning outco nacy, transfusion, nutritio stems., 4h, Learning outco	; outcomes:1,2 3 utcomes:3,4 4h, Learning es:4,5 mes:3,4,5 m)., 4h, Learning pmes:2,3,4,5,6,7	



I						
	15.NO exercise					
Required materials	Special purpose laboratory					
	Special purpose computer laboratory					
	Whiteboard with markers					
	Overhead projector					
	Special equipment					
	TESTING ICT EQUIPMENT OF LIS, RIS and PACS system.					
Exam literature	1. Grupa autora, Nastavni materijali - prezentacije iz područja informacijskih podsustav u zdravstvu (moj.tvz.hr).					
	2. Korisničke i tehničke upute za LIS, RIS i PACS.					
Students obligations	Attendance of 70% of lectures and of 80% of exercises.					
Knowledge	No mid-term exam.					
evaluation during						
semester						
Knowledge	Written exam (30% points).					
evaluation after	Term paper (50% points)					
semester	An oral exam (20% points)					
Student activities:	Aktivnost ECTS					
	(Written exam) 6					
Remark	This course can be used for final thesis theme					
Prerequisites:	No prerequisites.					

Code WEB/ISVU	23159/130928	ECTS	6.0	Academic year	2018/2019
Name	Health Information Sys	tems			
Status	2nd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate profession prmatike) - elective cours natics Engineering (NOVI	aal study programme spe se2nd semester - Polytee Izvanredni specijalisti in	ecialization in Informatio chnic graduate professio formatike) - elective cou	s Engineering (NOVI onal study programme urse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	- construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:1. Prof. dr. sc. Lectures:dr.sc. Mirosla Laboratory exercises: I Laboratory exercises: I	Miroslav Slamić profeso v Mađarić dipl.inž.el. Denis Jager Biserka Klarić	r visoke škole		•
Course objectives	This course provides th	e basics of health inform	nation systems.		
Learning outcomes:	1.To link definitions, te information systems I 2.Critically assess the of record Level:7 3.Identify the basic strue 4.To link and understan Level:6,7 5.Critically assess typic records and electronic 6.To develop content a information systems ar 7.Compile a concept of resolve barriers to ado	rminology and basic con- evel:6,7 effective use of informati ucture of health informat nd the specifics of health cal applications of e-Heal patient records, e-prescr nd the use of electronic chitectures in health car basic elements for the c ption of these systems in	cepts of health informat on technology and medi ion systems Level:6 information and knows th and its benefits: hosp iptions, telemedicine L patient records and pers e with respect to interop design and implementation e Health Level:6,7	ion systems and unders ical terms related to the the basics of health info ital information system: evel:7 sonal health records and perability Level:6,7 ion of information system	tand the history of health electronic medical prmation model s, electronic medical connect them with key ms in e-Health and
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answers	;			
Methods of carrying out laboratory exercises	Laboratory exercises o Laboratory exercises, c Discussion, brainstorm Workshop	n laboratory equipment computer simulations ing			
Course content lectures	 The administrative in 2.Business information 3.Information systems 4.Central Information S 5.Hospital Information 6.Hospital Information 7.The integration of inf outcomes:5,6 8.The use of informatic 9.No lecture. No lecture. 	formation systems in he systems in health care., in primary health care. In system., 4h, Learning out Systems., 4h, Learning o Systems., 4h, Learning o ormation systems in hea on systems for business in	alth care. , 2h, Learning 2h, Learning outcomes: nformation systems in te comes:1,2,3 iutcomes:3,4,5 outcomes:2,3,4,5,6 Ith care. The use of info ntelligence in the health	outcomes:1,2 1,2 elemedicine. , 4h, Learni rmation systems in heal system., 4h, Learning o	ng outcomes:1,2,3 th care., 6h, Learning outcomes:5,6,7
Course content laboratory	1.Working in an enviro 2.Working in an enviro 3.Working in an test er 4.Working in an test er 5.Working in an test er 6.The use of informatic 8.Data analysis using b 9.No lecture. 10.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 14.No lecture. 15.No lecture.	nment of administrative nment of primary care in avironment of central info avironment of hospital info avironment of hospital info on systems in real-world o business intelligence info	and business informatio formation systems and formation system., 4h, Le formation system., 4h, L formation system., 4h, L formation system., 4h, L environments., 4h, Learr environments., 2h, Learr rmation systems., 4h, Le	n systems., 4h, Learning telemedicine., 4h, Learn earning outcomes:1,2,3 earning outcomes:3,4,5 earning outcomes:4,5,6 ning outcomes:4,5,6 earning outcomes:3,4,5,	g outcomes:1,2 ing outcomes:1,2,3 6,7
Required materials	Special purpose labora General purpose comp Special purpose compu Whiteboard with marke Overhead projector	tory uter laboratory iter laboratory ers			



Exam literature	1. Grupa autora: Nastavni materijali - prezentacije na moj.tvz.hr				
Students obligations	Attendance of 70% of the lectures and 80% exercises				
Knowledge	No mid-term exam.				
semester					
Knowledge evaluation after semester	Evaluation of the written part of the seminar paper (70% points). Presentation of seminar paper (30% points).				
Student activities:	Aktivnost ECTS				
	(Written exam) 6				
Remark	This course can be used for final thesis theme				
Prerequisites:	No prerequisites.				

Code WEB/ISVU	23154/130922	ECTS	6.0	Academic year	2018/2019
Name	Information security				I
Status	2nd semester - Polytee Redovni specijalisti inf specialization in Inforn Polytechnic graduate p specijalisti informatike specialization in Inforn	chnic graduate pr ormatike) - electi natics Engineerin professional study) - elective cours natics Engineerin	ofessional study progra ive course2nd semester g (NOVI Redovni specija y programme specializa e2nd semester - Polyte g (NOVI Izvanredni spec	amme specialization in Informa r - Polytechnic graduate profess alisti informatike) - elective cou ition in Informatics Engineering chnic graduate professional stu cijalisti informatike) - elective c	ics Engineering (NOVI sional study programme rse2nd semester - (NOVI Izvanredni idy programme ourse
Teaching mode	Lectures + exercises (work at home	auditory + labora	atory + seminar + meto	odology + construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:mr.sc. Marink Auditory exercises: Do Auditory exercises:mr. Seminar exercises: Do Seminar exercises:mr.	to Žagar viši pred magoj Tuličić sc. Marinko Žaga magoj Tuličić sc. Marinko Žaga	lavač n viši predavač n viši predavač		
Course objectives	Introducing students w	ith concepts, sta	indards, risks and issue	s of Information security.	
Learning outcomes:	1.Identify the legal bas 2.abbility to present se 3.critically assess impl 4.abbility to present se 5.to assess security th 6.to analyze malware 7.to assess cloud appli 8.assess implemented	sis of electronic b ecurity concept. L emented security ecurity standards reats and risks. L and malware pro- ication security. L security policies.	usiness. Level:6 _evel:6,7 y policies. Level:7 and policies . Level:6,7 _evel:6,7 tection. Level:6 _evel:6,7 . Level:7		
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answer:	5			
Methods of carrying out auditory exercises	Group problem solving Discussion, brainstorm Workshop	l ling			
Methods of carrying out seminars	Traditional literature a Data mining and know Essay writing Workshop	nalysis ledge discovery o	on the Web		
Course content lectures	1.Basic terms and con Cybernetic Safety, 2h, Threats to information Privacy and identity th 2.Legislative framewor 3.The principles of info 4.Standards and secur Implementation of info Information security p 5.Malware and malwar 6.Network and wireles 7.WEB application sec 8.Cloud security, 2h, L 9.Public Key Infrastruc 10.Cybercrime, 2h, Lei 11.Digital Forensics ar 12.Nema predavanja 13.Nema predavanja 15.Nema predavanja	cepts, 2h, Learnin Learning outcom systems, 1h, Lea eft, 1h, Learning rk for cyber secur srmation systems ity policy, 2h, Learnin re protection, 2h, s network security urity, 2h, Learnin earning outcome ture, 2h, Learning arning outcomes: ad Anti-Forensics,	ng outcomes:4 nes:6 arning outcomes:4,5,6 outcomes:4,8 rity and electronic busir security, 2h, Learning arning outcomes:3 management system, 3 g outcomes:1,3 Learning outcomes:6 cy, 2h, Learning outcomes g outcomes:5 s:5,8 g outcomes:2 :4 . 2h, Learning outcomes	ness, 2h, Learning outcomes:7, outcomes:2,5 2h, Learning outcomes:1,3,7 es:5 s:4,5	3
Course content auditory	1.Standards and policy 2.Informatin security n 3.ISO 27001 Rev. A, 21 4.Security policy, 2h, L 5.Organization of infor 6.All other measures o 7.Public key infrastruc 8.Web application secu 9.Nema vjebi 10.Nema vjebi 11.Nema vjebi 12.Nema vjebi 13.Nema vjebi 14.Nema vjebi 15.Nema vjebi	v of information s nanagement syst n, Learning outcome mation security, f information sec ture, 2h, Learning urity, 1h, Learning	ecurity, 2h, Learning ou em (ISMS), 2h, Learning es:2,3 2h, Learning outcomes: urity, 2h, Learning outco g outcomes:6 g outcomes:5	utcomes:2 g outcomes:2,3 :2,3 :omes:2,3	



Course content	1.Nema viebi					
seminars	2.Nema viebi					
	3.Nema vjebi					
	4.Security policies development, 3h					
	5.Security policies development, 3h, Learning outcomes:2,3					
	6.Organization of information security, 3h, Learning outcomes:2,3					
	7.Managing security measures, 3h, Learning outcomes:3					
	8.Analysis of web security, 3h, Learning outcomes:5,6					
	9.Nema vjebi					
	10.Nema vjebi					
	11.Nema vjebi					
	12.Nema vjebi					
	13.Nema vjebi					
	14.Nema vjebi					
	15.Nema vjebi					
Required materials	Basic: classroom, blackboard, chalk					
	Whiteboard with markers					
	Overhead projector					
Exam literature	1. Prezentacije sa predavanja					
	2. Norma ISO/IEC 17799, 27001					
	 Donald E. Eastlake, Kitty Niles,; Secure XML: The New Syntax for Signatures and Encryption, Addison-Wesley Pub Co; 					
	1st edition (July 19, 2002)					
	4. Zakon o elektronickom potpisu, elektronickoj trgovini, zastiti osobnih podataka, i sl.					
	0. Luke Harding; E.Snovden: Dosijel, EPH Media 2014.					
	7. A.Comy-Murray, V.Wealer, Sigurin na Internetu, Mis 2005.					
Students obligations	Maximum of 3 absence from excercises.					
Knowledge	Kolokvij, teoretska pitanja					
evaluation during	Kontrolni ispit					
semester						
Knowledge	Essay writing					
evaluation after	Final exam					
semester	Although FOTO					
Student activities:						
	(Ordivity in class)					
	(Semina Work) 1					
	(Practical work)					
	(Constantly tested knowledge) 1					
Remark	This course can be used for final thesis theme					
Prerequisites:	No prerequisites.					
Proposal made by	mr.sc. Marinko Žagar viši predavač					

Code WEB/ISVU	23178/130949	ECTS	6.0	Academic year	2018/2019
Name	Innovation Engineerin	g		· · · ·	
Name Status Teaching mode Teachers	Innovation Engineerin 3rd semester - Polytec Redovni specijalisti inf specialization in Inforr Polytechnic graduate informatike) - elective Informatics Engineerin professional study pro elective course3rd ser Engineering (NOVI Izv study programme spe elective course3rd ser Engineering (NOVI Red graduate professional informatike (smjer raa specialization in Inforr Lectures + exercises (work at home Lectures: Ana Hoić	g chnic graduate pro formatike) - electi natics Engineering professional study course3rd semes ng (NOVI Izvanred gramme specializ mester - Polytechr anredni specijalisti cialization in Infor mester - Polytechr dovni specijalisti i study programme irstvo)) - elective natics Engineering (auditory + labora	ofessional study program ve course3rd semester g (NOVI Redovni specija v programme specializat ter - Polytechnic graduat ni specijalisti informatik tation in Informatics Engine ci graduate professiona ci informatike) - elective matics Engineering (NC nic graduate professiona nformatike (smjer raars e specialization in Inforr course3rd semester - Po g (NOVI Izvanredni speci tory + seminar + meto	nme specialization in Informat - Polytechnic graduate profess listi informatike) - elective cou- cion in Informatics Engineering ate professional study program e) - elective course3rd semest ineering (NOVI Izvanredni spe- al study programme specializa course3rd semester - Polytecl VI Redovni specijalisti informa al study programme specializa tvoi)) - elective course3rd sem- natics Engineering (NOVI Izvar olytechnic graduate profession ijalisti informatike (smjer raars dology + construction)	ics Engineering (NOVI ional study programme rse3rd semester - (NOVI Redovni specijalisti ime specialization in er - Polytechnic graduate cijalisti informatike) - tion in Informatics nnic graduate professional tike (smjer raarstvo)) - tion in Informatics ester - Polytechnic irredni specijalisti al study programme stvo)) - elective course 30+30 (15+0+15+0) 120
	Lectures:Prof. dr. sc. J Auditory exercises: An Seminar exercises: An	ana Žiljak Gršić , 1 1a Hoić 1a Hoić	mag. design		
Course objectives	Gaining of basic know Creating improved ide about the process of p	ledge in the field a, procedure, pro patenting innovati	of innovation and know cess that brings new be ons.	edge of their role and impact nefits or quality of the applica	on business processes. tion. Gaining knowledge
Learning outcomes:	1.ability to formulate t 2.ability to highlight ir 3.ability to plan an inn 4.ability to design a pi 5. designing an innova 6.devise (suggestion / 7.ability to write docu 8.ability to present the	the area of a spect novations with co- novation concept of roposal for an inne- ative solution. Lev solution) propose mentation for the e innovation proje	ific task. Level:6,7 pompetitive advantages. design . Level:6,7 pvation. Level:6,7 el:6 ed solution. Level:6,7 innovation proposal (di ct. Level:6,7	Level:7 agram, graph, map). Level:6,7	
Methods of carrying out lectures	Ex cathedra teaching Case studies Demonstration Discussion Questions and answer Seminar, students pre	s sentation and dis	cussion		
Methods of carrying out auditory exercises	Laboratory exercises, Group problem solving Discussion, brainstorn Interactive problem so Workshop	computer simulat g hing blving	ions		
Methods of carrying out seminars	Discussion, brainstorn Computer simulations Interactive problem sc Workshop	ning Diving			
Course content lectures	1.Introduction to innov 2.Recognizing the nee 3.The development pr 4.Planning and adjust 5.Establishment of res 6.Patents, 2h, Learnin 7.Intellectual property 8.Application and imp 9.Progress of existing 10.The sustainability of 11.Innovations that ch 12.Croatian Innovator 13.Infraredesign, 2h, I 4.Failed innovation, 2	vation and their in ad for innovation, ocess of innovation ment to system in sources, 2h, Learn g outcomes:1,7,8 protection, legisl lementation of inn applications, 2h, of the project, the nanged the world, s, 2h, Learning outcome 2h, Learning outcomes:	npact on improvement, 2h, Learning outcomes: on: research, selection, which innovation will fi ing outcomes:6 ation and international ovation, 2h, Learning o Learning outcomes:5 long-term usability of in 2h, Learning outcomes tcomes:2,5 s:5 omes:2 1,2,3,4,5,6,7,8	2h, Learning outcomes:2,3,4 2 implementation, 2h, Learning on agreements, 2h, Learning outc utcomes:3,4 nnovations, 2h, Learning outco :2,5	outcomes:3,4,5 utcomes:3,4 :omes:1,7,8 :mes:6,8
Course content auditory	1.Field work: Innovatio 2.Analysis of an innov 3.Marketing research, 4.How could student p 5.Implementation of th 6.Application of innov 7.Sustainability of the 8.Field work: Innovatio	on and Developme ation process, 1h, 1h, Learning outco protect his work an he conceptual des ation, 1h, Learning project, 1h, Learn on and Developme	ent Centre - company, 3 Learning outcomes:1,2 comes:2 nd harmonized it up wit ign, 1h, Learning outco g outcomes:6 ning outcomes:3,6 ent Centre - institutions	h, Learning outcomes:5 h the market and the law, 1h, mes:3,4,5,8 , 2h, Learning outcomes:5	Learning outcomes:3,6,7

	9.Defining seminar topics, ideas and questions, 1h, Learning outcomes:1,2,3,4,5,6,7,8 10.Analysis of the ideas, 1h, Learning outcomes:6,7 11.Papers presentation , 1h, Learning outcomes:8 12.Papers presentation , 1h, Learning outcomes:8 13.Implementation stage 14.No exercises 15.No exercises
Course content seminars	 1.Innovations and innovative solutions, 1h, Learning outcomes:1 2. Inspiration in the world of innovations, 1h, Learning outcomes:1,2 3.Analysis existing innovative solutions, 1h, Learning outcomes:2,3 4.The innovation process, 1h, Learning outcomes:2,3,4 5.Development an innovation plan, 1h, Learning outcomes:3,4 6.Plan harmonization, 1h, Learning outcomes:4, 7.Research stage, 1h, Learning outcomes:6,7 9.Analysis an applicability of ideas, 1h, Learning outcomes:2,3 10.Protection of an innovation, 1h, Learning outcomes:2 11.Adaptation to the real conditions, 1h, Learning outcomes:7 13.Seminar presentation, 1h, Learning outcomes:7,8 14.Colloquium, 2h, Learning outcomes:1,2,3,4,5,6,7,8 15.No exercises
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Whiteboard with markers Overhead projector
Exam literature	 J. Žiljak Vujić: Sigurnosna grafika, Tehničko veleučilište u Zagrebu, ISBN: 978 953 7048 33 4 Juraj Božićević: Innovations culture and technological development, Zagreb, 2009 Steve Jobs: Secrets of his innovations/Carmine Gallo, Zagreb, 2011 Facebook Effect: the true story about Mark Zuckerberg and the fastest growing company in the world/David Kirkpatrick; Zagreb, 2012
Students obligations	Attending lectures and exercises, making of presentation and desing innovative assignment. Maximum of 3 absences from exercises
Knowledge evaluation during semester	Defined assignment Oral exam
Knowledge evaluation after semester	Oral exam Practical work
Student activities:	Aktivnost ECTS (Written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
ISVU equivalents:	171893;
Proposal made by	Aleksandra Bernašek, lecturer

Code WEB/ISVU	23180/130951	ECTS	6.0	Academic year	2018/2019
Name	Instructional Design				
Status	3rd semester - Polytec Redovni specijalisti inf specialization in Inform	hnic graduate profession ormatike) - elective cours natics Engineering (NOVI	al study programme spe se3rd semester - Polyteo Izvanredni specijalisti in	ecialization in Informatics chnic graduate professior nformatike) - elective cou	Engineering (NOVI Tal study programme Irse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	+ construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. izv. prof. d Auditory exercises:izv. Seminar exercises:izv.	r. sc. Petar Jandrić prof. v prof. dr. sc. Petar Jandric prof. dr. sc. Petar Jandric	v. šk. ć prof. v. šk. ć prof. v. šk.		
Course objectives	This course prepares s	tudents for independent	development of digital I	earning materials	
Learning outcomes:	1.Create digital learnin 2.Plan development of 3.Analyse requirement 4.Formulate / define e- 5.Choose an appropria 6.Create learning outco 7.Construct digital ass 8.Choose an appropria 9.Evaluate success of 10.Plan sustainable de 11.Konstruct digital lea 12.Present own projec	ng material. Level:6,7 digital learning material s for digital learning material s for digital learning material learning continuum . Lev te pedagogical approach omes . Level:6,7 essment . Level:6,7 te technology for digital digital learning material . velopment of digital lear arning material . Level:6, t at an appropriate level.	. Level:6,7 erial . Level:6 /el:6,7 . Level:7 learning material . Leve . Level:7 ning material . Level:6,7 7 Level:6,7	1:7	
Methods of carrying out lectures	Guest lecturer Case studies Demonstration Simulations Modelling Discussion Questions and answer: Seminar, students pres e-learning	s sentation and discussion			
Methods of carrying	Group problem solving	l			
out auditory exercises	Traditional literature a Data mining and know Essay writing Discussion, brainstorm Mind mapping Computer simulations Interactive problem so Other e-learning	nalysis ledge discovery on the V ning lving	/eb		
Methods of carrying out seminars	Essay writing e-learning				
Course content lectures	1. Introduction to instru 2. Planning and method 3. Requirements analys 4. Context analysis, 2 h 5. E-learning continuun 6. Online pedagogies (1 8. Learning outcomes, 9. Digital assessment (1 10. Digital assessment (1 10. Digital assessment (1 11. Choosing technolog 12. Choosing technolog 13. Evaluation of digita 14. Evaluation of digita 15. Sustainability and s	Actional design , 2h, Lear dology of instructional de sis , 2h, Learning outcom , Learning outcomes:1,2 n , 2h, Learning outcome 1) , 2h, Learning outcome 2h, Learning outcomes: 1) , 2h, Learning outcome (2) , 2h, Learning outcom (2) , 2h, Lear sustainable development	ning outcomes:1,2,3,11, sign , 2h, Learning outco es:1,2,3,11,12 s:4,11,12 s:5,6,7,11,12 s:5,6,7,11,12 s:5,6,7,11,12 es:7,11,12 nes:7,8,11,12 nes:7,8,11,12), 2h, Learning outcome t), 2h, Learning outcome ning outcomes:9,11,12 ning outcomes:9,11,12 , 2h, Learning outcomes	.12 omes:1,2,3,11,12 es:8,11,12 es:8,11,12 s:1,2,3,4,5,6,7,8,9,10,11,	12
Course content auditory	 Individual project, 2 Individual project, 1 	h, Learning outcomes:1, h, Learning outcomes:1, 2h, Learning outcomes:1 2h, Learning outcomes:1	2,3,4,5,6,7,8,9,10,11,12 2,3,4,5,6,7,8,9,10,12,12 2,3,4,5,6,7,8,9,10,12,12 2,3,4,5,6,7,8,9,10,12,12 2,3,4,5,6,7,8,9,10,12,12 2,3,4,5,6,7,8,9,10,12	2 2 2 2	

Course content	1.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10,11,12				
seminars	2.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10,11,12				
	3.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10,11,12				
	4.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10,11,12				
	5.Individual coursework. 2h. Learning outcomes:1.2.3.4.5.6.7.8.9.10.11.12				
	6.Individual coursework. 2h. Learning outcomes:1.2.3.4.5.6.7.8.9.10.11.12				
	7.Individual coursework, 2h. Learning outcomes:1,2,3,4,5,6,7,8,9,10,11,12				
	8 Individual coursework 2h. Learning outcomes: 1,2,3,4,5,6,7,8,9,10,11,12				
	1 Individual coursework, 2h.] earning outcomes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11				
	10 Individual coursework 2b Learning outcomes: 12 3 4 5 6 7 8 9 10 11				
	11 Individual coursework 2h Learning outcomes:1234567891011				
	12 Individual coursework 2b Learning outcomes: $1, 2, 3, 4, 5, 6, 7, 8, 9, 7, 10, 11$				
	12 Individual conservork, 2h, Learning outcomes: 1,2,3,4,5,6,7,8,0,10,11				
	13. Individual coursework, 2b. Learning outcomes:1,2,3,4,5,0,7,0,5,10,11				
	14. Individual coursework, 2h, Learning outcomes. 1,2,3,4,5,6,7,8,0,10,11				
	15.Individual Coursework, 211, Learning Outcomes.1,2,3,4,3,0,7,6,9,10,11				
Required materials	Special equipment				
	no equipment				
Exam literature	Anderson, T. i Elloumi, F. (2008). Theory and Practice of Online Learning. Drugo izdanje. Canada, Athabasca: Athabasca				
	University.				
	Carr, N. (2011). The Shallows: What the Internet Is Doing to Our Brains, New York: W. W. Norton Company. Inc				
	Ćukušić, M. i ladrić, M. (2012). E-učenje: koncept i primjena. Zagreb: Školska knjiga.				
	Leonard, P. i McLaren, P. (1993). Paulo Freire: a critical encounter. London: Routledge.				
	levinson P. (2001). Digitalni McLuhan: vodič za novo doba. Zagreb: Izvori.				
	Perica I. (2013). Političko #8596. pedagoško: Janusova lica pedagogije. Zagreb: Blaberon.				
	Ovisno o tehnologiji korištenoj u individualnom projektu, popis literature može sadržavati različite knjige, priručnike i				
Students obligations	clume.				
Students obligations	(1) Protocyt (0.35 points)				
	(2) Fourier (0.25 points)				
	A minimum of 15 points in participation is required for successful completion of the course!				
Knowledge	Continuous assessment of online activity				
evaluation during					
semester					
Knowledge	Project + coursework				
evaluation after					
semester					
Student activities:	Aktivnost ECTS				
	(Classes attendance) 2				
	(Seminar Work) 4				
Remark	This course can be used for final thesis theme				
Prerequisites:	No prerequisites.				
Proposal made by	Dr Petar Jandrić prof				

Code WEB/ISVU	23186/130958	ECTS	6.0	Academic year	2018/2019
Name	Internet databases (N	oSQL database in e-busi	ness)		
Status	3rd semester - Polyteo Redovni specijalisti in specialization in Inforr	chnic graduate professio formatike) - elective cou natics Engineering (NOV	nal study programme s rse3rd semester - Polyt I Izvanredni specijalisti	pecialization in Informatic echnic graduate professio informatike) - elective co	s Engineering (NOVI nal study programme urse
Teaching mode	Lectures + exercises (work at home	auditory + laboratory +	seminar + metodology	+ construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:1. Prof. dr. so	. Goran Klepac Prof. v.š. Prof. dr. sc. Goran Klepa	Prof vš		
Course objectives	introduce the students	s with nonrelational data	bases and their implem	entation in business syst	ems
Learning outcomes:	1.Creating programmi	ng solution database in	Internet environment .	Level:6,7	
	2.Developing solution 3.Built solution in MyS 4.Cretaing solution in 5.eng: manage nonrel	in Internet environment QL. Level:6,7 PHP. Level:6,7 ational database. Level:	for database. Level:6,7 6,7		
Methods of carrying out lectures	Ex cathedra teaching Demonstration Discussion Questions and answer Seminar, students pre	s sentation and discussior	1		
Methods of carrying out laboratory exercises	Laboratory exercises of Group problem solving Discussion, brainstorn Interactive problem so	on laboratory equipment J hing blving			
Course content lectures	1.Introduction into Int Introduction into Lam Lambda architecture I Batch Layer, Serving I 2.Introduction into dy outcomes:1,2,3 Introduction to PHP, 2 PHP - programming in PHP - functions object 3.PHP in practice, 2h, 4.MySQL - basics, 2h, 5.MySQL - design and 7.MySQL - design and 7.MySQL - design and 7.MySQL - SQL , 2h, Le 8.Accessing MySQL us 9.Using mysqli extens 10.CSS, 2h, Learning of 11.Introduction to forr 12.Java script - basics 13.Using Ajax, 2h, Lea 14.Internet environme HTML5, Apache Web S	ernet databases , 2h, Lea oda architecture NOSQL ayers, 2h, Learning outc ayer, Speed Layer, 2h, 1 hamic web (PHP, MySQL, 2h, Learning outcomes:1, troduction, variables, cor s, arrays, 2h, Learning o Learning outcomes:1,2,3 database creation within database creation within database creation within database creation within database creation within sarning outcomes:1,2,3 ing PHP , 2h, Learning outcor bion , 2h, Learning outcor bion , 2h, Learning outcom s, 2h, Learning outcomes: 2,3 ms, 2h, Learning outcomes: 2,4, Learning outcomes: 2,6, Learning outcomes: 2,7, Learning outcom server, 2h, Learning outcom server, 2h, Learning outcom server, 2h, Learning outcom	arning outcomes:1,5 approach, 2h, Learning comes:1,3 Java Script, CSS, HTML 2,4 atrol structures , 2h, Lea utcomes:1,4 an Internet environment in Internet environment utcomes:1,2,3 mes:1,2,3 es:1,2,3 i.,2 atto devel comes:1,2,3,4,5 ent planning and devel comes:1,2,3,4,5	outcomes:1,4 5, Apache Web Server), 2 arning outcomes:1,2,4 , 2h, Learning outcomes: , 2h, Learning outcomes: opment using PHP, MySQ	h, Learning 1,2,3 1,2,3 L, Java Script, CSS, L, Java Script, CSS,
Course content laboratory	1.MongoDB - database MongoDB - data types MongoDB - control str MongoDB - complex q 2.PHP basic syntax , 2 PHP expressions and o PHP expressions and o PHP objects , function 3.PHP holistic approad 4.MySQL basics, 2h, L 5.MySQL- Queries , 2h 6.MySQL- Queries , 2h 7.MySQL- Queries , 2h 9.Acessing MySQL usi 10.Acessing MySQL usi 10.Acessing MySQL usi 11.Using mysqli, 2h, L 12.CSS, 2h, Learning o 13.Java script , 2h, Lei 14.Java script , 2h, Lei	e creation, 2h, Learning of , 2h, Learning outcomes uctures and queries , 2h ueries, 2h, Learning outc h, Learning outcomes:1, control flow, 2h, Learning control flow, 2h, Learning s, arrays, 2h, Learning o th in application develop earning outcomes:1,2,3 h, Learning outcomes:1,2, Learning outcomes:1,2, Learning outcomes:1,2, Learning outcomes:1,2, outcomes:1,2 arring outcomes:1,2,3 putcomes:1,2 arring outcomes:1,2 arring outcom	outcomes:5 s:5 , Learning outcomes:5 comes:5 2,4 g outcomes:1,2,4 g outcomes:1,2,4 utcomes:1,2,4 ment , 2h, Learning out ,3 ,3 3 tcomes:1,2,3,4 ttcomes:1,2,3,4 4	comes:1,2,4 ning outcomes:1,2,3,4,5	
Required materials	General purpose comp Whiteboard with mark Overhead projector	outer laboratory ers			


Exam literature	Shashank, Tiwari: Professional NoSQL, John Wiley Sons, Inc., 201	1.	
Students obligations	Attending lectures and exercises		
Knowledge evaluation during semester	Discussions on a given theme		
Knowledge evaluation after semester	Creating Internet application		
Student activities:	Aktivnost ECT (Project) 6	5	
Remark	This course can be used for final thesis theme		
Prerequisites:	No prerequisites.		
Proposal made by	Dr.sc. Goran Klepac, Prof. v.š., Znanstveni suradnik		

Code WEB/ISVU	23156/130924	ECTS	6.0	Academic year	2018/2019
Name	Interoperability sta	ndards in systems	management	•	•
Status	2nd semester - Poly Redovni specijalisti specialization in Inf	/technic graduate informatike) - elec ormatics Engineer	professional study progra ctive course2nd semester ing (NOVI Izvanredni spec	mme specialization in Informat - Polytechnic graduate profess ijalisti informatike) - elective c	ics Engineering (NOVI ional study programme ourse
Teaching mode	Lectures + exercise work at home	es (auditory + labo	oratory + seminar + meto	dology + construction)	30+45 (30+15+0+0) 105
Teachers	Lectures:1. dr.sc. M	lladen Mauher prot	f.v.šk.		
Course objectives	Comprehension and	d proficiency of go	vernment and public serv	ices interoperability implemen	tation
Learning outcomes:	1.to reconsider inte 2.to present the leg 3.to present the org 4.to present the se 5.to present the tee 6.to valuate interop	properability requir gal view of interope ganizational view of mantic view of inter chnical view of inter perability reference	rements. Level:7 erability. Level:6,7 of interoperability. Level:6 eroperability. Level:6,7 eroperability. Level:6,7 e architecture. Level:7	,7	
Methods of carrying out lectures	Ex cathedra teachin Guest lecturer Case studies Demonstration Discussion Questions and answ	ng vers			
Methods of carrying out auditory exercises	Data mining and kr Discussion, brainsto Mind mapping	owledge discovery prming	y on the Web		
Methods of carrying out laboratory exercises	Laboratory exercise Group problem solv Mind mapping Workshop	es, computer simul ring	lations		
Course content lectures	1.Introduction: inte Learning outcomes 2.Interoperability a 3.Legal view of inte 4.Organizational view 5.Semantic view of 6.Technical view of 7.Interoperability re 9.n/a 10.n/a 11.n/a 12.n/a 13.n/a 14.n/a 15.n/a	roperability definit :1 rchitectures overvi- roperability archit- ew of interoperability ar- interoperability ar- interoperability ar- eference architectu- eference architectu-	ion, interoperability polici iew, 4h, Learning outcome ecture, 4h, Learning outco ity architecture, 4h, Learn chitecture, 4h, Learning o cchitecture, 4h, Learning o ure, 4h, Learning outcome ure, 2h, Learning outcome	es (european, national), intero es:2,3 omes:2,3 ning outcomes:2,3 nutcomes:2,3 nutcomes:2,3,4 es:5,6	perability frameworks, 4h,
Course content auditory	1.n/a 2.n/a 3.Key interoperabil 4.Key interoperabil 5.Interoperability a 6.n/a 7.Data transformat 8.n/a 9.n/a 10.n/a 11.n/a 12.n/a 13.n/a 14.n/a 15.n/a	ity enablers, 4h, Le ty enablers, 4h, Le nd reuse, 4h, Lean ion services, 3h, Le	earning outcomes:1,2,3,4, earning outcomes:1,2,3,4, ning outcomes:1,2,3,4,5 earning outcomes:1,2,3,4,5	5	
Course content laboratory	1.n/a 2.n/a 3.n/a 4.Use Case interopo 5.Use Case interopo 6.Use Case interopo 7.Presentation of U 8.n/a 9.n/a 10.n/a	erability modeling, erability modeling, erability modeling, se Case interopera	4h, Learning outcomes:1 4h, Learning outcomes:1 4h, Learning outcomes:1 4bility models, 3h, Learnin	,2,3,4,5 ,2,3,4,5 ,2,3,4,5,6 g outcomes:1,2,3,4,5,6	

	11.n/a
	12.n/a
	13.n/a
	14.n/a
	15.n/a
Required materials	Basic: classroom, blackboard, chalk
-	General purpose computer laboratory
	Whiteboard with markers
1	Overhead projector
Exam literature	Ana Lisboa, Delfina Soares: E-government Interoperability Frameworks: A Worldwide Inventory, Elsevier, 2014
Students obligations	course attendance 70%
-	auditory exercises attendance 70%
	laboratory exercises attendance 80%
Knowledge	no
evaluation during	
semester	
Knowledge	written exam 70% points
evaluation after	oral exam 30% points
semester	
Student activities:	Aktivnost ECTS
	(Written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	Prof. Mladen Mauher, Ph.D.

Code WEB/ISVU	23148/130915	ECTS	6.0	Academic year	2018/2019
Name	IT Systems Develo	pment and Implem	entation		_
Status	2nd semester - Po	vtechnic graduate	professional study program	mme specialization in Informat	ics Engineering (NOVI
	Redovni specijalist	i informatike) - eleo	ctive course2nd semester	- Polytechnic graduate profess	ional study programme
	specialization in In	formatics Engineer	ing (NOVI Izvanredni speci	ijalisti informatike) - elective co	ourse
Teaching mode	Lectures + exercis	ses (auditory + labo	pratory + seminar + metod	dology + construction)	30+30 (30+0+0+0)
	work at home				120
Teachers	Lectures: Marijan I	Matić dipl.ing.			
Course abiantiuse	Auditory exercises	: Marijan Matic dipi	ling.		
Course objectives	systems	ents the basic know	wiedge related to the area	of development, introduction	and testing of mormation
Learning outcomes:	1 ability to choose	a methodology sui	table for the development	of an information system. Lev	rel·7
Leaning outcomest	2.UML diagrams. L	evel:6,7			
	3.ability to evaluat	te the procedures o	of testing, control and system	em security. Level:7	
	4.ability to compare	re methodologies a	nd standards used in the o	levelopment of information sy	stems. Level:6,7
	5.ability to justify t	the use of a data m	odel when working with da	atabases. Level:7	
	6.ability to classify	tasks included in a	administering database sy	stems. Level:6,7	vol. 7
	8 ability to recomm	nend the implement	tation of a database mode	sing and deep processing. Lev	er:7
	9 ability to recom	ogramming langua	ges according to their feat	tures. Level:7	
	10.ability to set up	a software testing	environment. Level:6,7		
	11.ability to prepa	re a software speci	fication and documentatio	n. Level:6,7	
	12.ability to estimation	ate the quality of a	user interface. Level:7		
	13.ability to desig	n a Web content ba	sed on the CSS3/HTM5/Jav	/aScript technologies. Level:6,	1
Methods of carrying	Ex cathedra teach	ing			
ouriectures	Seminar students	presentation and c	liscussion		
	Seminar, students	presentation and c			
Methods of carrying	Laboratory exercis	es on laboratory ed	quipment		
out auditory	Laboratory exercis	es, computer simu	lations		
exercises					
Course content	1.Process and met	hods of system dev	velopment; software in sys	tems used for data processing	; life cycle of system
lectures	development, tool	s used in system de	evelopment;, 4h, Learning	outcomes:1,2	
	2.testing and impl	ementation of syste	ems; system control and so	ecurity, trends in system devel	opment; data control and
	3 data and transa	ctions database st	,4 ructure: data modelling: re	elational data model· 4h Lea	ming outcomes:5.6
	4.SOL: gueries and	l reports: database se	administration and securi	ty: data warehousing and mini	ng, programming: . 4h.
	Learning outcome	s:7,8			
	5.techniques and i	methods used in so	ftware development; algoi	rithms and data structures; pro	ogramming languages;
	OOP; elements of	a program; , 4h, Le	arning outcomes:9,10,11		
	6.testing; docume	ntation and mainte	nance; program examples	; user interface and Web desig	n; , 4h, Learning
	outcomes:12		is desire. Web and burger		- 12 12
	7.numan-compute 8 Requirements ar	r interaction; grapr	design; Web page design;	Web programming 2b Lear	5:12,13
	9		design, web page design,	web programming , zn, Lean	ing outcomes.15
	10				
	11				
	12				
	13				
	14				
	15				
Course content	1.UML modelling -	use case diagram.	4h. Learning outcomes:2		
auditory	2.UML modelling -	class diagram, 4h,	Learning outcomes:2		
	3.software testing	(testing modules a	nd coverage), 4h, Learning	g outcomes:2	
	4.administering ar	nd using configurati	on management tools (Su	bversion), 4h, Learning outcom	ies:3
	5. integration of co	nfiguration control	tools with error control too	ols (Subversion i Bugzilla), 4h,	Learning outcomes:3,10
	6.SQL control of tr	ansactions and rigr	nts (DCL i ICL), 4h, Learnir	ig outcomes:6	10.10
	8 JavaScript 2b L	earning outcomes:		.555, 411, Learning outcomes.	.2,15
	9	curring outcomes.			
	10				
	11				
	12				
	13				
	14 15 -				
	15				
Required materials	Basic: classroom, l	blackboard, chalk			
	Special purpose co	omputer laboratory			
	Overhead projecto	r			
Exam literature	Skripta predavanja	a: Marijan Matić, Ra	zvoj i primjena informacijs	kih sustava, Zagreb 2012	
	EUCIP CORF I FVFI	COURSE MATERIA	L: P. Schooer. R Brambilla	. F. Amarilli: The All-Round IT P	rofessional. Build
	Knowelegde Area:	Development and	Implementation of Informa	ation Systems, ICS Skills, Dubli	n 2005.,
-	-	·		· · · · · ·	



Students obligations	maximum of 3 absences from exercises		
Knowledge evaluation during semester	Kolokvij, teorijska pitanja#2#80#50\$Prakti rad#10#20#40\$		
Knowledge evaluation after semester	Pismeni ispit#1#50#50\$Usmeni ispit#1#50#	50\$	
Student activities:	Aktivnost (Written exam)	ECTS 6	
Remark	This course can be used for final thesis theme		
Prerequisites:	No prerequisites.		

Code WEB/ISVU	23142/130908	ECTS	5.0	Academic year	2018/2019
Name	IT Systems Managen	nent			_
Status	1st semester - Polyte Redovni specijalisti ii specialization in Info Polytechnic graduate informatike (smjer ra specialization in Info	echnic graduate p nformatike) - elec rmatics Engineeri e professional stud aarstvo)) - elective rmatics Engineeri	rofessional study prograr tive course1st semester ng (NOVI Izvanredni spec dy programme specializa e course1st semester - Pc ng (NOVI Izvanredni spec	nme specialization in Informat - Polytechnic graduate profess ijalisti informatike) - elective o tion in Informatics Engineering olytechnic graduate profession ijalisti informatike (smjer raar	ics Engineering (NOVI ional study programme course1st semester - g (NOVI Redovni specijalisti ial study programme stvo)) - elective course
Teaching mode	Lectures + exercises work at home	; (auditory + labo	ratory + seminar + meto	dology + construction)	45+15 (15+0+0+0) 90
Teachers	Lectures: Vesna Alić- Auditory exercises: V	Kostešić dipl.ing. /esna Alić-Kosteši	stroj. ć dipl.ing.stroj.		
Course objectives	To transfer to studer	ts the basic know	ledge related to planning	g, using and managing informa	ation systems
Learning outcomes:	1.ability to classify o 2.ability to justify a f 3.ability to support tl 4.ability to support tl the fields of business 5.ability to present n 6.ability to formulate 7.ability to communi 8.ability to support n Level:7 9.ability to explain th 10.ability to solve ba 11.ability to sketch b 12.ability to fully con	rganisation struct unction of an info the value of an in he development of and marketing. In nethods and techn e phase of the IT p cate ideas, espec eaching decisions he elementary reg usic types of legal basic business agr nply with a code of	ures and information sys rmation system in regarc formation system accord of an information system Level:7 niques of testing quality of roject. Level:6,7 ially with people who are related to ethical and level gulations of the Civil oblig issues. Level:6 reements. Level:6 of business conduct . Level	tems which support their work to the part of work it support ing to key business indicators in an organisation in accordar of a planned information syste not closely related to IT. Leve gal issues concerning the infor ation act and The Croatian co el:	:. Level:6,7 s. Level:7 . Level:7 ice with the latest trends in m. Level:6,7 el:6,7 rmation technologies. mpanies act. Level:
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se st 1.3.OPĆI Koristiti teh 1.5.OPĆI Identificirat 2.1.OSOBNE Znanje 2.3.OSOBNE Znanje 2.4.OSOBNE Kritička problema.: 10h in 15 2.7.OSOBNE Predsta 2.8.OSOBNE Komuni 2.11.OSOBNE Komuni 3.1.SPECINF Razumij 3.3.SPECINF Razumij 3.3.SPECINF Povezat	ranim jezikom u li nike, vještine i su i, modelirati i rješ o suvremenim pit moralni pristup ra evaluacija argum 0h vljanje informacija kacijske vještine u enost za nova zna evati mjesto i ulo i relevantne spec 1: 10h in 150h	iteraturi i svakodnevnoj s vremene alate neophodn avati inženjerske problen anjima struke i društva.: du.: 10h in 150h lenata, pretpostavki i poc a, ideja, problema i rješer u okviru struke te s klijen nja, iskustva i kulturne ol gu IT u kontekstu organiz ifične discipline kao što s	tručnoj komunikaciji. : 10h in ne za inženjersku praksu.: 10h ne.: 10h in 150h 10h in 150h lataka u cilju stvaranja mišljer nja stručnoj i općoj publici.: 10 tima, na hrvatskom i englesko kolnosti.: 10h in 150h racije, menedžmenta i poslovr u informacijsko-računarsko inž	150h in 150h ija i pridonošenja rješenju h in 150h im jeziku.: 10h in 150h ih procesa.: 50h in 150h ženjerstvo i tehnologije u
Methods of carrying out lectures	Ex cathedra teaching Case studies Discussion)			
Methods of carrying out auditory exercises	Group problem solvir Discussion, brainstor Computer simulation	ng rming Is			
Course content lectures	1.Organisation and L 2.Organisation and L 3.Management of Inf 4.Measuring the Valu 5.Colloquium, 2h, Le 6.Global Networked I 7.Global Networked I 8.Project Manageme 9.Project Manageme 10.Project Managem 11.Cooperation and of 13.Legal and ethical 14.Legal and ethical 15.Colloquium, 2h, L	Jse of IT, 2h, Lear Jse of IT, 2h, Lear formation Technol Je of IT, 2h, Learn arning outcomes: Economy, 2h, Lea Economy, 2h, Lea th, 2h, Learning o ent, 2h, Learning o ent, 2h, Learning communication, 2 communication, 2 issues, 2h, Learn issues, 2h, Learn earning outcomes	ning outcomes:1,2 ning outcomes:1,2 logy, 2h, Learning outcom ing outcomes:5,6 1,2,3,4,5,6 rning outcomes:7 rning outcomes:7 utcomes:8,9 outcomes:8,9 ch, Learning outcomes:10 th, Learning outcomes:10 ing outcomes:11,12 ing outcomes:11,12 s:7,8,9,10,11,12	nes:3,4	
Course content auditory	1.Information system 2.Information system 3.Typical IT functions 4.Typical IT functions 5.Business plans and 6.Business plans and 7.Using CRM, SCM, E 8.Using CRM, SCM, E 9.Basic techniques u 10.Basic techniques 11.Communication n 12. Art of presenting	ns used in manag ns used in manag s and types of tec s and types of tec f feasibility studie f feasibility studie (RP, 1h, Learning sed in project ma used in project ma nodels , 1h, Learn , 1h, Learning ou	ement , 1h, Learning out ement , 1h, Learning out hnology, 1h, Learning ou hnology, 1h, Learning ou s , 1h, Learning outcome s , 1h, Learning outcome outcomes:6 outcomes:6 anagement, 1h, Learning ing outcomes:8 tcomes:9	comes:1 comes:1 tcomes:2,3 tcomes:2,3 s:4,5 s:4,5 s:4,5 putcomes:7 outcomes:7	

	13.Copyright and special features of computer programs, 1h, Learning outcomes:10 14.Examples of software license agreement, 1h, Learning outcomes:11 15.IT innovation management, 1h, Learning outcomes:12
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Overhead projector
Exam literature	1. EUCIP CORE LEVEL COURSE MATERIAL: P. Schgoer, R Brambilla, F. Amarilli: The All-Round IT Professional, Plan Knowelegde Area: Use and Management of Information Systems, ICS Skills, Dublin 2005.,
Students obligations	maximum of 3 absences from exercises
Knowledge evaluation during semester	Colloquim
Knowledge evaluation after semester	test paper
Student activities:	AktivnostECTS(Constantly tested knowledge)3(Written exam)2
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Code WEB/ISVU	23150/130917	ECTS	6.0	Academic year	2018/2019
Name	Java Programming				
Status	2nd semester - Polytec Redovni specijalisti info specialization in Inform Polytechnic graduate p informatike (smjer raar specialization in Inform	hnic graduate profess prmatike) - elective co atics Engineering (NG rofessional study pro stvo)) - elective cours atics Engineering (NG	sional study progra burse2nd semester DVI Izvanredni spe gramme specializa se2nd semester - F DVI Izvanredni spe	amme specialization in Informat - Polytechnic graduate profess cijalisti informatike) - elective co tion in Informatics Engineering Polytechnic graduate profession cijalisti informatike (smjer raars	ics Engineering (NOVI ional study programme burse2nd semester - (NOVI Redovni specijalisti al study programme tvo)) - elective course
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory	+ seminar + meto	odology + construction)	30+30 (0+30+0+0) 120
Teachers	Lectures:v.pred. Aleksa Laboratory exercises:v.	nder Radovan , dipl. pred. Aleksander Rad	ing. dovan , dipl. ing.		
Course objectives	Acquiring knowledge a	nd skills for developm	nent of Java applica	ations that use the database.	
Learning outcomes:	Acquiring knowledge and skills for development of Java applications that use the database. 1.ability to write a code for a JavaFX application which will use a GUI and a database. Level:6,7 2.ability to choose a Java development option if it is suitable for solving a specific task. Level:7 3.ability to organise elements of an application into classes, interfaces and packages according to the principles of OOP. Level:6,7 4.ability to develop JavaFX applications to solve various types of practical problems. Level:6,7 5.ability to estimate individually the appropriateness of using Java in solving a specific practical problem. Level:7 6.ability to organise a development environment (Eclipse) for an efficient development of JavaFX applications. Level:6,7 7.ability to devise the structure of classes in Java applications to make it upgradable. Level:6,7 8.ability to discover the possibilities of upgrading an application by means of open source libraries. Level:6,7 9.ability to redesign the existing applications by using Java. Level:6,7 10.ability to provide a critical review of the advantages and disadvantages of Java when compared to other programming languages. Level:7				
Methods of carrying out lectures	Ex cathedra teaching Demonstration				
Methods of carrying out laboratory exercises	Practical work using co	mputer with Java dev	elopment environi	nent installed.	
lectures	1. Java programming fail 2. Classes and objects i 3. Object oriented progr 4. Exceptions in Java, 21 5. Collections, generics 6. Files in Java, 2h, Lear 7. JavaFX, 2h, Learning ou 9. No classes, 2h 10. No classes, 2h 11. No classes, 2h 12. No classes, 2h 13. No classes, 2h 14. No classes, 2h 15. No classes, 2h	nguage basics and sin n Java, 2h, Learning c ramming in Java, 2h, n, Learning outcomes and Javadoc, 2h, Lea ning outcomes:7,9,1: outcomes:1,3,4,6 utcomes:1,2,3,6	mpie Java program outcomes:7 Learning outcomes ::7,8 rning outcomes:7,1 1	s, 2n, Learning outcomes:2,3,1	0,11
Course content laboratory	1.No classes, 2h 2.Classes and objects i 3.Object oriented progr 4.Exceptions in Java, 2l 5.Collections and gene 6.Files in Java, 2h, Lear 7.JavaFX, 2h, Learning 8.JDBC, 2h, Learning ou 9.No classes, 2h 10.No classes, 2h 11.No classes, 2h 13.No classes, 2h 13.No classes, 2h 14.No classes, 2h 15.No classes, 2h	n Java, 2h, Learning c ramming in Java, 2h, n, Learning outcomes rics in Java, 2h, Learn ning outcomes:8,9,10 outcomes:1,2,4,5,6,7 utcomes:1,8,9,10,11	outcomes:3,7,10 Learning outcomes :7 ing outcomes:2,5, 0,11 ',8,9,10,11	s:2,3,4,5,7,9,10 7,9,10,11	
Required materials	Basic: classroom, black General purpose comp Overhead projector	board, chalk uter laboratory			
Exam literature	Bruce Eckel: On Java 8, Java for Programmers: A Programmer's Guide Java Concurrency in Pra Head First Java, 2nd ed Java The Good Parts, O Eclipse IDE Pocket Guic Effective Java, 2nd edit	MidView LLC, 2017. Deitel Developer Seri to Java SCJP Certifica actice, Addion Wesley ition, O'Reilly, veljača 'Reilly, svibanj, 2010. de, O'Reilly, kolovoz, ion, Prentice Hall, svi	ies, Prentice Hall, v tion: A Compreher /, svibanj, 2006. a, 2005. 2005. banj, 2008.	reljača, 2009. sive Primer 3rd Edition, 2009.	

1	Sprechen Sie Java? drunkt verlag, Hanspeter Mssenbek, lin	ani 2011		
	Sprichen Bronzmirzen iz Java, Hansprei Maschick, hpanj 2011.			
Students obligations	Completing all ten laborateny exercises			
Students obligations				
Knowledge	Ten laboratory exams - 6 points each			
evaluation during	Two partial exams - 20 points each			
semester	Optional points for additional effort			
	Every partial exam has a correctional exam			
	Maximum 100 points			
50-61 - sufficient				
	75-86 - very good			
	87-100 - excellent			
Knowledge	Written exam is evalued with 40 points, and remaining 60 p	oints are transferred from the achievement on laboratory		
evaluation after	exams during the semester time			
semester				
Student activities:	Aktivnost	ECTS		
	(Practical work)	4		
	(Written exam)	2		
Remark	This course can be used for final thesis theme			
Prerequisites:	No prerequisites.			
Proposal made by	Aleksander Radovan, BSc. engineer, lecturer, 03.06.2018.			

Code WEB/ISVU	23149/130916	ECTS	6.0	Academic year	2018/2019
Name	Management Soft Skill	S			
Status	2nd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate profession ormatike) - elective cours natics Engineering (NOVI	al study programme spe e2nd semester - Polytec Izvanredni specijalisti inf	cialization in Informatics hnic graduate professior formatike) - elective cou	Engineering (NOVI nal study programme rse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	eminar + metodology +	construction)	30+30 (15+0+15+0) 120
Teachers	Lectures: Vjeran Bušeli Auditory exercises: Vje	ć viši predavač ran Bušelić viši predavač			
Course objectives	To transfer to students	the basic knowledge rel	ated to popular manager	ial "soft skill" competend	ces
Learning outcomes:	1.ability to classify the 2.ability to estimate th 3.ability to control one 4.ability to control effic 5.ability to create and 6.ability to create qual 7.ability to negotiate fo	basic functions and task e importance of personal 's own emotional intellige ciently one's own time. Le give an efficient presente ity questions in order to o pllowing a selling method	s related to managemen , communication and gro ence. Level:6,7 evel:6,7 ation. Level:6,7 get prompt information. I ology (9 Block Model). Le	t. Level:6,7 oup managerial skills. Le Level:6,7 evel:6,7	vel:7
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se stra 1.3.OPĆI Koristiti tehni 1.4.OPĆI Povezati inžeu usluge.: 10h in 180h 2.1.OSOBNE Znanje o 2.2.OSOBNE Odgovorn 2.3.OSOBNE Etički i mo 2.4.OSOBNE Kritička ev problema.: 10h in 180h 2.7.OSOBNE Predstavlj 2.8.OSOBNE Predstavlj 2.8.OSOBNE Profesiona 2.10.OSOBNE Prilagodl 2.11.OSOBNE Otvoreno	nim jezikom u literaturi i ke, vještine i suvremene njerske aktivnosti konstru suvremenim pitanjima st ost, dosljednost, točnost, oralni pristup radu.: 10h i valuacija argumenata, pr n anje informacija, ideja, p cijske vještine u okviru s alna i ljudska osobnost.: 2 jivost novim tehnologijar ost za nova znanja, iskusi	svakodnevnoj stručnoj k alate neophodne za inže uiranja, proizvodnje i mal ruke i društva.: 10h in 18 ažurnost.: 10h in 180h n 180h etpostavki i podataka u o roblema i rješenja stručn truke te s klijentima, na l 20h in 180h na i tehnikama kao dio p tva i kulturne okolnosti.:	omunikaciji. : 10h in 180 njersku praksu.: 10h in 1 rketinga s potrebama ko 30h cilju stvaranja mišljenja i noj i općoj publici.: 40h in hrvatskom i engleskom j rocesa cjeloživotnog uče 20h in 180h	h 180h risnika proizvoda i pridonošenja rješenju 1180h eziku.: 20h in 180h enja.: 10h in 180h
Methods of carrying out lectures Methods of carrying out auditory exercises	Ex cathedra teaching Case studies Demonstration Simulations Discussion Questions and answers Seminar, students prese Homework presentatio Other Multimedia material, ta Group problem solving Data mining and know Discussion, brainstorm Mind mapping Interactive problem so	s sentation and discussion n apes, LCD projector, inter ledge discovery on the W ing lving	active approach 'eb		
Methods of carrying	Workshop Other Other				
out seminars	Nema nastave				
Course content lectures	 , 2h, Learning outco , 4h, Learning outco , 4h, Learning outco , 2h, Learning outco , 2h , 2h 	mes:1,2,3,4,5,6,7 mes:1,2 mes:1,2,3 mes:1,2,3 mes:1,2,3 mes:4 mes:5 mes:6 omes:6 omes:7 omes:7			
Course content auditory	1., 6h, Learning outco 2., 6h, Learning outco 3., 2h, Learning outco 4., 4h, Learning outco 5., 2h, Learning outco 6., 4h, Learning outco 7., 2h 8., 2h	mes:1,2,4 mes:1,2,5 mes:1,2,6 mes:1,2,6,7 mes:1,2,6,7			

	9. , 2h
	10. , 2h
	11. , 2h
	12. , 2h
	13. 2h
	14 2h
	15 2h
	15., 211
Course content	1.Nema nastave. 30h
seminars	2 Nema nastave
Semilars	Nema nastave
	5.Nema hastave
	6.Nema nastave
	/.Nema nastave
	8.Nema nastave
	9.Nema nastave
	10.Nema nastave
	11.Nema nastave
	12.Nema nastave
	13.Nema nastave. 2h
	14 Nema nastave
	15 Nema nastave
	15.Nefina hastave
Required materials	Basic: classroom. blackboard. chalk
	Overhead projector
Exam literature	Basic literature:
	1. Bahtijarević-Šiber, Sikavica, Pološki Vokić, Suvremeni menadžment - vještine, sustavi, izazovi, Školska knjiga, Zagreb,
	Additional literature:
	2 Corto Carto Moderni menadžment 10. Izdanje MATE dio 2. Zagreb 2008
	2. Cetto, Cetto, Moderni menadzinence 10. izdanje, male do.o., zagreb, 2006.
	S. Peter Drucker, Najvaznije o menauzmentu, M.E.P. CONSULT (J.O.O., Zagreb, ZUOS.
	4. Stephen Covey, The Seven Habits of Highly Effective People, Simon Schuster, 1989.
	5.Daniel Goleman, Emocionalna inteligencija, Mozaik knjiga, 1997.
	6.Jerry Weissman, Prezentacijom do uspjeha, MATE d.o.o., Zagreb, 2006.
	7.Keith M. Eades, The New Solution Selling: The Revolutionary Sales Process That is Changing the Way People Sell,
	McGraw-Hill, 2004.
	8.Dennis Matthies, Precision Questioning Technique, http://www.vervago.com/resources.html (PQ PA Skill Sharpener)
Students obligations	50% dolaznosti uz aktivno sudjelovanje i pravovremeno izvravanje zadanih obaveza vezano uz prakti rad
Knowledge	Redovitost pohaa (15 provjera)
evaluation during	Pisana zada(2 provjere)
semester	Prakti rad (2 provjere)
Knowledge	Usmeni ispit:
evaluation after	Bedovitost nobas i aktivnost na satu - 20% (kriterij za prolaz 50%)
comester	Dicana zada(2 proviera) - 40% (kritarii za prolaz 50%)
Seniester	Prakti radu (2 provjete) - 4070 (kriterij za prolaz 5070)
Student activities	Altimost ECTS
Student activities:	
	(written exam) b
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Study programme for	academic yea	r 2018/2019
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Code WEB/ISVU	23135/130898	ECTS	5.0	Academic year	2018/2019
Name	Mathematics	-		· · ·	
Status	1st semester - Polytec	hnic graduate profes	sional study progra	amme specialization in Informatics	Engineering (NOVI
	Redovni specijalisti inf	ormatike) - elective	course1st semester	- Polytechnic graduate profession	hal study programme
	Polytechnic graduate r	rofessional study or	ogramme specializ	ation in Informatics Engineering (I	NOVI Redovni specijalisti
	informatike (smjer raa	rstvo)) - elective cou	irse1st semester - F	Polytechnic graduate professional	study programme
	specialization in Inform	natics Engineering (N	IOVI Izvanredni spe	cijalisti informatike (smjer raarstv	o)) - elective course
Teaching mode	Lectures + exercises (auditory + laborator	y + seminar + met	odology + construction)	30+30 (30+0+0+0)
Topehore	work at home	Urbiba profivia čk			90
reachers	Auditory exercises:dr.s	orbina prof.vis.sk. sc. lgor Urbiha prof.v	is.šk.		
Course objectives	To gualify students to	use both a differenti	al and integral calc	ulus of multivariable functions	
Learning outcomes:	1.functions of several	variables. Level:6,7	5		
	2.continuity and limit of	of a function of sever	ral variables. Level:	6,7	
	3.ability to understand	the differential calc	ulus of multivariabl	e functions. Level:7	
	5 ability to understand	the first and higher	order partial deriva Level:7	atives. Level:7	
	6.ability to understand	the local extremes	of more variables. I	_evel:7	
	7.ability to understand	the integral calculu	s of multivariable fu	unctions. Level:7	
	8.ability to understand	the calculus of doub	ole integrals. Level:	7 Joveli7	
	10.ability to understand	d the calculus of dou	uble integration wit	h substitution. Level:7	
	11.ability to understan	d the implementatio	on of integrals on ca	lculating centre of mass, static m	oments and centre of
	gravity. Level:7				
	12.first order linear dif	ferential equation us	sing the variation of	constants method. Level:6	
	14.ability to solve diffe	rential equations. Levels,	vel:		
Methods of carrying	Ex cathedra teaching				
out lectures	Case studies	_			
	Questions and answers	5			
	auditory				
Methods of carrying	Other				
out auditory	solving examples and	exercises relevant to	o the delivered mat	erial.	
exercises		<u> </u>			
Course content	Limit and continuity of	ns, Domain of a func multivariable functi	ction of two variable	es, Quadric surfaces, 2n, Learning	outcomes:1
	2.Partial derivatives, S	chwartzs theorem, 2	h, Learning outcom	nes:2,3,4	
	Chain rule, total deriva	tive of a function of	two variables of fir	st and second order, tangent plan	e., 2h, Learning
	outcomes:4,5	ctions of soveral var	ishlar conditional	avtroma 2h Learning autoomaci	s
	Integral calculus of fur	ctions of several var	riables: volume, doi	uble integral, multiple integral, 2h	Learning outcomes:7.8
	4.1. exam, 2h				,, , ,, , ,, , ,, , , , , , , , , , , , , , , , , , , ,
	Computing double inte	gral - iterated integr	rals, Fubinis theore	m, 2h, Learning outcomes:8	
	5.Polar coordinate syst	em in plane, compu	ting double integra	I using substitution (cartesian to p	olar coordinates),
	Application of integrals	s: Centroid, Centre o	f mass, Static mom	ents, Moment of inertia , 2h, Lear	ning outcomes:11
	6.2. exam, 2h				-
	Ordinary differential ed	quations - Introductio	on, 2h, Learning ou	tcomes:13	10
	System of linear differ	rerential Equations,	the variation of cor	istants method, 2n, Learning outcomes:14	omes:12
	8.3. exam, 2h	citical equations with		its, zii, Leanning outcomes.14	
	9.nema nastave				
	10.nema nastave				
	12.nema nastave				
	13.nema nastave				
	14.nema nastave				
	15.nema nastave				
Course content	1.Multivariable functio	ns. Domain of a fund	tion of two variable	es. Ouadric surfaces 2h. Learning	outcomes:1
auditory	Limit and continuity of	multivariable function	ons, 2h, Learning o	utcomes:2	
	2.Partial derivatives, S	chwartzs theorem.,	2h, Learning outcor	nes:2,3,4	
	Chain rule, total deriva	itive of a function of	two variables of fin	st and second order, tangent plan	e., 2h, Learning
	3.Local extrema of fun	ctions of several var	iables, conditional	extrema 2h. Learning outcomes:	6
	Integral calculus of fur	ctions of several var	riables: volume, do	uble integral, multiple integral, 2h	, Learning outcomes:7,8
	4.1. exam, 2h				
	Computing multiple int	egral - iterated integration	grais, Fubinis theor ting double integra	em, 2h, Learning outcomes:8 Lusing substitution (cartosian to r	volar coordinates)
	Jacobian, 2h, Learning	outcomes:9,10	any double integra		
	Application of integrals	: Centroid, Centre o	f mass, Static mom	ents, Moment of inertia , 2h, Lear	ning outcomes:11
	6.2. exam, 2h	wotions laterate "	on Oh Lagardan	teamac.12	
	7. First Order Linear Did	juations - Introductions	on, 2n, Learning ou the variation of cor	tcomes:13 Istants method, 2h. Learning outc	omes:12
I					

	System of linear differential equations with constant coefficients, 2h, Learning outcomes:14 8.3. exam, 2h 9.nema nastave, 2h 10.nema nastave, 2h 11.nema nastave, 2h
	12.nema nastave, 2h
	13.nema nastave, 2h, Learning outcomes:12
	14.nema nastave, 2h 15.nema nastave. 2h
Required materials	Basic: classroom, blackboard, chalk
	Whiteboard with markers
Exam literature	Solving examples and exercises relevant to the derivered material.
	S. Surepa, Matematička analiza III, Tehnička knjiga, Zagreb 1975.
	L.Krnić, Z.Šikić: Račun diferencijalni i integralni, Školska knjiga, Zagreb, 1992.
	B.P.Demidovič: Zadaci i riješeni zadaci iz više matematike s primjenom na tehničke nauke, Tehnička knjiga, 1978.
Students obligations	No special requirements.
Knowledge evaluation during semester	Exams during semester
Knowledge	There are three preliminary exams (three guestions each), and if a student correctly solved at least one problem of
evaluation after semester	each preliminary exam and correctly solved at least four problems of all three preliminary exams, it makes the student exempt from taking the written exam.
	The written part of the exam consists of five problems to be solved within 2 hours. A student may attempt to the oral part of the exam, if he has two correctly solved problems in the written part of the exam.
Student activities:	Aktivnost ECTS
	(Written exam) 5
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	dr.sc. Igor Urbiha prof.vis.šk., 17.4.2014.

Study programme for academic year 2018/2019	
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Code WEB/ISVU	23202/130977	ECTS	6.0	Academic year	2018/2019
Name	Methodology of profess	ional and scientific re	esearch		
Status	4th semester - Polytech Redovni specijalisti info specialization in Inform Polytechnic graduate p informatike (smjer raar specialization in Inform	nic graduate profess matike) - elective co atics Engineering (NC rofessional study pro- stvo)) - elective cours atics Engineering (NC	ional study prog ourse4th semest DVI Izvanredni sp gramme speciali se4th semester - DVI Izvanredni sp	ramme specialization in Informatics er - Polytechnic graduate profession pecijalisti informatike) - elective cou zation in Informatics Engineering (N Polytechnic graduate professional pecijalisti informatike (smjer raarstv	s Engineering (NOVI nal study programme irse4th semester - NOVI Redovni specijalisti study programme io)) - elective course
Teaching mode	Lectures + exercises (a	uditory + laboratory	+ seminar + me	todology + construction)	15+45 (0+0+45+0) 120
Teachers	Lectures:1. Doc. dr. sc. Lectures:3. dr.sc. Žarko Seminar exercises: Sara	Lidija Tepeš Golubić Nožica a Slamić Tarade struč	v. pred. ć. spec. rel. publ.		120
Course objectives	Enable students to proc	duce high-quality prof	fessional work a	nd research	
Learning outcomes:	1.Formulate hypothesis 2.generate a solution o 3.evaluate policies and 4.Select procedures for 5.choosing methods for 6.formulate / shape res 7.present the results in	for solution to resea f professional and sci procedures of the me transforming good ic creating a profession earch results. Level:6 appropriate way to t	rch problem. Lev entific problems ethodology of pr Jeas into high-qu nal work. Level:7 5,7 arget audience.	vel:6,7 through research. Level:6,7 ofessional and research work. Leve ality professional work. Level:7 , Level:6,7	1:7
Methods of carrying	Ex cathedra teaching				
	Case studies Discussion Questions and answers Seminar, students pres Homework presentation	entation and discussi า	ion		
Methods of carrying out seminars	Traditional literature ar Data mining and know Discussion, brainstormi	alysis edge discovery on the ng	e Web		
Course content lectures	1.Introduction to profes professional work. Cond 2. The methodology of Learning outcomes:5,7 3.Technology of profess research work., 3h, Lea 4.Research and develog of the report and resea 5.Plagiarism. Profession professional and scient 6.The ways of controllir 7.no lessons, 2h 8.no lessons, 2h 9.no lessons, 2h 10.no lessons, 2h 11.no lessons, 2h 12.no lessons, 2h 13.no lessons, 2h 14.no lessons, 2h	sional and research we cept and types of scie professional research sional and scientific ru- rning outcomes:3 oment. Writing and te rch documentation., 3 hal and scientific journ fic titles., 3h, Learnin ng originallity of writte	work. Profession entific work. , 3h a. Concept and c esearch. The cho echnical process 3h, Learning out nals and publica ng outcomes:1 en papers, appli	al, research and scientific activities Learning outcomes:1,2 lassification of professional and scie pice of research topics. Planning an ng of professional work. Using liter comes:6 tions. Searching databases. Works ng computer programs, 2h	. Concept and types of entific methods. , 3h, d organization of ature and citation, parts for acquiring
	15.no lessons, 2h				
Course content seminars	 1.assigned by mentor, 2.assigned by mentor, 3.assigned by mentor, 4.assigned by mentor, 5.assigned by mentor, 6.assigned by mentor, 8.assigned by mentor, 8.assigned by mentor, 10.assigned by mentor, 11.assigned by mentor, 12.assigned by mentor, 13.assigned by mentor, 14.assigned by mentor, 15.assigned by mentor, 	3h, Learning outcome 3h, Learning outcom 3h, Learning outcom 3h, Learning outcom 3h, Learning outcom 3h, Learning outcom	es:2 es:2 es:2 es:2 es:3 es:3 es:3 es:3 es:3 es:3 es:3 es:3		
Required materials	Basic: classroom, black Overhead projector	board, chalk			
Exam literature	1. M.Žugaj, K.Dumičić, 2. R. Zelenika: Metodol 3. Lj. Baban, K. Ivić, S. J	V.Dušak: Temelji znal ogija i tehnologija izra elinić, M. Lamza-Mare	nstvenoistraživa ade znanstveno <u>c</u> onić, A. Šundalić	čkog rada- Metodologija i metodika i stručnog djela. Ekonomski fakult : Primjena metodologije stručnog i	, FOI, Varaždin, 2006.g. et, Rijeka, 2000.g. znanstvenog

	istraživanja.Ekonomski fakultet, Osijek, 2000. 4. R. Zelenika: Tehnologija znanstvenog i razvojnog istraživanja. IQ plus d.o.o.Rijeka 2016. ISBN: 978-953-95705-9-8		
Students obligations	Attending classes and participation in the process		
Knowledge evaluation during semester	Preliminary exam and seminar paper		
Knowledge evaluation after semester	Oral exam and seminar paper		
Student activities:	Aktivnost (Oral exam) (Written exam) (Written exam) (Seminar Work) (Seminar Work) (Activity in class)	ECTS 1 1 1 1 1 1 1	
Remark	This course can be used for final thesis ther	ne	
Prerequisites:	No prerequisites.		
Proposal made by	dr,sc. Žarko Nožica, 23.3.2014		

Code WEB/ISVU	23140/130906	ECTS	5.0	Academic year	2018/2019
Name	Motivation and Team \	Work			_
Status	1st semester - Polvtec	hnic graduate pr	ofessional study program	nme specialization in Informat	ics Engineering (NOVI
	Redovni specijalisti inf	ormatike) - elect	ive course1st semester -	- Polytechnic graduate profess	ional study programme
	specialization in Inform	natics Engineerin	g (NOVI Izvanredni spec	ijalisti informatike) - elective c	ourse1st semester -
	Polytechnic graduate	professional stud	y programme specializat	tion in Informatics Engineering	(NOVI Redovni specijalisti
	informatike (smjer raa	rstvo)) - elective	course1st semester - Po	lytechnic graduate profession	al study programme
	specialization in Inforn	natics Engineerin	ıg (NOVI Izvanredni spec	ijalisti informatike (smjer raars	tvo)) - elective course
Teaching mode	Lectures + exercises (auditory + labor	atory + seminar + meto	dology + construction)	30+30 (30+0+0+0)
	work at home				90
Teachers	Lectures:1. izv. prof. d	r. sc. Petar Jandr	ić prof. v. šk.		
	Auditory exercises:izv.	prof. dr. sc. Peta	ar Jandrić prof. v. šk.		
Course objectives	To introduce students	the basics of suc	cessful communication	and develop students	
Learning outcomes:	1.ability to formulate t	he basics of succ	essful communication. I	_evel:6,7	
	2.abilityto identify obs	tacles to success	ful communication, und	erstanding conflicts, the basic	features of group
	processes and rules of	public presentat	tion . Level:6	and the state of t	la in annual in facult of
	3.ability to classify tec	nniques and skill	s needed for successful	communication with individua	is, in groups and in front of
	A ability to devise clea	r expressing and	active listening: to prov	vide feedback with respect 1 ev	vel:6 7
	5 ability to solve com	nunication issues	and conflicts Level:6	de leeuback with lespect. Le	ei.0,7
	6.ability to present val	rious business pla	ans, problems and soluti	ons. Level:6.7	
	7.ability to estimate th	e influence of ge	ender based attitudes on	work with persons of the sam	e or opposite gender.
	Level:6,7	-		-	
	8.ability to compare th	ne intercultural d	ifferences for better com	munication with people belon	ging to various cultures.
	Level:6,7				
	9.ability to formulate a	a leader's roles a	nd functions directed to	wards social and emotional rel	ations between members
	of a group and perform	nance of individu	al and group goals . Lev	el:6	
	10.ability to develop h	umanistic values	s, such as mutual respon	sibility, the rights to inclusion	and to being accepted,
	expressing freely one		e of the unreferit. Level.	5,7	
Methods of carrying	Ex cathedra teaching				
out lectures	Guest lecturer				
	Case studies				
	Discussion				
	Questions and answer	S			
	Seminar, students pre	sentation and dis	scussion		
	Homework presentation	on			
Methods of carrying	Traditional literature a	nalysis			
out auditory	Data mining and know	leage alscovery	on the web		
exercises	Discussion brainstorm	ning			
	individual work, work i	n pairs, in small	groups and plenary		
Course content	1.Communication proc	ess (1). 2h. Lea	rning outcomes:1.10		
lectures	2.Communication proc	ess (2)., 2h, Lea	rning outcomes:1,3,10		
	3.Verbal Communicati	on., 2h, Learning	outcomes:2,3,4,10		
	4.Non-verbal Commun	ication., 2h, Lear	ming outcomes:2,3,10		
	5.Foundations of femir	nism., 2h, Learnir	ng outcomes:7,8,10		
	6. The influence of gen	der based opinio	ns on work with persons	of the same or the opposite g	ender., 2h, Learning
	7 Eoundations of multi	culturalism 2h	Learning outcomes:7.8	10	
	8.Intercultural differen	ces more succes	sful communication with	people from other cultures.	2h. Learning
	outcomes:7.8.10				, _cag
	9.Negative and positiv	e aspects of con	flict., 2h, Learning outco	mes:3,4,5,10	
	10.Constructive and d	estructive interac	ction and communication	n., 2h, Learning outcomes:3,4,	5,10
	11.Communication in s	small groups., 2h	, Learning outcomes:3,4	,5,10	
	12.Communication in I	arge groups., 2h	, Learning outcomes:3,4	,5,10	
	13.Group structure and	(1) 2b Loorning	cities., 2n, Learning outo	comes:3,4,5,9,10	
	15 Public presentation	(1), 2n, Learnin (2) 2h Learnin	a outcomes:3.4,3,9,10		
		(2)., 211, 200	g outconnes.5, 1,5,6,5,10		
Course content	1.Distinguishing betwe	en a team and a	working group 6h. Le	arning outcomes:1.2.5	
auditory	2.Building a team. , 6h	, Learning outco	mes:1,2,5,8	J	
	3.Planning a team pro	ject. , 6h, Learnir	ng outcomes:1,2,3,4,5,6,	7,8,9,10	
	4.Creating team stand	ards., 6h, Learni	ng outcomes:1,2,9,10		
	5.Leadership styles., 6	h, Learning outc	omes:1,4,9,10		
	6.No lecture.				
	7.No lecture.				
	8.No lecture.				
	10 No lecture				
	11.No lecture				
	12.No lecture.				
	13.No lecture.				
	14.No lecture.				
	15.No lecture.				

Required materials	Basic: classroom, blackboard, chalk			
	Whiteboard with markers			
	Overhead projector			
	individual work, work in pairs, in small groups and plenary			
Exam literature	Pearson, J. C., Spitzberg, B. H. (1990). Interpersonal communication: concepts, components and contexts. Dubuque: Wm. C. Brown Publishers.			
	Egan, G. (1977). You and me: the skills of communicating and relating to others. Monterey: Brooks/Cole Publishing Company.			
	Bolton, R. (1986). People skills. New York: Touchstone.			
	Fisher, R., Ury, W., Patton, B. (2003). Kako do DA: do dogovora pregovorom, a ne predajom. Zagreb: Neretva. Lucas, S. E. (1998). The art of public speaking. New York: McGraw-Hill.			
	Van Emden, J. I Becker, L. (2004). Presentation skills for students. London: Palgrave Macmillan.			
	Stewart, J. (Ed.) (1999). Bridges, not walls: a book about interpersonal communication. McGraw-Hill.			
	Holliday, A., Hyde, M. I Kullman, J. (2004). Intercultural communication. London: Routledge			
Students obligations	maximum of 3 absences from exercises			
Knowledge	Redovitost pohaa#10#10#50\$Kolokvij, teorijska pitanja#3#90#50\$			
evaluation during				
semester				
Knowledge	oral exam			
evaluation after				
semester				
Student activities:	Aktivnost ECTS			
	(Oral exam) 5			
Remark	This course can be used for final thesis theme			
Prerequisites:	No prerequisites.			

Study programme	for academic	year 2018/2019
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Code WEB/ISVU	23176/130947	ECTS	6.0	Academic year	2018/2019
Name	Multimedia Processin	а			
Status	3rd semester - Polyte Redovni specijalisti in	chnic graduate pr formatike) - elect	ofessional study programive course3rd semester	nme specialization in Informati - Polytechnic graduate professi	cs Engineering (NOVI onal study programme
Teaching mode	specialization in Infor Lectures + exercises	matics Engineerin (auditory + labora	g (NOVI Izvanredni spec atory + seminar + meto	ijalisti informatike) - elective co dology + construction)	30+60 (30+30+0+0)
	work at home				90
Teachers	Lectures:1. Ivan Rajko	DVÍĆ			
Course objectives	To transfer to student	s advanced know	ledge in the field of inte	ractive media and multimedia	presentations
Learning outcomes:	1.plan to produce mu 2.ability to devise a p 3.ability to organise t 4.critically assess and 5.ability to provide a design. Level:6,7	Itimedia presenta resentation of a c he workflow of the a analyze the med critical review on	tions. Level:6,7 ontent by using multime e image, sound and vide ia elements in a multim the classification of prog	edia tools. Level:6,7 o processing. Level:6,7 edia presentation. Level:7 grams and of computer equipm	ent used in multimedia
Methods of carrying out lectures	Ex cathedra teaching Discussion Questions and answe Seminar, students pre Homework presentati	rs esentation and dis on	scussion		
Methods of carrying out auditory exercises	Group problem solvin Discussion, brainstorr Mind mapping Interactive problem s Workshop	g ning olving			
Methods of carrying out laboratory exercises	Laboratory exercises Group problem solvin Discussion, brainstorr Mind mapping Interactive problem s Workshop	on laboratory equ g ning olving	ipment		
Course content lectures	 presentation of sylla Fundamentals of im Analysis of practice Organizing producti Creating your own s The integration of tr Students presentati Students presentati 10. 11. 12. 13. 14. 15. 	abus, 4h, Learning age , sound and v s, 4h, Learning ou on of multimedia storyboard for pre ext , images and s on and discussion on and discussion	g outcomes:1,5 video, 4h, Learning outco tcomes:1,5 content, 4h, Learning ou sentations, 4h, Learning sound in a unique preser a, 4h, Learning outcomes a, 2h, Learning outcomes	omes:1,2,5 utcomes:2,3,4 outcomes:3,4 ntation, 4h, Learning outcomes s:1,2,5 s:1,2,5	:3,4
Course content auditory	1.Introduction to mult 2.Presentation of mul 3.Making simple exer 4.Making simple exer 5.The process of proc 6.Presentation storyb 7.Finalization of prese 8.Finalization of prese 9., 2h 10., 2h 11., 2h 12., 2h 13., 2h 14., 2h 15., 2h	imedia laboratory timedia tools, 2h, cises for picture a cises for sound, 2 essing media, 2h, oard, 2h, Learning entation, 2h, Learn entation, 2h, Learn	v, 2h, Learning outcomes: Learning outcomes:1,3, nd video, 2h, Learning o h, Learning outcomes:1 Learning outcomes:1,3, g outcomes:1,2,5 ning outcomes:1,5 ning outcomes:1,4,5	s:1,5 5 putcomes:1 ,5	
Course content laboratory	 Introduction to con The basic image pr Discussion of selec Elaboration of mult Discussion on desig Creating multimed Finalisation of Worl Presentation of final 	nputer programs, ocessing, audio a ted topics to crea- imedia content, 4 gn of storyboardin ia presentations, 4 ks, 4h, Learning o al works, 4h, Learr	4h, Learning outcomes: nd video, 4h, Learning o te multimedia presentat h, Learning outcomes:3 g, 4h, Learning outcomes:1 utcomes:1,3,4,5 ning outcomes:1,2	1 outcomes:3,4 ions, 4h, Learning outcomes:3, ,4,5 es:3,4,5 L,3,4,5	4,5

	9. 10. 11. 12.	
	13. 14. 15.	
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Whiteboard with markers Video equipment	
Exam literature	Vaughan, T. Multimedia: Making It Work, Second Edition	
Students obligations	The design presentation , presentation	
Knowledge evaluation during semester	seminar	
Knowledge evaluation after semester	presentation	
Student activities:	Aktivnost (Seminar Work) (Classes attendance) (Activity in class)	ECTS 3 1 2
Remark	This course can be used for final thesis theme	
Prerequisites:	No prerequisites.	
Proposal made by	Ivan Rajković, 21.3.2015	

Code WEB/ISVU	23144/130911	ECTS	6.0	Academic year	2018/2019
Name	Multimedia Systems				
Status	2nd semester - Polyte Redovni specijalisti in	echnic graduate pr Iformatike) - electi	rofessional study program ive course2nd semester	mme specialization in Informati - Polytechnic graduate professi ijalicti informatika) - elective co	cs Engineering (NOVI onal study programme
Teaching mode	Lectures + exercises	(auditory + labora	atory + seminar + metod	dology + construction)	30+30 (15+15+0+0) 120
Teachers	Lectures:1. Prof.dr.sc	. Slavica Ćosović E	Baiić		120
	Lectures:2. Sanja Kra Lectures:3. Milan Baji Auditory exercises: M Auditory exercises: S Auditory exercises: S	ljević , dipl.ing., v. ić lilan Bajić of.dr.sc. Slavica Ć ania Kraljević , din	osović Bajić		
	Laboratory exercises:	: Milan Bajić			
Course objectives	Acquire basic knowler	dge in the area of	multimedia systems.		
Learning outcomes:	1.ability to integrate t 2.ability to formulate/ 3.ability to classify de 4.ability to choose an 5.ability to choose a o 6.ability to choose a o 7.ability to evaluate t 8.Ability to critically a 9.Ability to review po	the interface funct /design both analo evices according to option of ready v ne's own critical vi computer program the advantages of assess the quality ssibilities for integ	tionalities of various type og and digital electro-acc o the quality of recording ideo signal processing pi ew of the Internet TV poin for TV image processing digital TV. Level:7 of picture and sound.) I grating multimedia system	es of TV systems. Level:6,7 pustic systems . Level:6,7 g and reproduction. Level:6,7 rograms. Level:7 ssibilities. Level:7 g. Level:7 Level:7 ms Level:6,7	
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answe Seminar, students pre To achieve fundamen systems. Distortions of Computer programme programmes.Satelite	ers esentation and dis ital knowledge and of the audio and v es for editing of th systems.	ccussion d competences in the are ideo signals. Analog and he audio and video mater	ea of Analog and digital electro digital processing of the audio rials. Communication channels	acustical technique and and video signals. for exchange of the
Methods of carrying out auditory exercises	Group problem solvin Data mining and know Computer simulations	ig wledge discovery o s	on the Web		
Methods of carrying out laboratory exercises	Laboratory exercises Laboratory exercises, Discussion, brainstorr Workshop	on laboratory equ , computer simulat ming	ipment tions		
Course content lectures	1.Analog and digital c 2.Formats of digital m 3.Computer programs 4.Professional studio 5.Computer generate 6.Digital newsroom. N 7.Live streaming. The 8.User Interfaces., 2h 9.No classes. 10.No classes. 11.No classes. 13.No classes. 13.No classes. 14.No classes. 15.No classes.	Jevices and syster nultimedia content s for editing audio equipment for rec ed content, graphic Vetwork infrastruc a digital archive., 4 I, Learning outcom	ms., 4h, Learning outcom t., 4h, Learning outcome and video materials., 4h ording and playback of a cs and animation. User g ture in the media., 4h, La th, Learning outcomes:3, nes:1,2,3,4,5	nes:2,3,4 s:1,2,3,4,5 n, Learning outcomes:1,2,3,4,5 audio and video signals., 4h, Le enerated content., 4h, Learnin earning outcomes:1,2,3,4,5,7 ,4,7	arning outcomes:3 3 outcomes:3
Course content auditory	 No classes. Display different tyl Display different tyl Sound recording., Measuring the particle of t	pes of audio signa /pes of audio signa , 2h, Learning outo rameters of the vi .me (CV)., 2h, Lea tent from archival .me., 2h, Learning lia elements, prese	ls., 1h, Learning outcom als., 2h, Learning outcom comes:9 deo signal., 2h, Learning rning outcomes:9 material., 2h, Learning o outcomes:9 entation and use., 2h, Le	es:9 ies:9 i outcomes:9 putcomes:9 arning outcomes:9	



Course content	1.No classes.			
laboratory	2.No classes.			
	3.No classes.voa:			
	4.No classes.			
	5.No classes.			
	6.No classes.			
	7.No classes.			
	8. Display different types of audio signals., 1h, Learning outcomes:9			
	9.Display different types of audio signals., 2h, Learning outcomes:9			
	10. Sound recording., 2h, Learning outcomes:9			
	11. Measuring the parameters of the video signal., 2h, Learning outcomes:9			
	12. Record video resume (CV)., 2h, Learning outcomes:9			
	13. Editing video content from archival material., 2h, Learning outcomes:9			
	14. Editing video resume., 2h, Learning outcomes:1,5			
	15. HTML 5 multimedia elements, presentation and use., 2h, Learning outcomes:1,5			
Required materials	Basic: classroom, blackboard, chalk			
	Special purpose laboratory			
	General purpose computer laboratory			
	Whiteboard with markers			
	Overhead projector			
	Video equipment			
Exam literature	R. Steinmetz, K. Nahrstedt - Multimedia Systems (University of Illinois, Department of computer science)			
	R. Steinmetz, K. Nahrstedt - Multimedia Applications (University of Illinois, Department of computer science)			
	Bilješke nastavnika 1.Grgic, S., Grgic, M., Digitalna televizija - Upute za laboratorijske vjezbe, FER, Zagreb, 2002, 56			
	pages (in Croatian)(approved by the Senate of the University of Zagreb, 14 May 2002, 02-659/3-2002) 2.Grgic, S., Kos,			
	T., Grgic, M., Televizija - Upute za laboratorijske vjezbe, FER, Zagreb, 2002, 82 pages (in Croatian)(approved by the			
	Senate of the University of Zagreb, 14 May 2002, 02-660/3-2002)			
	R. Steinmetz, K. Nahrstedt - Multimedia Systems (University of Illinois, Department of computer science); R. Steinmetz,			
	K. Nahrstedt - Multimedia Applications (University of Illinois, Department of computer science)			
Students obligations	defining seminar paper			
Knowledge	Redovitost pohaa#10#10#30\$Seminarski rad#1#90#70\$			
evaluation during				
semester				
Knowledge	Seminar paper #1#100#70\$			
evaluation after				
semester				
Student activities:	Aktivnost ECTS			
	(Written exam) 6			
Remark	This course can be used for final thesis theme			
Prerequisites:	No prerequisites.			
Proposal made by	Sanja Duk ,dipl.ing., 1.6.2017.			

Code WEB/ISVU	23191/130966	ECTS	6.0	Academic year	2018/2019
Name	New technologies and t	trends in the e-Health			
Status	3rd semester - Polytech Redovni specijalisti info specialization in Inform	nnic graduate profession prmatike) - elective cour atics Engineering (NOV	nal study programme sp rse3rd semester - Polyte I Izvanredni specijalisti i	ecialization in Informatics chnic graduate professior nformatike) - elective cou	Engineering (NOVI al study programme rse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory +	seminar + metodology	+ construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. Prof. dr. sc. Auditory exercises:dr.s Auditory exercises:Prof Seminar exercises:dr.so	Miroslav Slamić profes c. Miroslav Mađarić dipl . dr. sc. Miroslav Slamić c. Miroslav Mađarić dipl	or visoke škole .inž.el. profesor visoke škole .inž.el.		
Course objectives	The aim of the course is actively tackles and kee	s to provide students to ep track of all the new t	be up-to-date with adv rends related to technol	ances in the field of e-hea logy and processes.	lth. The course is
Learning outcomes:	1.critically assess the a 2.critically assess the u 3.to manage the use of 4.review the use of soc 5.choose the basic opti 6.propose tools for Big 7.prepare a video confe	pplication of mobile con ise of new wearable mo BYOD devices in the he ial networks in the heal on to use the system in Data Analytics. Level:6 erence systems for com	mputing and communica bile devices and sensors ealthcare system Level th system. Level:6,7 the cloud for the purpo ,7 munication in telemedic	ition devices in healthcare 5 for patient monitoring L :6,7 ses of Health Information ine. Level:6,7	: Level:7 .evel:7 Systems. Level:7
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answers Seminar, students pres	entation and discussion	1		
Methods of carrying out auditory exercises	Group problem solving Traditional literature ar Data mining and knowl Discussion, brainstormi	nalysis edge discovery on the N ing	Neb		
Methods of carrying out seminars	Group problem solving Traditional literature ar Data mining and knowl Essay writing Discussion, brainstormi	nalysis edge discovery on the N ing	Neb		
Course content lectures	 Selected topics in the 2.Selected topics from Monitoring technolog The role, importance Selected topics in the 6.Application of the sys 7.Big data analytics of outcomes:6 The use of video conf institutions., 4h, Learni 9.No lecture. 10.No lecture. 12.No lecture. 13.No lecture. 14.No lecture. 15.No lecture. 15.No lecture. 	e application of mobile t application of wearable y trends and use of BYC and risks of social netw e application of robotics item in the Cloud (Cloud unstructured and semi- ferencing and unified ap ng outcomes:5,6	echnology in health care mobile devices and sen DD devices in the health- iorking applications in he in medicine., 4h, Learni J) in the health care env structured information in oproach in telemedicine	e., 4h, Learning outcomes sors in health care., 4h, L care environment., 2h, Le ealthcare., 4h, Learning or ng outcomes:5 ironment., 4h, Learning or n electronic medical recor and communication betwo	:1 earning outcomes:2 arning outcomes:3 utcomes:4 utcomes:5,6 ds., 4h, Learning een health care
Course content auditory	 1.A case study using a 2.A case study of the u outcomes:2 3.Case study analysis a Learning outcomes:3 4.A case study of the a 4h, Learning outcomes 5.No lecture. 6.No lecture. 7.No lecture. 8.No lecture. 9.No lecture. 10.No lecture. 11.No lecture. 12.No lecture. 13.No lecture. 14.No lecture. 15.No lecture. 15.No lecture. 	, 4h, Learning outcome se of wearable mobile o and application of comp pplication of social netv :3,4	s:1 levices and sensors to n uter BYOD and commun vorks in spreading healtl	nonitor the state of chroni ication devices in health o n culture and the broader	c patients., 4h, Learning :are systems., 3h, context of health care.,



Zagreb University of Applied Sciences

Course content	1.No work on seminar.
seminars	2.No work on seminar.
	3.No work on seminar.
	4.No work on seminar.
	5.The seminar - application of robotics in medicine., 4h, Learning outcomes:3,4
	6.The seminar - Application of Cloud systems in medicine., 4h, Learning outcomes:5
	7.The seminar - application of Big Data analytics to health information space., 4h, Learning outcomes:6
	8.The seminar - application of video conferencing systems for communication in telemedicine., 3h, Learning
	outcomes:7
	9.No lecture.
	10.No lecture.
	11.No lecture.
	12.No lecture.
	13.No lecture.
	14.No lecture.
	15.No lecture.
Required materials	Basic: classroom, blackboard, chalk
	General purpose computer laboratory
	Overhead projector
	Video equipment
Exam literature	Nastavni materijali - prezentacije na moj.tvz.hr
Students obligations	Attendance of 70% of the lectures and 80% exercises.
Knowledge	No mid-term exam.
evaluation during	
semester	
Knowledge	Evaluation of the written part of the seminar paper (70% points).
evaluation after	Presentation of seminar paper (30% points).
semester	
Student activities:	Aktivnost ECTS
	(Written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.

Code WEB/ISVU	23155/130923	ECTS	6.0	Academic year	2018/2019
Name	Office Business and Co	llaborative technology			
Status	2nd semester - Polytec Redovni specijalisti info specialization in Inform	hnic graduate professior ormatike) - elective cours natics Engineering (NOVI	nal study programme spe se2nd semester - Polytec Izvanredni specijalisti ini	cialization in Informatics hnic graduate profession formatike) - elective cou	s Engineering (NOVI nal study programme rse
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology +	construction)	30+30 (15+15+0+0) 120
Teachers	Lectures:1. dr.sc. Mlade	en Mauher prof.v.šk.			
Course objectives	Qualify students to und	lerstand, design and imp	element collaboration sys	stem	
Learning outcomes:	1.to understand an pre 2.to create and explain 3.to create and explain 4.to create single-level 5.to envision the techn	sent the meaning and co government service col government collaborati and multilevel governm ology development and	bllaboration models in go laboration models. Level on model in the given go ent collaboration models implementation directior	vernment services. Leve :6,7 vernment domains. Leve : Level:6,7 ns of a new collaboration	el:6,7 el:6,7 n systems. Level:6,7
Involvement of learning outcomes of the course in study programme:	1.3.OPĆI Koristiti tehnil 1.5.OPĆI Identificirati, r 2.1.OSOBNE Znanje o s 2.2.OSOBNE Odgovorni 2.3.OSOBNE Etički i mo 2.4.OSOBNE Kritička ev problema.: 5h in 180h 2.7.OSOBNE Predstavlj 2.8.OSOBNE Profesiona 2.11.OSOBNE Otvoreno 6.1.E-uprava Razumijev uprave: 30h in 180h 6.2.E-uprava Razumijev 6.3.E-uprava Primijenit	ke, vještine i suvremene modelirati i rješavati inže suvremenim pitanjima st ost, dosljednost, točnost oralni pristup radu.: 5h in valuacija argumenata, pr anje informacija, ideja, p cijske vještine u okviru s alna i ljudska osobnost.: ost za nova znanja, iskus vati mjesto i ulogu IT u k vati objedinjeno pružanje iti kolaborativne tehnolo i standarde interoperabi	alate neophodne za inže enjerske probleme.: 5h in ruke i društva.: 5h in 180 , ažurnost.: 5h in 180h 180h etpostavki i podataka u o roblema i rješenja stručr truke te s klijentima, na 5h in 180h tva i kulturne okolnosti.: ontekstu organizacije, m e usluga dionicima u sust gije uredskog poslovanja nosti u sustavima uprave	njersku praksu.: 5h in 18 180h)h cilju stvaranja mišljenja i noj i općoj publici.: 5h in hrvatskom i engleskom j 5h in 180h enedžmenta i procesa u tavu javne uprave: 30h in u podsustavima javne u e: 30h in 180h	30h pridonošenja rješenju 180h jeziku.: 5h in 180h okruženjima javne n 180h iprave: 40h in 180h
Methods of carrying out lectures	Ex cathedra teaching Demonstration Modelling Discussion Questions and answers	5			
Methods of carrying out auditory exercises	Group problem solving Discussion, brainstorm Mind mapping	ing			
Methods of carrying out laboratory exercises	Laboratory exercises, c Group problem solving Workshop	computer simulations			
Course content lectures	1.Introduction: Collabor 2.Collaborative service 3.Collaborative governi 4.Collaborative governi 5.Collaborative governi 6.Collaborative governi 7.Implementation strat 8.Future of collaboratio 9.n/a 10.n/a 11.n/a 12.n/a 13.n/a 14.n/a 15.n/a	ration, Collaboration driv s design and implement ment-to-government ser ment-to-employee servic ment-to-citizen services, ment-to-business service egies, 4h, Learning outc n technologies, 2h, Lear	rers, Collaboration impler ation, 4h, Learning outco vices, 4h, Learning outco es, 4h, Learning outcome 4h, Learning outcomes: es, 4h, Learning outcomes omes:3,4,5 ning outcomes:5	mentation models, 4h, Le imes:2,3 imes:3,4 ies:3,4 3,4 is:3,4	earning outcomes:1
Course content auditory	1.n/a 2.n/a 3.Collaborative system 4.n/a 5.Collaborative system 6.n/a 7.Existing and expecte 8.The synthesis of colla 9.n/a, 2h 10.n/a 11.n/a 12.n/a 13.n/a 14.n/a	s case study, 4h, Learnir s case study, 4h, Learnir d collaboration technolo aborative technologies a	ng outcomes:1,2 ng outcomes:2,3 gies illustrations, 4h, Lea nd collaborative systems	rning outcomes:3,4 ;, 3h, Learning outcomes	:1,2,3,4,5

	15.n/a
Course content	1.n/a
laboratory	2.n/a
2	3.n/a
	4.Conceptual modeling of collaborative systems, 4h, Learning outcomes:1,2,3,4
	5.n/a
	6.Conceptual modeling of collaborative systems, 4h, Learning outcomes:1,2,3,4
	7.Conceptual modeling of collaborative systems, 4h, Learning outcomes:1,2,3,4
	8.Presentation and discussion of conceptual models, 3h, Learning outcomes:1,2,3,4
	9.n/a
	10.n/a
	11.n/a
	12.n/a
	13.n/a
	14.1/a
	15.17a
Required materials	Basic: classroom, blackboard, chalk
	General purpose computer laboratory
	Overhead projector
Exam literature	Kolaborativne tehnologije uredskog poslovanja - podloge za predavanja
Students obligations	course attendance 70%
	Auditory exercises 70%
	laboratory exercises 80%
Knowledge	n/a
evaluation during	
semester	
Knowledge	written exam 80% points
evaluation after	oral exam 20% points
semester	
Student activities:	Aktivnost ECTS
	(Written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	Prof. Mladen Mauher, Ph.D.

Code WEB/ISVU	23638/158110	ECTS	5.0	Academic year	2018/2019
Name	Project Management				
Status	1st semester - Polytech Redovni specijalisti info specialization in Inform Polytechnic graduate pr informatike (smjer raars specialization in Inform	nic graduate profession ormatike) - elective cours atics Engineering (NOVI rofessional study progra stvo)) - elective coursels atics Engineering (NOVI	al study programme spe- se1st semester - Polytecl Izvanredni specijalisti in mme specialization in In st semester - Polytechnio Izvanredni specijalisti in	cialization in Informatics hnic graduate profession formatike) - elective cou formatics Engineering (N c graduate professional s formatike (smjer raarstv	Engineering (NOVI al study programme rse1st semester - IOVI Redovni specijalisti study programme o)) - elective course
Teaching mode	Lectures + exercises (a work at home	uditory + laboratory + s	eminar + metodology +	construction)	30+30 (15+0+15+0) 90
Teachers	Lectures:1. Vesna Alić-ł Auditory exercises: Ves Auditory exercises: Hrv Seminar exercises: Vida	Kostešić dipl.ing.stroj. :na Alić-Kostešić dipl.ing. oje Rakić , dipl.ing.stroj., a Senci	stroj. . pred.		
Course objectives	To introduce students to and various services	o basic elements of man	agement in the project l	based activities such as	ousiness, manufacturing
Learning outcomes:	 1.ability to formulate /create the project goal in accordance with the strategy of an organization. Level:6,7 2.ability to formulate/to design a project according to a strategy of an organisation. Level: 3.ability to compose a proposal of a project and a project plan in a seminar paper. Level:6,7 4.ability to control processes in a project, its scope, time, costs, quality, people, communication, risks and project procurement . Level:6,7 5.ability to estimate the project risks on a project proposal. Level:6,7 6.ability to analyse the project phases and activities the results of which contribute to the project goal. Level:6 7.ability to standardise the time and resources necessary for carrying out activities by using techniques of network planning. Level:6,7 8.ability to analyse a project proposal through a logical matrix. Level:6 9.ability to develop willingness for teamwork and cooperation. Level:6,7 11.ability to combine methods and procedures for making decisions. Level:6,7 12.ability to state the influence of a project product on the environment. Level:7 				
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se strar 2.1.OSOBNE Znanje o s 2.2.OSOBNE Odgovorno 2.3.OSOBNE Etički i mo 2.4.OSOBNE Kritička ev problema.: 20h in 150h 2.6.OSOBNE Iskustva ra 2.7.OSOBNE Predstavlja 2.8.OSOBNE Komunikac 2.12.OSOBNE Fleksibiln načela, pravnih normi i 3.5.SPECINF Realizirati 150h 5.3.E-poslovanje Primije 10h in 150h 6.4.E-uprava uprave: 100	him jezikom u literaturi i suvremenim pitanjima str ost, dosljednost, točnost, ralni pristup radu.: 10h i valuacija argumenata, pro ada u projektnim timovin anje informacija, ideja, p cijske vještine u okviru st lost i prilagodljivost u izn pravila struke.: 10h in 1 kritičko razmišljanje te k eniti formalne metode na i formalne metode na an b in 150b	svakodnevnoj stručnoj k ruke i društva.: 10h in 15 ažurnost.: 10h in 150h n 150h etpostavki i podataka u o na i industriji.: 20h in 150 roblema i rješenja stručr truke te s klijentima, na alaženju tehničkih rješel 50h ogičko stvaranje mišljenj a analizu zahtjeva kod projel	omunikaciji. : 10h in 150 50h cilju stvaranja mišljenja i 0h noj i općoj publici.: 20h ir hrvatskom i engleskom j nja uz neupitno poštivan a u poslovnim i inženjers rojektiranja poslovnih info	n 150h pridonošenja rješenju 1 150h jeziku.: 10h in 150h je temeljnih etičkih skim procesima: 10h in ormacijskih sustava : rmacijskih sustava i
Methods of carrying out lectures	podsustava uprave: 107 Ex cathedra teaching Case studies Demonstration Discussion The whole material is p topic. It can be presente	n In 150n resented in lectures illus ed on OHP or in Power Po	trated by drawings, tabl pint.	es and graphs to facilita	te understanding of the
Methods of carrying out auditory exercises	Group problem solving Discussion, brainstormi Interactive problem solv Workshop Problems of each partic topic, students are give technique and with assi	ng ving cular topic analysed are s en a related one to solve istance of their teacher,	solved on the blackboard it on their own but with students create a smalle	d. After explaining and so assistance of the teache er project.	olving a problem of a r. Using the BK
Methods of carrying out seminars	Group problem solving Discussion, brainstormi Workshop posters, markers, adhee	ng sive tape			
Course content lectures	1. The nature and conte 2. Strategy and project I 3. Project management 4. Appropriate project of 5. The initial phase of th 6. Initiating and Planning 7. Preparation of project 8. Planning techniques, 9. Implementation phase 10. Concluding phase ar 11. Colloquium, 2h, Lean 12. no classes	ext of project manageme management, 4h, Learni and stakeholders, 2h, Le rganizational structure, 2 de project, 2h, Learning o g Project, 3h, Learning o t proposal, 3h, Learning o 4h, Learning outcomes:6 e of the project, 4h, Lear nd evaluation of the proj rning outcomes:1,2,3,4,5	nt processes and knowle ng outcomes:1 earning outcomes:2 2h, Learning outcomes:2 outcomes:3 utcomes:4,5,7,10 5,7,8 ning outcomes:7,8,9,10 ect, 2h, Learning outcom 5,6,8,9,10,11,12	edge areas, 2h, Learning	outcomes:1

1	13.no classes
	14.no classes
Course content	1.no classes
auditory	2.no classes
	3.no classes
	4.no classes
	7.no classes
	8.exercise TMP, CPM, 4h, Learning outcomes:7
	9.exercise TMP, PERTH,PD, 4h, Learning outcomes:7
	10. Colloquum, 2h, Learning outcomes: /
	13.no classes
	14.methods of decision-making, 2h, Learning outcomes:5,6,7,9
	15.methods of project cycle - logical framework, 3h, Learning outcomes:5,6,7,9,10,11,12
Course content	1 no classes
seminars	
	3.no classes
	4. no classes
	5. no classes
	 methods for problem solving, Brainstorming, making the problem tree and objective tree, elaboration of project ideas, 4b, Loarning outcomes;9,10,11,12
	Tworking on the papers. The Learning outcomes:9.10.11.12
	8.working on the papers, 1h, Learning outcomes:9/12
	9.working on the papers, 1h, Learning outcomes:9,10,11,12
	10.working on the papers, 1h, Learning outcomes:9,10,11,12
	11. working on the papers, 1h, Learning outcomes:9,10,11,12
	12. Working on the papers, 1n, Learning outcomes:9,10,11,12
	14. working on the papers, 1h, Learning outcomes:9,10,11,12
	15.papers due, 3h, Learning outcomes:9,11,12
Required materials	Basic: classroom, blackboard, chalk
	Whiteboard with markers
	Overhead projector
	Operating supplies
Fuere literature	posters, markers, admesive tape
Exam interature	rmi- volic króż znanje o upravijanu projektima (volic króż PMBOK,4. izdanje), mate d.o.o., zagreb z011. nikolić Čala alić Kostešić: Metode planiranie u projektima (volic króż PMBOK,4. izdanje), mate d.o.o., zagreb z011.
	Čala, I; i ostali autori: Inženjerski priručnik, dio 4, poglavlja 6. Planiranje i praćenje proizvodnje, Školska knjiga, Zagreb,
	2002.
	Vila, A; Štajdl, B; Čala, I; Karabajić, I: Metode planiranja proizvodnje, Informator, Zagreb, 1982.
	Vila, A; Leicher, Z: Planiranje proizvodnje i kontrola rokova, Informator, 3. izdanje, Zagreb 1983. Schroder, Poder C: Ularviljanje proizvodnje i kontrola zagreb. 1000.
	Schloeder, Roger, G. opravijalje prozvodnjom, Mate, Zagreb, 1999. Bliješke koje nastavnik privrema za nastavu
	Cala, i Stupnievito planitanie, izlaganie na savietovanju Upravljanje proizvodnjom, CDI Zagreb, Briuni, 1989.
	Dilworth, J.B.: Operations Management, Mc Grow Hill, inc., New York, 1995.
	Schonberger,R.J., Knod, M.E.: Operations Management, Irwin, 1994.
	Majstorović, V.: Upravljanje Proizvodnjom i projektima (Production and Project Management), Nakladnici Sveučilište u
Students obligations	Mostaru i Daaami international vienna, Mostar-Wien 2001. Idelivery of a seminar paper
Knowledge	L colloquim - tasks numerical type may 50 points - 30 min
evaluation during	2. colloquim - objective type tasks maximum 50 points - 30 min
semester	3.seminar work max 50 points - 30 min
	max total 150 points - 90 min
	Points rating
	J0-105 sufficient
	121-135 very good
	136-150 excellent
Knowledge	written exam, seminar paper
evaluation after	Points rating
semester	0-89 inadequate
	90-105 Sufficient
	121-135 very good
	136-150 excellent
Student activities:	Aktivnost ECTS
	(Constantly tested knowledge) 1
	(Seminar Work) 2



Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
ISVU equivalents:	130900;
Proposal made by	Vesna Alic Kostesic

Code WEB/ISVU	23141/130907	ECTS	5.0	Academic year	2018/2019
Name	Quality Management				
Status	1st semester - Polytech Redovni specijalisti info specialization in Inform Polytechnic graduate p informatike (smjer raar specialization in Inform	nnic graduate profession prmatike) - elective cours natics Engineering (NOVI rofessional study progra stvo)) - elective course1 natics Engineering (NOVI	al study programme spe se1st semester - Polytec Izvanredni specijalisti in mme specialization in Ir st semester - Polytechni Izvanredni specijalisti in	ecialization in Informatics chnic graduate profession nformatike) - elective cou nformatics Engineering (I ic graduate professional nformatike (smjer raarstw	Engineering (NOVI nal study programme Irse1st semester - NOVI Redovni specijalisti study programme ro)) - elective course
Teaching mode	Lectures + exercises (a work at home	auditory + laboratory + s	seminar + metodology -	+ construction)	30+30 (15+0+15+0) 90
Teachers	Lectures:dr.sc. Ljubivoj Lectures:mr. Alenka Po Auditory exercises:dr.s Auditory exercises: Sar Auditory exercises:mr. Seminar exercises:dr.s Seminar exercises: Sar Seminar exercises:mr.	Cvitaš dipl.ing. Ijičak dipl.oec., viši preda c. Ljubivoj Cvitaš dipl.ing nja Đonlić dipl. ing. stroj. Alenka Poljičak dipl.oec. c. Ljubivoj Cvitaš dipl.ing nja Đonlić dipl. ing. stroj. Alenka Poljičak dipl.oec.,	avač l. (mag. ing. mech.) , viši predavač (mag. ing. mech.) , viši predavač		
Course objectives	To transfer to students	the basic knowledge rel	ated to quality manager	ment	
Learning outcomes:	 ability to estimate to abiding. Level:7 ability to choose an a 3.ability to measure thi 4.ability to write a report Level:6,7 ability to buid a system 6.ability to propose the increase efficiency and 7.ability to manage the 8.ability to devise a do 	what point the regulatio pppropriate quality tool for e level of stability and va- ort on preventions or corr em of quality assurance of activities which will intr- reduce costs. Level:6,7 e quality system in a chos- cumented procedure to o	ns and norms concernin or solving incompatibiliti iriability of a process. Le rections that have been on a model of a work org oduce advancements in sen model of a work org describe a process in the	ng the quality of products ies in processes, product evel:7 made towards the mana ganisation or institution. the existing processes i ganisation or institution. I e organisation model. Le	or services are law- s or services. Level:7 gement or customers. Level:6,7 n an organisation, to Level:6,7 vel:6,7
Involvement of learning outcomes of the course in study programme:	1.1.OPĆI Služiti se stran 1.2.OPĆI Primijeniti zna 1.3.OPĆI Koristiti tehnil 1.4.OPĆI Povezati inžer usluge: 70h in 150h 1.5.OPĆI Identificirati, r 1.6.OPĆI Osmišljavati i 2.1.OSOBNE Znanje o s 2.2.OSOBNE Odgovorn 2.3.OSOBNE Etički i mc 2.4.OSOBNE Etički i mc 2.4.OSOBNE Kritička ev problema: 50h in 150h 2.5.OSOBNE Spremnos 2.6.OSOBNE Spremnos 2.6.OSOBNE Spredstavlj 2.8.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.10.OSOBNE Profesiona 2.12.OSOBNE Fleksibilr načela, pravnih normi i 3.1.SPECINF Razumijev 3.3.SPECINF Razumijev 3.4.SPECINF Realizirati 150h	nim jezikom u literaturi i anje matematike i fizike r ke, vještine i suvremene njerske aktivnosti konstru modelirati i rješavati inže provoditi pokuse, analizi suvremenim pitanjima sti ost, dosljednost, točnost, oralni pristup radu.: 40h i valuacija argumenata, pr t za rad na terenu i u ne: ada u projektnim timovim anje informacija, ideja, p cijske vještine u okviru s alna i ljudska osobnost.: 2 jivost novim tehnologijar post za nova znanja, iskus nost i prilagodljivost u izr pravila struke.: 30h in 1 ati mjesto i ulogu IT u ko rati domenu inženjerstva elevantne specifične diso 20h in 150h kritičko razmišljanje te lo	svakodnevnoj stručnoj k na inženjerske probleme alate neophodne za inže ujranja, proizvodnje i ma njerske probleme.: 50h rati i interpretirati dobiv ruke i društva.: 50h in 1 ažurnost.: 60h in 150h n 150h etpostavki i podataka u standardnim uvjetima.: na i industriji.: 50h in 15 roblema i rješenja struč truke te s klijentima, na 20h in 150h ma i tehnikama kao dio j tva i kulturne okolnosti jalaženju tehničkih rješe 50h intekstu organizacije, m i tehnologija sukladno s cipline kao što su inform ostalno usvajanje novih	komunikaciji. : 30h in 15 e.: 30h in 150h enjersku praksu.: 50h in arketinga s potrebama ko in 150h /ene podatke.: 50h in 15 50h cilju stvaranja mišljenja 10h in 150h 60h noj i općoj publici.: 40h i hrvatskom i engleskom procesa cjeloživotnog uč : 30h in 150h enja uz neupitno poštivar eenedžmenta i poslovnih stupnju obrazovanja: 40r iacijsko-računarsko inžer znanja: 30h in 150h nja u poslovnim i inženjer	Dh 150h prisnika proizvoda i Dh i pridonošenja rješenju n 150h jeziku.: 40h in 150h enja.: 30h in 150h nje temeljnih etičkih procesa.: 60h in 150h n 150h pierstvo i tehnologije u skim procesima: 30h in
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Seminar, students pres Other Drawings, tables and d used in companies.	entation and discussion iagrams are used to facil	itate understanding, as	well as photographs and	l prepared materials
Methods of carrying out auditory exercises	Group problem solving Discussion, brainstorm Workshop Other problems are solved wi	ing th students			
Methods of carrying out seminars	Data mining and knowl Discussion, brainstorm Workshop Other Student chooses an ex	edge discovery on the W ing ample to analyse, work c	eb on it and present for the	group.	

Course content	1. Introduction to the course, assessment of general concepts and definitions of guality, 4b. Learning
lectures	automaci 1 2 34 5 7 8
lectures	Success 1,2,3,4,3,7,6
	2.39sterns standards, introduction to 150 9001 Requirements for Management System, 41, Learning
	Outcomes: 1, 2, 3, 4, 3, 0, 7, 0
	3. Collecting and displaying data, FMEA analysis, 3n, Learning outcomes: 1,2,3,4,5,6,7,8
	4.Process control and statistics, SII, Learning outcomes: 1,2,3,4,3,0,7,6
	3. Repetition of topics 51-54, In, Learning outcomes: 1,2,3,4,5,6,7,8
	0.Quality control of the process, SwO1 analysis, 55, 41, Learning outcomes:1,2,3,4,5,6,7,8
	7. Metriod six sigma, 3n, Learning outcomes:1,2,3,4,5,0,7,8
	8. Product design, engineering, 31, Learning outcomes:1,2,3,4,5,6,7,8
	9. Method eight disciplines, 1n, Learning outcomes: 1,2,3,4,5,6,7,8
	10. Quality in procurement, sn, Learning outcomes:1,2,3,4,5,6,7,8
	11. Repetition of topics 55-59, 1n, Learning outcomes:1,2,3,4,5,6,7,8
	12.10 (5530) 5
Course content	L Process development and manufacturing EMEA analysis. 2h Learning outcomes: 1.2.2.4.5.6.7.9
auditory	2. Yes B man, the analysis of the production process: 2h Learning outcomes. 1,2,3,4,5,0,7,6
additory	2. Kay Parformance Indicators: 2.1 Loarning outcomes: 1, 2, 3, 4, 5, 6, 7, 8
	A quality plans 26 Learning outcomes: 12,34567.8
	5 8D method internal audits 2b Learning outcomes:12:345678
	5.05 methods, methods and adding 201, Edwining outcomes 1, 2, 3, 4, 5, 6, 7
	10. no lessons
	12.no lessons
	13.no lessons
	14.no lessons
	15.no lessons
Course content	1.Consultation and exercises, 1h, Learning outcomes:1,2,3,4,5,6,7,8
seminars	2.Consultation and exercises, 1h, Learning outcomes:1,2,3,4,5,6,7,8
	3.Consultation and exercises, 1h, Learning outcomes:1,2,3,4,5,6,7,8
	4.no lessons
	5.no lessons
	6.no lessons
	7.no lessons
	8.no lessons
	9.no lessons
	10.no lessons
	11.no lessons
	12.no lessons
	13.no lessons
	14.no lessons
	15.no lessons
Required materials	Basic: classroom, blackboard, chalk
	Whiteboard with markers
	Overnead projector
Frank literature	
Exam literature	Biljeske koje nastavnik priprema za nastavu
	j.w.jural, Quality Collitor Hallubook, McGlaw-Hill, New 100k, 1969.
	jurali, jusepii Moses, Frank M. Olyna, 1993, Frankanje Frankanje Analitek. MATE 0.0.0. Zagleb
	L.L.Grant, N.S.Leavenworth, Statistical Quality Control, McGraw-Till, New Tork, 1966.
	azihat Tonči 2009. Upravljanje kvalitetom Znanstv, knjiga Zagreb
	Celić Ivica 2008. Kvaliteta i noslovna izvrsnost MEP Consult. Zarreh
	Staidohar-Paden Olga, 2009. Plivati s ISO-mi ostati živ. Kigen, Zagreb
Students obligations	delivered seminars and evaluated with at least 8 points
Knowledge	Redovitost nohaa 3#0.400\$Kolokviii. teoriiska nitania#2#35#0\$Seminarski rad#1#15#8\$Domazada5#3#0\$
evaluation during	$\frac{1}{1}$
semester	
Knowledge	written and oral exam
evaluation after	
semester	
Student activities:	Aktivnost ECTS
	(Classes attendance) 1
	(Seminar Work) 1
	(Written exam) 3
Remark	This course can be used for final thesis theme
Prerequisites	No prerequisites
Proposal made by	dr sc. Liubiyoi Cyitaš dinl ing 1.6.2015
opesar made by	and galled appling interests

Code WEB/ISVU	23161/130930	ECTS	6.0	Academic year	2018/2019
Name	Security, interfaces and	standardization in heal	th IS		
Status	2nd semester - Polytech Redovni specijalisti info specialization in Informa	nnic graduate profession rmatike) - elective cours atics Engineering (NOVI	al study programme s e2nd semester - Polyt Izvanredni specijalisti i	pecialization in Informatics echnic graduate professio informatike) - elective cou	s Engineering (NOVI nal study programme rse
Teaching mode	Lectures + exercises (a work at home	uditory + laboratory + s	eminar + metodology	+ construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. Prof. dr. sc. Lectures:mr.sc. Marinko	Miroslav Slamić profeso Žagar viši predavač	r visoke škole		
Course objectives	To familiarize students specific standards in he data in healthcare IS.	with the problems of Info alth care and knowledge	ormation security and e of the most importan	application security policie t interfaces for the transm	es. Understanding the hission and storage of
Learning outcomes:	1.recommend standard 2.assess security threat 3.classified legislation i 4. to present the conce 5.critically assess imple 6.to select the appropri 7.to organize monitorin	s used in information system to and vulnerabilities. Le n the field of e-business. pt information security. Immented safety standard ate interface for data tra g any changes in standa	stems in health care. L vel:6,7 Level:6,7 Level:6,7 s. Level:7 ansfer and storage. Lev rrds, interfaces and sec	evel:7 vel:7 curity policy. Level:6,7	
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Discussion Questions and answers				
Methods of carrying out auditory exercises	Traditional literature an Data mining and knowle Discussion, brainstormi Mind mapping	alysis edge discovery on the W ng	leb		
Methods of carrying out seminars	Group problem solving Traditional literature an Data mining and knowle Essay writing Discussion, brainstormi Mind mapping	alysis edge discovery on the W ng	leb		
Course content lectures	 Basic concepts of info Legislation in Informa The principles of infor Standards and safety Sweb application secure Standardization in heteroge Interfaces in heteroge No lecture. 	rmation security, 4h, Le tion Security., 4h, Learn mation systems security policy. Malicious progra rity and security in the c althcare - IHE, ISO 27002 eneous healthcare IS ver eneous healthcare IS ver	arning outcomes:1 ing outcomes:2 /., 4h, Learning outcom ms and protection, 4h, loud., 2h, Learning out 2, 27799, 31000, MBDS ndors - HL7., 4h, Learni ndors - DICOM, 4h, Lea	nes:3 Learning outcomes:4 .comes:2,3,4 5 EHR-a , 4h, Learning out ng outcomes:6,7 rning outcomes:6,7	comes:5
Course content auditory	 Standards and safety Information Security I ISO 27001 AnexA, 2h, Security policy, 1h, Le Sorganization of inform Standards in health ca T.Interfaces in healthca Suja u zdravstvu - DIO No lecture. 	policy, 2h, Learning out Management System, 2h, Learning outcomes:1,2, earning outcomes:2,3 nation security, 1h, Lear are., 2h, Learning outcor re - HL7, 2h, Learning ou COM, 3h, Learning outcor	comes:1 a, Learning outcomes:2 3 ning outcomes:3,4 nes:5 utcomes:6,7 mes:6,7		
Course content seminars	1.No exercise 2.No exercise 3.No exercise 4.Seminar - Information 5.Seminar - Information	Security, 2h, Learning o Security, 2h, Learning o	outcomes:1,2,3,4 outcomes:1,2,3,4		

	6.Seminar - Standards in Healthcare, 3h, Learning outcomes:5 7.Seminar - interfaces in healthcare (HL7), 4h, Learning outcomes:5,6,7 8.Seminar - interfaces in healthcare (DICOM), 4h, Learning outcomes:5,6,7 9.No exercise 10.No exercise 11.No exercise 12.No exercise 13.No exercise 14.No exercise 15.No exercise
Required materials	Basic: classroom, blackboard, chalk General purpose computer laboratory Whiteboard with markers Overhead projector
Exam literature	 Prezentacije sa predavanja - moj.tvz.hr Norma ISO/IEC 17799, 27001 Donald E. Eastlake, Kitty Niles,; Secure XML: The New Syntax for Signatures and Encryption, Addison-Wesley Pub Co; 1st edition (July 19, 2002) Zakon o elektroničkom potpisu, elektroničkoj trgovini, zaštiti osobnih podataka, i sl. Dragan Pleskonjić, Nemanja Maček, Borislav Đorđević, Marko Carić; Sigurnost računarskih sistema i mreža, Mikro knjiga, Beograd 2007. Luke Harding; E.Snovden: Dosijei, EPH Media 2014. A.Conry-Murray, V.Weafer; Sigurni na internetu; MIŠ 2005. NORMA IHE, ISO 27002, 27799, 31000, MBDS EHR-a
Students obligations	Attendance of 70% of lectures and of 80% of exercises.
Knowledge	Colloquium. theoretical issues
evaluation during semester	control exam (30% points)
Knowledge	Written exam - seminar 50% points).
evaluation after semester	An oral exam - seminar (20% points)
Student activities:	AktivnostECTS(Classes attendance)1(Written exam)1(Oral exam)1(Constantly tested knowledge)1(Research)1(Seminar Work)1
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.
Proposal made by	PhD. Miroslav Slamić, college professor, April 2015.

Code WEB/ISVU	23190/130965	ECTS	6.0	Academic year	2018/2019	
Name	Service Management (ITSM) in healthcare		•		
Status	3rd semester - Polytec Redovni specijalisti inf specialization in Inform	hnic graduate profes ormatike) - elective o natics Engineering (N	ssional study prog course3rd semest IOVI Izvanredni sp	ramme specialization in Informat er - Polytechnic graduate profess pecijalisti informatike) - elective c	ics Engineering (NOVI ional study programme course	
Teaching mode	Lectures + exercises (work at home	auditory + laboratory	y + seminar + me	etodology + construction)	30+30 (0+30+0+0) 120	
Teachers	Lectures:1. Prof. dr. sc. Miroslav Slamić profesor visoke škole Lectures:2. dr.sc. Miroslav Mađarić dipl.inž.el. Laboratory exercises: Ivica Gospočić					
Course objectives	The aim of the course	is to teach students	the skills IS mana	gement in healthcare.		
Learning outcomes:	 1.to create a system of project management and change of information systems in health care. Level:6,7 2.to support system master data management in healthcare Level:7 3.recommend the use of ISO 20000. Level:7 4.critically assess management system with regard to the integrity and data protection. Level:7 5.design a management concepts according to ITIL framework. Level:6,7 6.to propose training concepts personnel working for the IS in Healthcare. Level:6,7 7.predict the risks in the management of IS in Healthcare. Level:6,7 					
out lectures	Case studies Discussion					
Methods of carrying out laboratory exercises	Laboratory exercises o Laboratory exercises, o Traditional literature a Data mining and know Mind mapping	n laboratory equipm computer simulation nalysis ledge discovery on t	ent s he Web			
Course content lectures	1.Introductory lecture 2.Master data manage 3.Change and project i outcomes:2,3 4.Standards for Manag outcomes:3,4 5.Legislation in the ma and privacy of patients 6.Infrastructure manag 7.The framework and r health care by SFIA (SI 8.Models of education outcomes:6,7 9.No lecture. 10.No lecture. 11.No lecture. 13.No lecture. 13.No lecture. 14.No lecture. 15.No lecture.	in management infor ment in health inform management information S magement of inform s., 4h, Learning outco gement IS using the l model for competence kills Framework for th and training speciali	rmation systems (mation systems in a bystems and use i ation systems wit omes:2,3,4 ITIL (IT Infrastruct ce management, I he Information Ag sts for management	(IS) in health care., 4h, Learning of 4h, Learning outcomes:1 accordance with the service (serv n health care environment - ISO2 h regard to the requirements of r ure Library) framework., 4h, Lear CT experts for the purposes of in e) concept., 4h, Learning outcom ent information systems in health	outcomes:1 ice) concept., 4h, Learning 0000., 4h, Learning naintaining the integrity ning outcomes:4,5,6 formation systems in les:6,7 in care., 2h, Learning	
Course content laboratory	1.Case Study - modelir 2.Case Study - maintai 3.Case Study - standar 4.Case Study - standar 5.Case Study - Implem outcomes:4,5 6.Case Study - Develop outcomes:4,5 7.Case Study - Develop outcomes:5,6 8.Case Study - Develop outcomes:4,5 7.Case Stud	ng of master data in n master data in the d ISO20000 manage entation of ITIL proce oment of measureme oment of measureme g requirements and i	the health system, a ment information ment information esses and mappir ent and metrics for ent and metrics for investment plann	h., 4h, Learning outcomes:1,2 th, Learning outcomes:1,2 systems of health., 4h, Learning systems of health., 4h, Learning ig of these processes on the prop or reporting to the ITIL framework or reporting to the ITIL framework or g for education of staff in IS., 21	outcomes:3 outcomes:3 per tools., 4h, Learning ., 4h, Learning ., 4h, Learning n, Learning outcomes:6,7	
Required materials	Basic: classroom, blacl Special purpose labora General purpose comp Whiteboard with mark Overhead projector	kboard, chalk itory uter laboratory ers				
Exam literature	1. Grupa autora: Nasta	ivni materijali - preze	entacije na moj.tv	z.hr		



Students obligations	Attendance of 70% of the lectures and 80% exercises	
Knowledge evaluation during	No mid-term exam.	
semester		
Knowledge evaluation after semester	Evaluation of the written part of the seminar paper (70% pc Presentation of seminar paper (30% points).	ints).
Student activities:	Aktivnost (Written exam)	ECTS 6
Remark	This course can be used for final thesis theme	
Prerequisites:	No prerequisites.	

Code WEB/ISVU	24034/186735	ECTS	5.0	Academic year	2018/2019	
Name	Software Engineering a	nd Information Systems		•		
Status	1st semester - Polytech	nic graduate professiona	al study programme spe	cialization in Informatics	Engineering (NOVI	
	Redovni specijalisti informatike) - elective course1st semester - Polytechnic graduate professional study programme					
	specialization in Informatics Engineering (NOVI Izvanredni specijalisti informatike) - elective course1st semester -					
	protytechnic graduate protessional study programme specialization in informatics Engineering (NOVI Redovni specijalisti informatike (smjer raarstvo)) - elective course1st semester - Polytechnic graduate professional study programme					
	specialization in Information	atics Engineering (NOVI	Izvanredni specijalisti in	formatike (smjer raarstv	o)) - elective course	
Teaching mode	Lectures + exercises (a	uditory + laboratory + s	eminar + metodology +	- construction)	30+30 (0+30+0+0)	
_	work at home				90	
Teachers	Lectures:dr.sc. Mladen	Mauher prof.v.šk.				
	Laboratory exercises:Di	r. sc. Aleksandar Stojano	vić pred.			
Course objectives	To transfer to students	the knowledge related to	o the processes of deve	lopment and implementa	ition of information	
	maintenance and prepa	ration for its implement.	ation	is and design of system	is, soltware design,	
Learning outcomes:	1.ability to identify the	basic terms, models and	forms of control related	d to software engineering	ı. Level:6	
j	2.ability to present the	flow of the process of so	ftware engineering. Lev	el:6,7	,	
	3.ability to formulate/de	esign the ways of identif	ication and specification	n of requests put for a sof	tware system. Level:6,7	
	4.ability to relate the ar	eas to the ways of desig	ining software architect	ure. Level:6,7		
	6 ability to estimate the	e life cycle of a program	ion and integration. Lev	7		
	7.ability to propose star	ndards to be used in the	development of networ	, ked business systems. Le	evel:6,7	
				,		
Methods of carrying	Ex cathedra teaching					
out lectures	Case studies					
	Demonstration					
	Discussion					
	Questions and answers					
Methods of carrying	Laboratory exercises or	n laboratory equipment				
out laboratory	Group problem solving					
exercises	Essay writing Discussion brainstormi	na				
Course content	1.Basic terms related to	software engineering (s	software engineering m	odels, software engineeri	ng management). , 2h,	
lectures	Learning outcomes:1					
	2.Basic terms related to	software engineering (s	software engineering m	odels, software engineeri	ng management). , 2h,	
	Learning outcomes: 1 3 Requests and specific	ations (system models a	and modelling using pro	ntotypes formal specifica	ton) 2h Learning	
	outcomes:2		and modeling, doing pre	totypes, formal specifica	confi,, 2n, Ecunning	
	4.Requests and specific	ations (system models a	and modelling, using pro	ototypes, formal specifica	ton)., 2h, Learning	
	outcomes:2		C 11 C 11 C 1			
	5.System design (system modules, interface desi	m architecture, architect	ture of distributed syste	ms, object oriented appr	oach, design of program	
	6.Verification and valida	ation (debugging, metho	ds used for verification	and validation, impleme	ntation in various	
	phases of software dev	elopment). , 2h, Learning	g outcomes:4			
	7.Maintenance and evo	lution (strategy, types, d	lynamics and maintena	nce costs; control of conf	igurations and system	
	changes; inherited soft	ware, software reengine	ering and architectural t	transformation), 2h, Lear	ning outcomes:4	
	ontology, tools used in	data integration). 2h. Le	arning outcomes:5	ionnation types, data int	egration supported by	
	9.Documentation (type	s, needs, standards, dok	umentation manageme	n). , 2h, Learning outcom	es:6	
	10.Preparation and carr	ying out education relat	ed to system usage (us	er domain, technical dom	iain), 2h, Learning	
	outcomes:6	on to a now system (nro	naration implementation	n ratiring the old system	a) 2h Loorning	
	outcomes:6	on to a new system (pre		in, retiring the old system	i). , 211, Learning	
	12.System and system	modelling (system, type	s, models, system engir	neering, ontology). , 2h, L	earning outcomes:6	
	13.Unified process and	language used for syste	m modelling, UML diagr	ams, stati modelling, dyr	namic modelling,	
	modelling of business s	trategies, SOA modelling	g., 2h, Learning outcome	es:7		
	15.Generic technologie	s of business manageme	ent. 2h. Learning outcomes.	nes:7		
		- - -	, , j			
Course content	1.Practical work 1, 2h, l	_earning outcomes:1				
laboratory	2.Practical work 2, 2h, I	earning outcomes:1				
	3.Practical work 3, 2h, 1 4 Practical work 4, 2h, 1	_earning outcomes:1				
	5. Practical work 5, 2h, I	earning outcomes:2				
	6.Practical work 6, 2h, I	_earning outcomes:2				
	7.Practical work 7, 2h, l	_earning outcomes:3,4				
	8.Practical work 8, 2h, L	_earning outcomes:3,4				
	9.Practical work 9, 2h, L	Learning OUTCOMES:3				
	11.Practical work 11. 2	n, Learning outcomes:3				
	12.Practical work 12, 2	n, Learning outcomes:3				
	13.Practical work 13 - d	esign and production of	comprehensive task, 2h	n, Learning outcomes:1,2	,3	
	14.Practical work 14 - d	esign and production of	comprehensive task, 21	n, Learning outcomes:1,2	,3 2	
	IJ.FIACULAI WULK IJ - 0	cargin and production of	comprehensive Lask, ZI	, Learning outcomes:1,2	د,	



Required materials	Basic: classroom blackboard chalk			
incounce materials	General purpose computer laboratory			
	Overhead projector			
Exam literature	Basic literature:			
	1. Manger, R.: Softversko inženjerstvo, skripta, PMF-MO, 2013.			
	2. Mauher,M.: Programsko inženjerstvo, priručni separati, TVZ, 2012.			
	Additional literature:			
	1. Sommerville Ian: Software Engineering, 9th Edition, Pearson, 2011.			
	2. R. S. Pressman: Software Engineering: A Practitioners Approach 6/e, McGraw-Hil, 2005			
Students obligations	maximum of 30% absences from lectures			
	maximum of 20% absences from exercises			
Knowledge	Lectures based learning outcomes, max 70 points			
evaluation during	Colloquium 1: Total of 35 outcome points, based on % of adequate answers to exam questions:			
semester	91%-100% = 35 points(5)			
	81%-90% = 31,5 points(4)			
	71%-80%= 28 points(3)			
	61%-70%=24,5 points(2)			
	Less of 60% = inadequate outcomes			
	Colleguium 2) Total of 25 outcome points, based on % of adoguate answers to exam questions:			
	Conduction 2. Total of 35 ductome points, based on 78 of adequate answers to exam questions.			
	$31_{0}^{-100} = -35$ points(3)			
	$G_{1,0}^{(0)} = 0, \beta = 0$ (inits(4)			
	(1/000/02 z0 ponics)			
	01%-70%=24,5 points(2)			
	Less of 60% = inadequate outcomes			
Knowledge	Documented (laboratory) problem solution 10 points			
evaluation after	Oral exame 20 points			
semester	Total of max. 100 points			
	91-100 = 5			
	31-90 = 4			
	71-80 = 3			
	61-70 = 2			
	L = s of 60% = inadequate outcomes			
Student activities:	Aktivnost ECTS			
	(Written exam) 5			
Remark	This course can be used for final thesis theme			
Prerequisites:	No prerequisites.			
Proposal made by	Prof. Mladen Mauher, Ph.D.			
Study programme for academic year 2018/2019

Code WEB/ISVU	23177/130948	ECTS	6.0	Academic year	2018/2019
Name	Strategic technologica	I entrepreneu	ırship		
Status Teaching mode Teachers	3rd semester - Polytec Redovni specijalisti inf specialization in Inform Polytechnic graduate j informatike) - elective Informatics Engineerin professional study pro elective course3rd ser Engineering (NOVI Izva study programme spe elective course3rd ser Engineering (NOVI Red graduate professional informatike (smjer raa specialization in Inforr Lectures + exercises (work at home Lectures:1. mr.sc. Ser	:hnic graduate 'ormatike) - el natics Engine- professional s course3rd se ig (NOVI Izvar gramme spec nester - Polyt- anredni specij cialization in I nester - Polyt- dovni specijali study progra irstvo)) - elect natics Engine (auditory + Ia gej Lugović M	e professional study program lective course3rd semester - ering (NOVI Redovni specijal tudy programme specializat mester - Polytechnic gradua nredni specijalisti informatike cialization in Informatics Eng echnic graduate professiona jalisti informatike) - elective Informatics Engineering (NOV echnic graduate professiona isti informatike (smjer raarst mme specialization in Inform cive course3rd semester - Po ering (NOVI Izvanredni speci boratory + seminar + metoc BA	nme specialization in Informa Polytechnic graduate profes isti informatike) - elective co ion in Informatics Engineerin te professional study progra e) - elective course3rd semes ineering (NOVI Izvanredni sp I study programme specializ: course3rd semester - Polytec VI Redovni specijalisti inform I study programme specializi vo)) - elective course3rd sem patics Engineering (NOVI Izva Iytechnic graduate professio jalisti informatike (smjer raa Iology + construction)	tics Engineering (NOVI sional study programme urse3rd semester - g (NOVI Redovni specijalisti nme specialization in :ter - Polytechnic graduate ecijalisti informatike) - ation in Informatics :hnic graduate professional atike (smjer raarstvo)) - ation in Informatics nester - Polytechnic nredni specijalisti nal study programme "stvo)) - elective course 30+30 (0+30+0+0) 120
	Laboratory exercises: Laboratory exercises:r Laboratory exercises:r	Dinko Horvat nr.sc. Sergej nag.oec Kristi	struč.spec.ing.techn.inf. Lugović MBA ina Perec		
Course objectives	Entrepreneurship is ur the same time techno the course is to harmo suit to new processes	like convention logy is rapidly nize the inter and functions	onal business deals with the v evolving, and it creates a n rnal dynamics with external t s.	search of optimal business p ew environment for strategic technological influences, crea	rocesses and functions. At development. The aim of ating a strategy that will
Learning outcomes:	1.create entrepreneur 2.examine business op 3.offer new business n	ship business oportunities. L nodels based	strategy related to new tecl _evel:6,7 on technology development	nnology. Level:6,7 . Level:6,7	
Methods of carrying out lectures	Ex cathedra teaching Discussion				
Methods of carrying out laboratory exercises	Laboratory exercises of Group problem solving Essay writing Discussion, brainstorm	n laboratory ז חing	equipment		
Course content lectures	1.Competitive Strateg 2.Innovation Strategy, 3.The Business Story a 4.Creativity and Produ 5.Types of Ventures, 3 6.Acquiring and Organ 7.Acquisition and Glob 8.Sources of Capital, 3 9.Deal Presentations a 10.Leading Ventures t 11.na 12.na 13.na 14.na 15.na	y, 3h, Learnin 3h, Learning and Plan, 3h, l ict Developme 3h, Learning o ising Resourc al Expansion, 3h, Learning o and Negotiatic o Success, 3h	g outcomes:1,2,3 outcomes:1,2,3 Learning outcomes:1,2,3 ent, 3h, Learning outcomes:1 outcomes:1,2,3 es, 3h, Learning outcomes:1,2, outcomes:1,2,3 ons, 3h, Learning outcomes:2,3 h, Learning outcomes:2,3	1,2,3 1,2,3 3 1,2,3	
Course content laboratory	1.Lab, 3h, Learning ou 2.Lab, 3h, Learning ou 3.Lab, 3h, Learning ou 4.Lab, 3h, Learning ou 5.Lab, 3h, Learning ou 6.Lab, 3h, Learning ou 7.Lab, 3h, Learning ou 9.Lab, 3h, Learning ou 10.Lab, 3h, Learning ou 10.Lab, 3h, Learning ou 11.na 12.na 13.na 14.na 15.na	Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3 Itcomes:1,2,3	3		
Required materials	Basic: classroom, blac General purpose comp Whiteboard with mark Portable overhead pro	kboard, chalk outer laborato ers njector	 ry		



Exam literature	Technology ventures. Dorf, Richard C., and Thomas H. Bye	rs. McGraw Hill, četvrto izdanje,
Students obligations	70% attendance, seminar and mandatory lab	
Knowledge evaluation during semester	Attendance review , rating exercises and lab work	
Knowledge evaluation after semester	Attendance review , rating exercises and lab work	
Student activities:	Aktivnost (Written exam)	ECTS 6
Remark	This course can be used for final thesis theme	
Prerequisites:	No prerequisites.	
Proposal made by	mr.sc. Sergej Lugović MBA, 11.7.2014	

Code WEB/ISVU	23181/130952	ECTS	6.0	Academic year	2018/2019
Name	Strategy and policy	of digital educatio	on		.
Status	3rd semester - Polyt Redovni specijalisti specialization in Infi	technic graduate p informatike) - elec	professional study progra tive course3rd semester	mme specialization in Informat - Polytechnic graduate profess ijalisti informatike) - elective c	ics Engineering (NOVI ional study programme
Teaching mode	Lectures + exercise	es (auditory + labo	ratory + seminar + meto	dology + construction)	30+30 (15+0+15+0) 120
Teachers	Lectures:1. izv. prof Auditory exercises:i	. dr. sc. Petar Jand zv. prof. dr. sc. Pet zv. prof. dr. sc. Pet	lrić prof. v. šk. tar Jandrić prof. v. šk. tar Jandrić prof. v. šk		
Course objectives	This course introduc	ces students to for	indations of policy and st	rategic planning in digital educ	ation
Learning outcomes:	1.Formulate / define	e the main concept	ts in theory and practice	of curriculum . Level:6.7	
	2.Critically assess th 3.Formulate / define 4.Analyse policy and 5.Examine the notic 6.Critically assess ir 7.Critically assess ir 8.Plan strategic dev 9.Present conclusion 10.Write a critical so	he relationships be e key concepts in C d strategic docume ons of education ar ssues in adult educ relopment of digita ns at an appropriate eminar on policy a	etween digital education a Critical Discourse Analysis ents in digital education. nd schooling . Level:6,7 cation and lifelong learnin ectives to digital educatio al education . Level:6,7 te level. Level:6,7 nd strategic planning in c	and ideology . Level:7 5 . Level:6,7 Level:6 ng . Level:7 nn . Level:7 ligital education. Level:6,7	
Methods of carrying	Guest lecturer				
out lectures	Case studies Discussion Questions and answ Seminar, students r Other e-learning	vers presentation and d	iscussion		
Methods of carrying out auditory exercises	Group problem solv Traditional literature Data mining and kn Essay writing Discussion, brainsto Other e-learning	ing e analysis owledge discovery orming	/ on the Web		
Methods of carrying	Essay writing				
out seminars	e-learning				
Course content	1. Theory and practi 2. Theory and practi 3. Digital education 4. Critical Discourse 5. Analysis of politica 7. Education and sch 8. Adult digital educ 9. Useful knowledge 10. Adult digital edu 11. International per 13. Digital educatior 14. Strategic plannir 15. Strategic plannir	ce of curriculum (1 ce of curriculum (2 and ideology, 2h, Analysis, 2h, Lear al and strateguc do nooling, 2h, Learni ation and lifelong I and really udeful I and really udeful I spectives to digita spectives to digita and social change ng of digital educat ng of digital educat	 , 2h, Learning outcome , 2h, Learning outcomes , 2h, Learning outcomes:2,9,1 ning outcomes:3,9,10 ocuments (1), 2h, Learning outcomes:5,9,10 learnings: links and contr knowledge , 2h, Learning rning and citizenship , 2h al education (1) , 2h, Lear al education (2) , 2h, Learning outcomes tearning outcomes tearning outcomes tearning 	s:1,2,9,10 s:1,2,9,10 o ng outcomes:3,4,9,10 ng outcomes:3,4,9,10 adictions , 2h, Learning outcom outcomes:7,9,10 n, Learning outcomes:7,8,9,10 ning outcomes:6,7,8,9 s:1,2,3,4,5,6,7,8,9,10 comes:1,2,3,4,5,6,7,8,9,10 comes:1,2,3,4,5,6,7,8,9,10 comes:1,2,3,4,5,6,7,8,9,10	nes:6,9,10
auditory	2.Individual coursev 3.Individual coursev 4.Individual coursev 5.Individual coursev 6.Individual coursev 7.Individual coursev 9.Individual coursev 10.Individual course 11.Individual course 12.Individual course 13.Individual course 14.Individual course 15.Individual course	vork, 2h, Learning vork, 2h, Learning work, 2h, Learning	outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9 g outcomes:1,2,3,4,5,6,7,9	(9,10 (9,10 (9,10 (9,10 (9,10 (9,10 (9,10 (9,10 (9,10 (8,9,10 (8,9,10 (8,9,10 (8,9,10 (8,9,10 (8,9,10) (8,9,10) (8,9,10) (8,9,10)	
Course content seminars	1.Individual coursev 2.Individual coursev 3.Individual coursev 4.Individual coursev 5.Individual coursev 6.Individual coursev 7.Individual coursev	vork, 2h, Learning vork, 2h, Learning vork, 2h, Learning vork, 2h, Learning vork, 2h, Learning vork, 2h, Learning work, 2h, Learning	outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8 outcomes:1,2,3,4,5,6,7,8	,9,10 ,9,10 ,9,10 ,9,10 ,9,10 ,9,10 ,9,10	

Study programme for academic year 2018/2019

	8.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	9.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	10.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	11.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	12.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	13.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	14.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
	15.Individual coursework, 2h, Learning outcomes:1,2,3,4,5,6,7,8,9,10			
Required materials	Special equipment			
	no equipment			
Exam literature	Althusser, L. (2008). On ideology. London: Verso.			
	Apple, M. W. (1990). Ideology and curriculum. London: Routledge.			
	Bates, A. W. (2004). Upravljanje tehnološkim promjenama: Strategije za voditelje visokih učilišta. Prvo izdanje. Zagreb:			
	CARNet/Benja.			
	Jandrić, P. i Boras, D. (2012). Kritičko e-obrazovanje: borba za moć i značenje u umreženom društvu. Zagreb: FF Press i			
	i ennicko veleuciliste u Zagrebu.			
	Latour, B. (2004). Politics of Nature. Cambridge, Massachusetts London, England: Harvard University Press.			
	McLaren, P. (2010). Revolutionary Critical Pedagogy. InterActions: UCLA Journal of Education and Information Studies,			
	(2).			
	Nobie, D. (1996). Digital Diploma Millis: The Automation of Higher Education. First Monday, 3(1-5). Bolanyi, K. (2001). The grapt transformation: The political and economic origins of our time. Postor: Postor Proce			
	Van Dijk, I. (1999). The Network Society. London, UK: SAGE.			
	Vali Dijk, J. (1999). Tile Network Solety. London: Verso			
	Zizek, S. (01.). (1334). Mapping ideology. London. Verso.			
Students obligations	(1) Participation (0-30 points)			
	(2) Coursework (0-70 points)			
	A minimum of 15 points in participation is required for successful completion of the course!			
Knowledge	Continuous assessment of online activity.			
evaluation during				
semester				
Knowledge	Coursework			
evaluation after				
semester				
Student activities:	Aktivnost ECTS			
	(Classes attendance) 2			
	(Seminar Work) 4			
Remark	This course can be used for final thesis theme			
Prerequisites:	No prerequisites.			
Proposal made by	Dr Petar Jandrić			

Code WEB/ISVU	23158/130926	ECTS	6.0	Academic year	2018/2019
Name	The health system and	d processes			
Status	2nd semester - Polyteo Redovni specijalisti inf specialization in Inforr	chnic graduate profession formatike) - elective cour natics Engineering (NOVI	nal study programme se2nd semester - Pol Izvanredni specijalis	specialization in Information lytechnic graduate profession ti informatike) - elective con	s Engineering (NOVI mal study programme urse
Teaching mode	Lectures + exercises (auditory + laboratory + seminar + metodology + construction) 45+15 (0+0+15+0) work at home 120				
Teachers	Lectures:Prof. dr. sc. Miroslav Slamić profesor visoke škole Seminar exercises: Biserka Klarić Seminar exercises:Prof. dr. sc. Miroslav Slamić profesor visoke škole				
Course objectives	to the basic processes in a variety of health and para-medical institutions, as well as with the basic terminology. To introduce students with the specifics of the economics of information systems (IS) in health care (a procurement, budgeting, expense tracking, reporting to management, etc.).				
Learning outcomes:	2.critically evaluate the models of health care and regulatory issues of the health care system. Level:7 3.to formulate and define processes in primary health care. Level:6,7 4.to develop a data model of the process in primary health care. Level:6,7 5.to analyse processes in hospital health care. Level:6 6.to develop processes and data models in hospital health care. Level:6,7 7.to plan of information resources to support the processes of health care. Level:6,7				
Methods of carrying out lectures	Ex cathedra teaching Guest lecturer Case studies Demonstration Discussion Seminar, students pre	sentation and discussion			
Methods of carrying out seminars	Traditional literature a Data mining and know Essay writing Discussion, brainstorm Mind mapping	analysis vledge discovery on the V ning	Veb		
Course content lectures	 1.A review of the elements of the health system of the REPUBLIC OF CROATIA. The professional roles of stakeholders in the health care system., 4h, Learning outcomes:1 2.Models of health care., 4h, Learning outcomes:2 3.Relevant regulatory issues of the health care system of the REPUBLIC OF CROATIA., 4h, Learning outcomes:1,2,3 4.Standard terminology and nomenclature in the processes of the health system., 4h, Learning outcomes:1,2 5.The information space of the data of the health system of the REPUBLIC OF CROATIA. Use of information by professionals., 4h, Learning outcomes:3 6.Aggregation of health information and data., 4h, Learning outcomes:2,3 7.Processes in primary health care. Organizational structure (in terms of information flow). Medical equipment and technology in the function of the information process., 4h, Learning outcomes:5 9.Processes in hospital health care. The processes of treatment of the patient., 4h, Learning outcomes:5 10.Processes in hospital health care. Elaboration of specific processes. The flow of data in the processes (source, authorization, storage). Expense tracking, 4h, Learning outcomes:5,6 11.Economics of the public-health system. General view on the economics of the health care system. Funding and procurement of information systems in health care., 5h, Learning outcomes:7 12.No lectures 13.No lectures 14.No lectures 				
Course content seminars	1.The definition of the statements of the paper., 2h, Learning outcomes:1,2,3 2.Elaboration of the elements of the paper., 2h, Learning outcomes:1,2,3 3.The collection of data for the seminar paper., 3h, Learning outcomes:1,2,3,4 4.Consultation on a term paper., 1h, Learning outcomes:1,2,3,4,5,6,7 5.Consultation on a term paper, 1h, Learning outcomes:1,2,3,4,5,6,7 6.Consultation on a term paper, 1h, Learning outcomes:1,2,3,4,5,6,7 7.Consultation on a term paper, 1h, Learning outcomes:1,2,3,4,5,6,7 8.Consultation on a term paper, 1h, Learning outcomes:1,2,3,4,5,6,7 9.Presentation of a term paper, 3h, Learning outcomes:1,2,3,4,5,6,7 10.No lectures 11.No lectures 12.No lectures 13.No lectures 13.No lectures 15.No lectures				
Required materials	Whiteboard with mark Overhead projector Video equipment	iers			



Exam literature	1. Grupa autora: Prezentacijski materijali na WEB stranici TVZ-a i MOODLE sustava (moj.tvz.hr, moodle1.tvz.hr). 2. Javni dokumenti na WEB stranici HZZO-a (www.hzzo.hr) i centralnog informacijskog sustava HZZO-a (www.cezih.hr).
Students obligations	Attendance of 70% of the lectures.
Knowledge evaluation during semester	No mid-term exams
Knowledge evaluation after semester	Evaluation of the written part of the seminar paper (70% points). Seminar work (30% points).
Student activities:	Aktivnost ECTS (Written exam) 6
Remark	This course can be used for final thesis theme
Prerequisites:	No prerequisites.