



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies



STUDY PROGRAMME ACCREDITATION MATERIAL:

# SOFTWARE ENGINEERING AND INFORMATION TECHNOLOGIES

MASTER ACADEMIC STUDIES

Novi Sad

2012.

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## Study Programme Accreditation

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Software Engineering and Information Technologies

Programme name	Software Engineering and Information Technologies
Independent higher education institution where the programme is being executed	University of Novi Sad
Higher education institution where the programme is being executed	Faculty of Technical Sciences
Educational-scientific/educational-art field	Technical-Technological Science
Scientific, professional or art field	Electrical and Computer Engineering - Software Engineering and Information Technologies
Type of studies	Master Academic Studies
Study scope, expressed in ECTS	61
Academic degree, abbreviation	Master in Software Engineering, M.Soft.Eng.
Study length	1
Programme implementation starting year	
Future course implementation starting year (for new programme)	2013
Number of students attending this programme	0
Planned number of students to be enrolled in this programme	32
Programme approval date (state the approval issuer)	14.11.2012 - Science Education Council 29.11.2012 - University of Novi Sad Senate
Programme language	Serbian, English
Programme accreditation year	
Web address containing programme information	<a href="http://www.ftn.uns.ac.rs">http://www.ftn.uns.ac.rs</a>



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

### Standard 00. Introduction

The study programme of the Graduate Academic Studies – Master in Software Engineering and Information Technologies is a continuation of the undergraduate academic studies of Software Engineering and Information Technologies. The study programme is realised at the Department of Computing and Control Engineering of the Faculty of Technical Sciences, University of Novi Sad.

Master study programme of Software Engineering and Information Technology is designed to educate the engineers - masters of software engineering that will get plenty of theoretical and practical knowledge for the development of complex software components and systems in domain specific areas (for example: mechanical engineering, economics, environment protection, education, public administration, e-business, etc.), and at the same time is a base for further education at the appropriate specialist, or doctoral level.

The increasing need for the development of complex software for specific domain applications imposes the need for a professional profile that, in addition to general technological and methodological knowledge in software engineering, possess specific domain knowledge in the field of software applications that are being developed. Therefore, the structure and content of the program of study designed to answer this need, and to enable students to gain a solid knowledge of the domain area you want to specialize.

During the course of the study emphasis is on development of students ability to solve problems. Ability to work autonomously as well as capacity for teamwork is specially appreciated, and you are encouraged to participate in a real professional and development projects within individual laboratories, or in conjunction with software houses. Through all the above mentioned activities in addition to the necessary theoretical and practical knowledge, the necessary sense of personal security and fulfillment is developed - that is necessary for successful integration into a professional environment.



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Software Engineering and Information Technologies

### Standard 01. Programme Structure

Name of this master - academic study program is Software Engineering and Information Technology. Academic title acquired upon successful completion of study programme is by the Software engineer - Master of Software Engineering. The structure of the program makes it possible to obtain deep knowledge of specific domain areas of application of software engineering and modalities of combining them with the methodological aspects of software development. In doing so, the student gains knowledge and qualifies for individual use of expert literature in specific domain area, can develop complex software applications. Knowledge acquired through this programme allows for application of this knowledge to develop software for solving domain specific problems, and provide base for further studies, if student choose to do so.

Admission requirements are the completion of the undergraduate studies worth at least 240 ECTS, and successful completion of entrance examination - if number prospective candidates is larger than number of vacancies. Entrance examination is on the field of Software Engineering and Information Technology, and is awarded with maximum of 60 points. Minimum required points to successfully pass the entrance examination is 14. Procedures for registration, ranking and enrolling of applied candidates are defined in the Regulations of student enrolment on study programmes.

Master academic studies of Software Engineering and Information Technology lasts year, and the student chooses a variety of courses related to domain specific application field of software engineering. Student must choose courses in specific domain that brings at least 70% of total ECTS points. of the loan from the domain field. The seniority in choosing the domain field is awarded to the best students, and the management of the study program has the ability to limit the number of students per group for the rational use of existing resources.

Classes are organized in the form of lectures and exercises. During the teaching process the emphasis is put on independent research and student work as well as its increased personal involvement in the educational process. Lectures, with the use of appropriate didactic resources, exposes the material provided, but on this occasion the students are also pointed towards research trends in the relevant area. On exercises, which follow the lectures, specific tasks are solved and examples that further illustrate the material are mastered. Exercises also provide additional explanations of the material. The exercises can be auditory, laboratory, computer or computing. Number of exercises can be performed in software companies or other institutions.

Elective courses are selected from the pool of proposed courses, but students have the option, according to their own preferences and desires and with the approval of the Chief of the study program, to choose a number of courses within FTN, UNS, or any other university in the country or abroad. In doing so, preconditions that are prescribed for attendance of the selected course must be met.



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Software Engineering and Information Technologies

### Standard 02. Programme Objectives

The purpose of this graduate study programme is the education of students for the profession of software engineering in the field of computing in accordance to the needs of the society and the individual. Software Engineering and Information Technologies study programme is designed to ensure the acquired competences which are justified and useful for the society. The Faculty of Technical Sciences has defined the fundamental tasks and aims in educating highly competent professionals in the field of engineering. The purpose of the Software Engineering and Information Technologies graduate study programme is in accordance with the basic tasks and aims of the Faculty of Technical Sciences. Realization of the thus structured study programme educates software engineering and information technologies engineers competent at the European and international level.



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Software Engineering and Information Technologies

### Standard 03. Programme Goals

The objectives of the study programme can be classified in the following categories:

**Technical knowledge:** The programme ensures the in -depth knowledge of at least one of the specialization areas – domains of application of software engineering.

**Practical knowledge:** Acquiring the necessary knowledge for defining problems and projects as well as plans for their resolving using different technical knowledge and skills. This, among other things, includes the development of creative ways of approaching problems and the ability of critical thinking.

**Communicative skills and team work.** Acquiring the necessary knowledge and skill in at least one world language with the ability to present one`s results to the professional and wider audience as well as developing the team work skills.

**Preparation for further studies:** Acquiring the necessary knowledge which will enable the continuation of student`s education at specialization or doctoral level. A specific aim which is related to the objectives of the education at the Faculty of Technical Sciences is developing the students` awareness of the need for life long learning, development of society as a whole and environment protection.

**Preparation for professional involvement:** Acquiring the necessary knowledge and developing awareness of the wide array of problems and obligations related to professional practice: safety, ethics, ecology and economy.



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## Study Programme Accreditation

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Software Engineering and Information Technologies

### Standard 04. Graduates` Competencies

Students with Master`s degree in Software Engineering and Information Technologies, who have completed the study programme, have the competence to solve real life problems in practice as well as to continue education if they decide to do so. Their competences include, primarily, critical thinking, the ability to analyze a problem, synthesize a solution, predict the behaviour of the chosen solution with the clear idea of the advantages and disadvantages of the chosen solution.

Mastering this study programme the students acquire an in depth knowledge of one application domain for software engineering, as well as applicable knowledge of general methodological principles of software engineering. The study programme qualifies students for solving practical problems using professional and scientific methods and procedures.

The students who have completed Software Engineering and Information Technologies Master programme are capable of adequately writing about and presenting the results of their work.

The students who have completed this level of studies have the competence to apply their knowledge in practice and follow the new developments in their profession as well as cooperate with local community and international environment. Students with Master`s degree in Software Engineering and Information Technologies are capable of team work and development of professional ethics.

As a rule, the competence of students is additionally verified through at least one paper presented at a national conference on the topic of the Master thesis.



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Software Engineering and Information Technologies

### Standard 05. Curriculum

Curriculum of the master academic studies of Software Engineering and Information Technologies has been formed to meet all targets. The structure of the study program ensures that elective courses are represented with at least 30% of the credits.

At master academic studies students develop knowledge in the field of software engineering and specify them on the specific domain areas, which are electives chosen through a reconciliation with their affinities for certain domain areas.

All courses last one semester and are awarded with corresponding number of ECTS credits - whereby one credit corresponds to approximately 30 hours of student activities.

The curriculum contains a description of each course that contains the name, course type, year and semester, the number of ECTS credits, teachers, the goal of the course to the expected outcomes, skills and competencies, prerequisites for attending, content items, reading materials, teaching methods, method of verification and evaluation, and other information.

The study program is compliant with the European standards in terms of conditions of entry, duration of study, the conditions of transition to the next year, graduating and modes of study.

An integral part of the curriculum of Software Engineering and Information Technology is a professional practice and practical work for 45 hours, which is realized in the relevant scientific research institutions, in organizations with innovative activities, or in organizations for providing infrastructural support for innovative activity in companies and public institutions.

Student completes studies by creating a master thesis that consists of a study of research, theoretical and methodological preparation necessary for a deeper understanding in the field of the master thesis, and writing the thesis.

Prior to the defense of the master thesis, candidate takes the exam on theoretical and methodological foundations before the Commission which is designated for the defense. The final assessment of the master thesis is based on the assessment laid the theoretical and methodological preparation and evaluation completion and defense of the work itself. Final thesis is before a panel consisting of at least three teachers with at least one must be from another department or college.

As a rule, the student is expected to publish at least one paper at national conferences in the area of final master work.

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Table 5.2 Course specification

Course:		<b>Electronic Payment Systems</b>				
Course id:	E2501					
Number of ECTS:	6					
Teachers:	Sladić S. Goran, Vidaković P. Milan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Students learn about the models and technologies for electronic payment systems. They gain the knowledge and skills to design the maintenance electronic payment systems.						
2. Educational outcomes (acquired knowledge):						
After successfully completing the course students are able to apply the principles, technologies and standards in the field of electronic payment systems. They are able to design and implement electronic payment systems, and improve existing electronic payment systems.						
3. Course content/structure:						
Payment system: organization, payment instruments, domestic and international payments, financial exchange network (TARGET, SWIFT), electronic payment system. Payment cards: types, payment cards associations, standards. Magnetic card: standards, structure, content, use, PIN codes, attacks on the card. Smart Cards: structure, types, standards, organization, modules, file system, keys, communication with card, Java smart card, attacks on the card. EVM standard: purpose, organization, smart card file system, data representation, EMV transactions. Online payments: general features, PayPal, Google Checkout, 3D Secure. Mobile payments: mobile payment systems, payment models, mobile EMV standard, Google Wallet. Fraud in electronic payment systems: online scams, evolution of fraud management and prevention of fraud, techniques for the fraud prevention.						
4. Teaching methods:						
Lectures, computer practice classes, consultations. The exam is oral. The final grade is formed on the bases of the laboratory practice and oral part of the exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	D. O'Mahony, M. Peirce, H. Tewari	Electronic Payment Systems for E-Commerce, 2nd edition		Artech House	2001	
2,	C. Radu	Implementing Electronic Card Payment Systems		Artech House	2002	
3,	W. Rankl	Smart Card Handbook, 2nd edition		Wiley and Sons	2004	
4,	D. Montague	Essentials of Online Payment Security and Fraud Prevention		John Wiley and Sons	2011	
5,	D. Williams	Pro PayPal E-Commerce		Apress	2007	
6,	EMVCo	EMV Specifications		EMVCo	2008	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Data Mining and Data Analysis Systems</h2>				
Course id:	E2503					
Number of ECTS:	6					
Teachers:	Kovačević D. Aleksandar, Nenadić M. Goran					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
The aims of the course are: provide students with the knowledge of important concepts and techniques of data mining; make students capable of applying of data mining methods, tools and techniques.						
2. Educational outcomes (acquired knowledge):						
Students are acquainted with the important concepts and techniques of data mining and capable of data analysis, predictive model creation, development and maintenance of data mining systems.						
3. Course content/structure:						
Basic concepts and overview of the field of DM. Exploratory data analysis and visualization. Basic techniques of classification: decision trees, naive Bayes method, k-nearest neighbors and support vector machines. Advanced classification techniques: the classifier ensembles, bagging, boosting, semi-supervised learning. Classifier evaluation, automatic determination of the parameter values ??and selection of attributes. Clustering techniques: k-means, hierarchical clustering, dbscan algorithm. Discovering association rules: apriori and FP-growth algorithm. Review of the application of data mining: analysis of business data, web data analysis, recommendation systems (films, books, etc.), predictions in sport.						
4. Teaching methods:						
Lectures, computer practice classes, consultations. The exam is oral. The final grade is formed on the basis of achievement on laboratory practice and oral exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Pang-Ning Tan, Michael Steinbach, Vipin Kumar	Introduction to Data Mining		Addison-Wesley	2005	
2,	Daniel T. Larose	Data Mining Methods and Models		Wiley / IEEE Press	2006	
3,	David Hand, Heikki Mannila, Padhraic Smyth	Principles of Data Mining		MIT Press	2001	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Advanced Internet Infrastructure</h2>			
Course id:	E2506				
Number of ECTS:	6				
Teachers:	Milosavljević P. Branko, Milanović N. Nikola, Nenadić M. Goran				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal:					
Students will be able to design and maintain network infrastructure in electronic business systems.					
2. Educational outcomes (acquired knowledge):					
Students will understand the functioning of Internet infrastructures for electronic business systems support. Students are competent for professional design and maintenance of Internet based networks.					
3. Course content/structure:					
IPv6 protocol: overview, protocols, implementation, routing and routing protocols, from IPv4 to IPv6, logic configuration of networks in Ipv6 environment. MPLS: overview, architecture, protocols, implementation. Mobile IP: overview, architecture, detail introduction to protocols and protocol extension, examples of implementation. Implementation of solutions for increasing network security: overview, concepts of solution application, traffic control at levels, data security, an example of VPN, QoS – resource allocation management in computer networks: overview, system architecture (LAN and WAN solutions), protocols, examples of implementation.					
4. Teaching methods:					
Lectures, computer and laboratory practice, consultations. The exam is oral. The final grade is formed on the bases of the laboratory practice and oral part of the exam.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Practical part of the exam - tasks		Yes	40.00	Theoretical part of the exam	
Test		Yes	10.00	Yes      30.00	
Test		Yes	10.00		
Test		Yes	10.00		
Literature					
Ord.	Author	Title		Publisher	Year
1,	W. Stallings	High-Speed Networks and Internets		Prentice-Hall, 2002. ISBN 0-13-032221-0	2002
2,	W. Stallings	Network Security Essentials: Applications and Standards		Prentice-Hall, 2000. ISBN0-13-016093-8	2000
3,	J. Doyle, J. DeHaven Carroll	Routing TCP/IP		Cisco Press, 2001. 1-57870-089-2	2001

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Table 5.2 Course specification

Course:		<b>Semantic Web</b>				
Course id:	E2513					
Number of ECTS:	6					
Teachers:	Konjović D. Zora, Milanović N. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal: Students gain knowledge of the concepts, techniques and selected examples of semantic web applications.						
2. Educational outcomes (acquired knowledge): The acquired knowledge enable the implementation of software systems which support intelligent selection, approach and processing of information on the Web.						
3. Course content/structure: Introduction: Structure syntax and semantics. Need for semantics on the Web. Meta-programming, meta-data, XML, XSLT, RDF. Semantics, Semantics and knowledge, Ontologies, Logics, Deduction, Domain modelling, Context, Distributed knowledge. Classification. Knowledge based protocols. Technologies. Ontology tools, Ontology software (API). OWL. SPARQL. Methodologies. Methodologies for ontology engineering. Methodologies for introducing knowledge management systems. Methodologies of developing semantic systems. Semantic systems. Semantic Web services. Semantic Web Portals. Semantic Wiki. Semantic Multi-Agent Systems. Semantic Web Browsers. Applications: bioinformatics, document management systems, information search, etc.						
4. Teaching methods: Teaching methods include: lectures, computer practice classes, homework assignments and consultations. During the lectures the content of the course is presented using the necessary didactic tools while student active participation is encouraged. The practical aspect of the course is covered at computer practice classes through assignments which students do independently or with the help of teaching assistants as well as through homework assignments (obligatory or optional). A student is expected to demonstrate the ability of independent task solving or understanding of the solution. The evaluation is in the form of oral conversation with the teaching assistant. The course lecturer and assistant have consultations with the students. During the consultations the students are given additional explanations of the material covered at the lecture and practice classes, and in case the consultations relating to independent work on laboratory or homework tasks, the suggestions are given on ho						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	10.00	Theoretical part of the exam	Yes	30.00
Computer exercise attendance		Yes	5.00			
Lecture attendance		Yes	5.00			
Project		Yes	50.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	G. Antoniou, F. Van Harmelen	A Semantic Web Primer (Cooperative Information Systems S.)		The MIT Press ISBN: 0262012103	2004	
2,	Shelley Powers	Practical RDF		OReilly	2003	
3,	John Davies	Towards the Semantic Web: Ontology-driven Knowledge Management		John Wiley and Sons Ltd, ISBN: 0470848677	2002	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Domain-Specific Languages</h2>			
Course id:	E2519				
Number of ECTS:	6				
Teachers:	Dejanović R. Igor, Milanović N. Nikola				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal:					
To teach students to design and implement software languages intended to be used in the specific domains (Domain-Specific Language – DSL) by using modern methods, techniques and tools.					
2. Educational outcomes (acquired knowledge):					
After successfully completing the course the student is able to: understand and effectively utilize the terminology and concepts of the subject area, apply methods and techniques for designing and implementing domain-specific languages, identify the advantages and disadvantages of various tools for creating domain-specific languages, analyze arbitrary domain of human activity and recognize the most important concepts and their interdependencies, based on analysis of the domain creates the abstract syntax of the DSL; utilize techniques to create different concrete syntax (graphical, textual, based on tables, dialogs, trees, etc.), identify the most appropriate syntax and implement it using the available tools, understand the impact of cultural and sociological profile of the user to the understandability of the concrete syntax, creates concrete syntaxes of a high degree of usability and readability by using knowledge about the human cognitive abilities.					
3. Course content/structure:					
Theoretical lectures: Basic definitions and concepts; difference between a General Purpose Language (GPL) and Domain Specific Language (DSL). External and internal DSLs. DSL as a set of coordinated models. History and development of DSLs; Traditional and modern notions of DSLs; Impact of DSL usage on productivity. Language Workbenches. Examples of DSLs. Domain analysis. Communication with domain experts; Techniques of recognition of key concepts from the domain description. Techniques of detecting the concepts relations. Abstract syntaxes, abstract syntax definition techniques, meta-modeling. Languages for meta-models definition (MOF, ECore, GOPRR, MoRP). Concrete syntaxes, concrete syntax definition, concrete syntaxes as the interfaces with the user, textual concrete syntaxes (EBNF, Xtext, Emfatic); graphical concrete syntaxes (GMF, Graphite, Spray, Eugenio); automated layouting; Language expressions definition using wizards; Tree-based syntaxes; table-based syntaxes; hybrid syntaxes, cultural and social aspects of creating highly usable and readable concrete syntax; framework of cognitive dimensions and impact of human cognitive abilities on the readability of language expressions. Secondary notation and its impact on the language expression comprehension. The semantics of the language; semantic constraints definition; semantic rules check. Interpreters; dynamic analysis and interpretation of language expression; optimization techniques. Translators - code generators; language expression analysis techniques and code generation for arbitrary target platform; Template engines. Coevolution of language; Horizontal and vertical coevolution; change propagation from higher to lower meta-level, propagation of changes within the same meta-level between the dependent statement. Practical classes: design and creation of DSL for a given domain. The division into project teams. Domain analysis. Extracting key concepts and their relationships. Creating language abstract sy					
4. Teaching methods:					
Lectures, Computer exercises; Consultation. Design and implementation of project assignment by working within project teams. At the end of the semester, public presentations of the most successful teams are organized with the discussion of the obtained results. The defense of project assignment is oral. The final exam is oral. Final grade is based on the score from the final exam and project defense.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project defence		Yes	50.00	Oral part of the exam	
Mandatory				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	Fowler, M.	Domain-Specific Languages		Addison-Wesley Professional	2010
2,	Parr, T.	Language Implementation Patterns: Create Your Own Domain-Specific and General Programming Languages		The Pragmatic Bookshelf	2009
3,	Kelly, S. & Tolvanen, J.-P.	Domain-Specific Modeling: Enabling Full Code Generation		Wiley-IEEE Computer Society Pr	2008
4,	Evans, E.	Domain-Driven Design: Tackling Complexity in the Heart of Software		Addison-Wesley Professional	2004
5,	Völter, M. & Stahl, T.	Model-Driven Software Development : Technology, Engineering, Management		John Wiley & Sons	2006
6,	Rubel, D.; Clayberg, E. & Wren, J.	The Eclipse Graphical Editing Framework (GEF)		Addison Wesley Professional	2011

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Table 5.2 Course specification

Course:		<b>Business Process Management</b>			
Course id:	E2521				
Number of ECTS:	6				
Teachers:	Milosavljević P. Branko, Ivanović V. Dragan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal:					
Understanding the concepts and systems for managing business processes. Gaining the knowlegde and skills for design and implementation of business process management systems.					
2. Educational outcomes (acquired knowledge):					
Upon successful completion of the course students are able to apply the concepts of business process management in software systems design and implementation, to specify and implement business processes, and to analyze, simulate and improve them.					
3. Course content/structure:					
The notion of workflow and business processes. Petri-nets, graphical representation and mathematical model. Extensions of Petri-nets. Modeling business processes. Triggers. Managing resources. Workflow nalysis and verification. Workflow patterns. Workflow simulation and testing. Business process management systems. Tools for monitoring and administration of business processes. Standardization in workflow systems.					
4. Teaching methods:					
Lectures; Computer practice. Consultations. The examination is oral. The final grade is formed on the bases of success at laboratory practice and oral examination.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project		Yes	50.00	Oral part of the exam	Mandatory
				Yes	Points
					50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	A.T.M. ter Hofstede, W.M.P. van der Aalst, M. Adams, N. Russell	Modern Business Process Automation: YAWL and its Support Environment		Springer	2009
2,	W.M.P. van der Aalst, C. Stahl	Modeling Business Processes: A Petri Net-Oriented Approach		MIT Press	2011
3,	W.M.P. van der Aalst	Process Mining: Discovery, Conformance and Enhancement of Business Processes		Springer	2011

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Software Standardization and Quality</h2>				
Course id:	E2522					
Number of ECTS:	6					
Teachers:	Perišić R. Branko, Sladić S. Goran, Marković -. Milan, Okanović Đ. Dušan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Acquiring basic knowledge in the field of software quality and standardization, as well as the knowledge about creation and the use of standards and technical regulations, and also certification of systems, processes and software products.						
2. Educational outcomes (acquired knowledge):						
The need for the creation and the use of standards and quality metrics. Ability to design and establish standardization of software systems. Ability to manage software standardization. Licencing and certification of software system, processes and products.						
3. Course content/structure:						
The concept of software standardization and quality metrics. Goals and principles of software standardization and quality assurance. Basic parameters of software systems standardization and quality. Models of the software systems standardization and quality.						
4. Teaching methods:						
Lectures; Consultations. Software project.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance		Yes	5.00	Theoretical part of the exam		20.00
Lecture attendance		Yes	5.00	Practical part of the exam - tasks		20.00
Project		Yes	40.00			
Term paper		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Mile Pešaljević	Inženjerske komunikacije i logistika		FTN Novi Sad	1995	
2,	G.Gordon Schulmeyer (Editor)	Handbook of Software Quality Assurance		Artech House	2007	
3,	Michael West	Real Process Improvement Using the CMMI		Software Engineering Institute	2008	

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Table 5.2 Course specification

Course:		<b>Decision Support Systems</b>				
Course id:	SEM005					
Number of ECTS:	6					
Teacher:	Kovačević D. Aleksandar					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	1		
Precondition courses		None				
1. Educational goal:						
The aims of the course are: provide students with the knowledge of important concepts and techniques of decision support systems; make students capable of applying decision support systems methods, tools and techniques and to develop and maintain decision support systems.						
2. Educational outcomes (acquired knowledge):						
Students are introduced to the concepts and techniques of decision support systems (decision support systems, DSS). Students are capable of applying of techniques, methods and tools in the area of decision support systems as well as for the design and maintenance of DSS.						
3. Course content/structure:						
Basic concepts of decision support systems (DSS). Decision theory. Systems theory, models and process modeling. Phases of decision making. Components of DSS systems. The organization of data, knowledge and models in the DDS system. Organization of the graphic user interface. Decision support systems hardware. DSS systems development methods. Modeling and analysis of DSS systems. Static models. Dynamical models. Risk management. Expert systems. Intelligent systems. Mining of structured and unstructured data to support decision-making. Machine Learning in DSS systems.						
4. Teaching methods:						
Lectures, laboratory exercises, consultations. The exam is oral. Exam score is based on the success of the laboratory exercises and the oral exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project defence		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Efraim Turban, Jay E. Aronson, Ting-Peng Liang	Decision Support Systems and Intelligent Systems (7th Edition)		Prentice Hall	2004	

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Table 5.2 Course specification

Course:		<b>Identity Management</b>			
Course id:	SEM009				
Number of ECTS:	6				
Teacher:	Marković -. Milan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	1	
Precondition courses		None			
1. Educational goal: Students learn about the models and technologies for identity management.					
2. Educational outcomes (acquired knowledge): After successfully completing the course students gain the basic theoretical concepts of identity, identity management, and knowledge on the multidisciplinary nature of the identity management problem. They are able to design and establish identity management system in a small or medium organization.					
3. Course content/structure: Basic theoretical concepts of identity and identity management. Multidisciplinary approach: technical, legal, social, security and organizational aspects of the identities. Identity management approaches: core identity, user and service access. Identity management systems: directories, LDAP standards and meta-directories. Technical aspects of the identity management system implementation: Single Sign On, Kerberos, X.509/PKI. Identity Federation and SAML standard.					
4. Teaching methods: Lectures. Computer practice. Consultations. The examination is oral. The final grade is formed on the basis of achievement in the laboratory practice classes and oral examination.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project		Yes	50.00	Oral part of the exam	
				Mandatory	Points
				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	ISO/IEC WD 24760	Information Technology -- Security Techniques -- A Framework for Identity Management			2009
2,	Phil Windley	Digital Identity		O Reilly	2005
3,	Graham Williamson, David Yip, Ilan Sharoni, Kent Spaulding	Identity Management: A Primer		MC PressLLC	2009
4,	Elisa Bertino, Kenji Takahashi	Identity Management: Concepts, Technologies, and Systems		Artech House	2010

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Table 5.2 Course specification

Course:		<b>E-government technologies</b>				
Course id:	SEM013					
Number of ECTS:	6					
Teachers:	Konjović D. Zora, Ivanović V. Dragan, Nenadić M. Goran, Sladić S. Goran					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	1		
Precondition courses		None				
1. Educational goal: Gaining practical knowledge of contemporary IC technologies and tools applicable to eGovernment.						
2. Educational outcomes (acquired knowledge): After successful completion of the course, student has gained practical knowledge for correct selection and application contemporary IC technologies and tools and their applications to all segments of complex software systems supporting eGovernment.						
3. Course content/structure: (1) Web based software architecture for eGovernment (electronic services, SOA, Web services, interoperability). (2) Standards (types, organizations, processes, services, data, W3C Technology Stack). (3) Communication technologies (TCP/IP networks, public networks, private networks). (4) Hardware technologies (workstations, servers, storage systems). (5) Software technologies (system software, infrastructural application software, applicative software). (6) Data management technologies (XML, No SQL databases, electronic documents management). (7) Business process management technologies (tools, repositories). (8) Security technologies (cryptography, PKI). (9) Virtualization technologies (hardware, software, storage, data, network). (10) Semantic technologies (architectures and processes integration, ontologies and interoperability, portals and users' interaction)						
4. Teaching methods: Classes, computer exercises, consultations. Exam is oral. Final grade is formed based on computer exercise grade and oral exam grade.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project defence		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Jayavel Sunderpandian, Tapen Sinha	E-Business Process Management: Technologies and Solutions		IGI Global	2007	
2,	Sangam Racherla, Libor Miklas Thiago Montenegro James M Mulholland	IBM System Storage Solutions Handbook		IBM	2011	
3,	Scott Lowe	Mastering VMware vSphere 5		Sybex	2011	
4,	Andreas Mitrakas	Secure E-Government Web Services		Idea Group Inc (IGI)	2007	
5,	Pramod J. Sadalage, Martin Fowler	NoSQL Distilled: A Brief Guide to the Emerging World of Polyglot Persistence		Addison-Wesley	2012	
6,	Tomas Vitvar, Vassilios Peristeras, Konstantinos Tarabanis	Semantic Technologies for E-Government		Springer	2010	

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Table 5.2 Course specification

Course:		<b>Information Security</b>			
Course id:	SEM017				
Number of ECTS:	6				
Teacher:	Marković -. Milan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	1	
Precondition courses		None			
1. Educational goal:					
Students learn about the methods and techniques for the modeling and implementation of information security within the different systems.					
2. Educational outcomes (acquired knowledge):					
After successfully completing the course the students are able to apply principles, methods and standards in the field of the information security. They are capable to implement information security management, security risk management, and to establish information security in organizations.					
3. Course content/structure:					
Introduction to information security: definition, fields of interest, basic concepts, development of information security. Requisites for information security: threats to information security, attacks on information systems, business, professional and ethical reasons for defining information security, legal framework. Information security standards: ISO 27000. Organization of information security: internal organization, external organization, resource management, physical and logical security, security incidents, business continuity. Information security management system: the concept of information security management systems and information security management, the scope of the system, user identification and resources, system design, policies, standards, procedures. Security risk management: fundamentals of risk management, risk identification, risk assessment, risk reduction, risk avoidance, strategies for risk control. Information security implementation: technical and non-technical aspects of implementation, defining security requirements, implementation of information security management, information security analysis, monitoring and maintenance.					
4. Teaching methods:					
Lectures. Computer practice. Consultations. The examination is oral. The final grade is formed on the basis of achievement in the laboratory practice classes and oral examination.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project defence		Yes	50.00	Oral part of the exam	
				Mandatory	Points
				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	ISO/IEC 27000	Information technology — Security techniques — Information security management systems		ISO	2009
2,	Michael E. Whitman, Herbert J. Mattord	Principles of Information Security, Fourth Edition		Course Technology, Cengage Learning	2012
3,	Evan Wheeler	Security Risk Management Building an Information Security Risk Management Program from the Ground Up		Elsevir	2011

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Table 5.2 Course specification

Course:		<b>Digital Archives</b>			
Course id:	E2507				
Number of ECTS:	6				
Teachers:	Surla I. Dušan, Ivanović V. Dragan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal: Enabling students to design digital archives and document control systems.					
2. Educational outcomes (acquired knowledge): Students become familiar with the principles and techniques for the development of digital archives and document control systems. The student is able to design and develop digital archives and document control systems.					
3. Course content/structure: Digital archives: terminology, features. Document models: simple, structured, multi-lingual, multi-media. Models of document collections: centralized, distributed. Document filing. Searching document collections: searching models, query languages, indices, user interaction, implementation. Metadata and acquisition in distributed collections. Collaboration of users in document formation. Document flow control: models, implementation. Standards in the field of digital archives and document control. Document access control and DRM (digital rights management).					
4. Teaching methods: Lectures, Computer practice, Tutorials. The examination is oral. The final grade is formed based on the achievement at the laboratory practice and the oral examination.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project		Yes	50.00	Oral part of the exam	
				Mandatory	Points
				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	R. Baeza-Yates, B. Ribeiro-Neto	Modern Information Retrieval		Addison-Wesley, New York	1999
2,	L. Asprey, M. Middleton	Integrative Document & Content Management: Strategies for Exploiting Enterprise Knowledge		Idea Group Publishing	2003
3,	A. Rockley	Managing Enterprise Content: A Unified Content Strategy		New Riders	2002

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Agile Software Development Methodology</h2>				
Course id:	E2508					
Number of ECTS:	6					
Teachers:	Milosavljević R. Gordana, Perišić R. Branko					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
<p>The objective of the course is to enable students to apply methods and tools for agile software system development and conduct a comparative analysis of the advantages and disadvantages when compared with the traditional approach. Fundamentals of modeling and realization of the generator code and applications.</p>						
2. Educational outcomes (acquired knowledge):						
<p>Students will acquire theoretical and practical knowledge necessary for the efficient application of the methods, techniques and tools for agile software system development. Agile software development, the design of tools for code generation based on abstract understanding of system functionality.</p>						
3. Course content/structure:						
<p>Approaches to agile software development. Methods and techniques of agile software development. Tools for agile software development. Code generators. The revision of the methodological approaches to software development (the relationship between the agile and traditional methods). The prototypical software development. Model driven architecture. Standardization of the functional and visual features of typical software systems and the design of software tools for design template generation.</p>						
4. Teaching methods:						
<p>The evaluation of knowledge is carried out continually during the semester in the form of checking the student's progress in a team project in a chosen software system. The project defense is public.</p>						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	5.00	Theoretical part of the exam	Yes	20.00
Lecture attendance		Yes	5.00	Practical part of the exam - tasks	Yes	30.00
Project		Yes	40.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	G. Milosavljević, Branko Perišić	Metodologije brzog razvoja softvera, u pripremi		Elektronsko izdanje-PDF,PPT	2007	
2,	A.Cockburn	Agile Software Development		Addison-Wesley	2002	
3,	B. Boehm, R.Turner	Balancing Agility and Discipline: A Guide for the Perplexed		Addison-Wesley	2003	
4,	A.Kleppe, J.Warmer, W.Bast	MDA Explained - The Model Driven Architecture: Practice and Promise		Addison-Wesley	2003	
5,	S.L. Pfleeger	Software Engineering Theory and Practice		Prentice Hall	2006	
6,	Mathew Robinson, Pavel Vorobiev	Swing, Second Edition		Elektronsko izdanje-PDF	2003	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Protection and Recovery of Software Systems</h2>				
Course id:	E2509					
Number of ECTS:	6					
Teacher:	Perišić R. Branko					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
<p>The objective of the course is to enable students to recognize the importance of complex software application, analysis, modeling and implementation of the authorization and protection mechanisms within complex software systems. Understanding the application of laws and regulations related to the protection and recovery of complex software systems.</p>						
2. Educational outcomes (acquired knowledge):						
<p>Identification, specification, modeling and implementation of protection and recovery mechanisms of complex software systems . After the exam has been taken and passed with success, students are able to design the mechanisms of protection and recovery within complex software systems and participate in the supervision and control of the computer system safety.</p>						
3. Course content/structure:						
<p>Terminology related to the protection, safety and security of software systems. Mechanisms and methods of authorization, protection and recovery of software systems. Modeling of protection mechanisms, design of protected software, dynamic configuration of software systems. Disaster recovery principles. Implementation of mechanisms of software protection and recovery. Standards and regulations in the domain of the protection of software systems. Discussing the responsibilities of all those involved in the process of the implementation of software protection and recovery.</p>						
4. Teaching methods:						
<p>The acquisition of knowledge happens gradually during the course and the students` work is evaluated through their achievement in a team project about the implementation of protection mechanisms within a chosen software system. The defense of team projects is public.</p>						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise attendance		Yes	5.00	Written part of the exam - tasks and theory	Yes	50.00
Lecture attendance		Yes	5.00			
Project		Yes	40.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Branko Perišić	Zaštita i oporavak softverskih sistema, u pripremi		Elektronsko izdanje-PDF,PPT	2007	
2,	Jon Toigo	Disaster Recovery Planning: Strategies for Protecting Critical Information Assets, 2nd Edition			2000	
3,	Steve McConnell	Code Complete, Second Edition		Microsoft Press	2004	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Software Configuration Management</h2>				
Course id:	E2510					
Number of ECTS:	6					
Teacher:	Dejanović R. Igor					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
To make students capable of applying best practice, methods, techniques and tools in the domain of Software Configuration Management (SCM) with the emphasis on the SCM process introduction and improvement.						
2. Educational outcomes (acquired knowledge):						
At the end of the course students are capable of: introducing SCM best practice, methods and tools in the software development process, improve existing SCM process, analyze available tools and identify advantages and disadvantages of each, understand pros and cons of different version control systems, change management systems, build and release management systems, systems for managing alternative lines of development etc.						
By using modern SCM tools and by the development and documentation of SCM process and the development of supporting application, students acquire a broad range of practical skills.						
3. Course content/structure:						
Theoretical lectures: Basic definitions and historical development of Configuration Management - CM. Traditional notion of CM; Identification of configuration, change control, status accounting, audit and verification. Configuration management in the context of software development (Software Configuration Management - SCM). Source code management; Version Control System - VCS; architectures, advantages and disadvantages : social coding; repository models; concurrent change management models; alternative development courses. Dependency management. Build management, automation, tools. Change Management; Events; Requests for change tracking; support systems. Issue management; identification; traceability; automation. Deployment: identification, authentication, security, planning. Industrial standards and frameworks. Models of maturity. Practical classes: file compare tool patch and diff. Centralized version control systems (Subversion). Distributed version control systems (Git, Mercurial). Tools to support issue tracking (Trac). Code review (ReviewBoard, Rietveld, Gerrit, barkeep). Tools for automated build (Apache Ant + Ivy, Maven). Systems for continuous integration (Jenkins). The design and documentation of the SCM process in accordance with the recommended practice. Creating Web applications to support the proposed SCM process.						
4. Teaching methods:						
Lectures, Computer exercises; Consultation. Design and implementation of project assignment by working within project teams. At the end of the semester, public presentations of the most successful teams are organized with the discussion of the obtained results. The defense of project assignment is oral. The final exam is oral. Final grade is based on the score from the final exam and project defense.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam		
Project		Yes	50.00	Theoretical part of the exam		
				Mandatory	Points	
				Yes	50.00	
Literature						
Ord.	Author	Title		Publisher	Year	
1,	A. Mette, J. Hass	Configuration Management Principles and Practice		Addison Wesley	2003	
2,	Aiello, R. & Sachs, L.	Configuration Management Best Practices: Practical Methods that Work in the Real World		Addison-Wesley Professional	2010	
3,	Berczuk, S. & Appleton, B.	Software configuration management patterns: effective teamwork, practical integration		Addison-Wesley Professional	2003	
4,	DoD USA	Configuration management guidance		Department of Defense--United States of America	2001	
5,	Chacon, S.; Hamano, J. & Pearce, S.	Pro Git		APress	2009	
6,	Reelsen, A.	Play Framework Cookbook		Packt Pub Limited	2011	



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Table 5.2 Course specification

Course:		<b>Neural Networks</b>				
Course id:	E2512					
Number of ECTS:	6					
Teacher:	Obradović J. Đorđe					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal: Students become familiar with the concepts, techniques and chosen examples of the application of neural computing.						
2. Educational outcomes (acquired knowledge): Students acquire the knowledge about the basic concepts in neural computing. Besides, they become familiar with certain approaches and methods of application.						
3. Course content/structure: Neural model and network architecture. Neural network training. Associative learning. Competitive networks. Hopfield networks. RBF networks. SVM. Busting techniques. Committee machines. Applications.						
4. Teaching methods: Lectures. Computer practice. Tutorial work. The practical part of the course is evaluated through laboratory work by solving obligatory tasks. Students are encouraged to do additional tasks at their own will as well. The tasks are graded. A part of the subject matter that forms a unit can be taken as a partial exam-colloquium (from 2 to 4). The partial exam is a part of the examination. The student can take the next partial exam only if they have gathered at least 30% of points at the previous partial exam. Partial exams are taken in the written form. The final part of the examination is an oral exam. The grade at the exam is formed by adding all the points a student has gathered during the course: by attending the lectures, completing the obligatory tasks, papers, passing the partial exams and the final examination.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	5.00	Theoretical part of the exam	Yes	30.00
Homework		Yes	2.00			
Lecture attendance		Yes	3.00			
Project		Yes	25.00			
Project task		Yes	15.00			
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Simon Haykin	Neural Networks: A Comprehensive Foundation		Pearson US Imports & PHIPes, 1998, ISBN:0139083855	1998	
2,	Shun-ichi Amari, Nikola K. Kasabov	Foundations of Neural Networks, Fuzzy Systems and Knowledge Engineering		The MIT Press, 1997, ISBN: 0262112124	1997	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Biologically inspired computing</h2>				
Course id:	E2514					
Number of ECTS:	6					
Teachers:	Konjović D. Zora, Kovačević D. Aleksandar					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Students gain knowledge of the concepts, techniques and selected examples of evolutionary computing and in particular, genetic algorithms.						
2. Educational outcomes (acquired knowledge):						
The acquired knowledge enable problem solving by using evolutionary computing approach.						
3. Course content/structure:						
Evolutionary algorithm. Genetic algorithms. Evolutionary strategies. Evolutionary programming. Genetic Programming. Hybridization with other techniques, memetic algorithms. Koevolution, interactive evolution.						
4. Teaching methods:						
Lectures, computer practice classes, consultations.						
The practical section of the course is evaluated in computer laboratory where students solve obligatory tasks. Students can also take optional tasks. The tasks are marked. Part of the course material which forms a logical whole can be taken as a partial exam – colloquium (2 to 4). A partial exam is a part of an exam. A student can take the next partial exam if he/she has attained at least 30% of points at the previous one. Partial exams are taken in written form. The final exam is taken in oral form. The final grade is formed on the bases of class attendance, obligatory tasks, assignments, partial exams and final exam grades.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	45.00	Theoretical part of the exam	Yes	30.00
Computer exercise attendance		Yes	5.00			
Homework		Yes	5.00			
Homework		Yes	5.00			
Homework		Yes	5.00			
Lecture attendance		Yes	5.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	A.E. Eiben, J.E. Smith	Introduction to Evolutionary Computing		Springer-Verlag Berlin and Heidelberg GmbH & Co.K	2004	
2,	Melanie Mitchell	An Introduction to Genetic Algorithms		The MIT Press, 1998, ISBN: 0262631857	1998	

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Table 5.2 Course specification

Course:		<b>Business Intelligence</b>				
Course id:	E2527					
Number of ECTS:	6					
Teachers:	Kovačević D. Aleksandar, Nenadić M. Goran					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
The aims of the course are: provide students with the knowledge of important concepts and techniques of business intelligence and business analytics; make students capable of applying of business intelligence and business analytics methods, tools and techniques in order to improve the quality of business decisions.						
2. Educational outcomes (acquired knowledge):						
Students are acquainted with the important concepts and techniques of business intelligence (BI) and business analytics (BA) and are capable of applying business intelligence and business analytics methods, tools and techniques in order to improve the quality of business decisions.						
3. Course content/structure:						
Overview of the basic concepts of business intelligence. Collection, storage and integration of business data (data integration). Data quality management. The organization of knowledge in business systems (knowledge management). Exploratory analysis of business data, creating business reports and analysis, online analytical processing (OLAP) and visualisation. Introduction to the concepts and techniques of data mining for the analysis of business data and the creation of predictive models: classification, clustering, association rules, linear and logistic regression. Research and analysis of time series (time series mining). Complex event processing and data flow analysis (stream mining) - integrating and analysis of data from various sources: Web logs (web log mining), the analysis of clicks (click stream mining), stock, text, etc. in order to uncover opportunities or threats in making business decisions. Automatic detection of process models (process mining) - log analysis of business processes with the aim of automatic model detection. Analysis of the supply chains (supply-chain analytics). Automatic fraud detection in business systems. Decision support systems. Overview of Enterprise Resource Planning (ERP) systems. Analysis of multimedia data (multimedia mining). Text mining in business intelligence - information extraction from business reports; automatic identification of attitudes and emotions from text (opinion and sentiment mining).						
4. Teaching methods:						
Lectures, laboratory exercises, consultations. The exam is oral. Exam score is based on the success of the laboratory exercises and the oral exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Efraim Turban, Ramesh Sharda, Dursun Delen, David King	Business Intelligence		Prentice Hall	2010	
2,	Evan Stubbs	The Value of Business Analytics: Identifying the Path to Profitability		Wiley	2011	
3,	Gert H. N. Laursen, Jesper Thorlund	Business Analytics for Managers: Taking Business Intelligence Beyond Reporting		Wiley	2011	
4,	Pang-Ning Tan, Michael Steinbach, Vipin Kumar	Introduction to Data Mining		Addison-Wesley	2005	
5,	Daniel T. Larose	Data Mining Methods and Models		Wiley / IEEE Press	2006	

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Table 5.2 Course specification

Course:		<b>Soft Sensors</b>				
Course id:	SEAM04					
Number of ECTS:	6					
Teachers:	Bojanić M. Dubravka, Jorgovanović Đ. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal: Students learn about theoretical and practical bases of soft sensors.						
2. Educational outcomes (acquired knowledge): - knowledge in the field of soft sensors design; - knowledge about the applications of machine learning techniques for modelling the nonlinear processes in human body.						
3. Course content/structure: Soft sensors as a low cost alternative to expensive hardware devices. Soft sensors in parallel with hardware sensors allowing the realization of more reliable processes. The applications of machine learning techniques (neural networks, fuzzy logic etc.) for modelling the nonlinear processes in human body. Soft sensor design. Data selection. Choice of the model structure (static, dynamic, model order selection). Model validation. Strategies to Improve Soft Sensor Performance.						
4. Teaching methods: Lectures. Computer practice. Laboratory practice. Consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Theoretical part of the exam	Yes	50.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Fortuna, L., Graziani, S., Rizzo, A., Xibilia, M.G.	Soft Sensors for Monitoring and Control of Industrial Processes		Springer	2007	

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Table 5.2 Course specification

Course:		<b>Dynamic Programming, combinatorial and network optimization</b>				
Course id:	SEAM05					
Number of ECTS:	6					
Teacher:	Čongradac D. Velimir					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
The class provides students with background in topics of combinatorial, network and dynamic programming, as well as practical applications of the presented material.						
2. Educational outcomes (acquired knowledge):						
Within the class students are introduced with basic principles of combinatorial, network and dynamic programming. Students are also introduced to practical problem solving by using knowledge obtained within the course.						
3. Course content/structure:						
Introduction to combinatorial optimization. Standard combinatorial optimization problems. Introduction to complexity theory. Introduction to network programming. Standard network optimization problems. Solving network programming problems by means of linear programming. Dynamic programming. Principles of optimal control. Linear Quadratic Regulators.						
4. Teaching methods:						
Lectures. Study. Research						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Homework		Yes	30.00	Written part of the exam - tasks and theory	Yes	50.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	John Lee	A first course in combinatorial optimization		Cambridge University Press	2004	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Algorithms and DSP platforms in computer communications</h2>				
Course id:	RT510					
Number of ECTS:	6					
Teacher:	Temerinac R. Miodrag					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Development methods for algorithms of computer communications and their implementation on DSP platforms						
2. Educational outcomes (acquired knowledge):						
Capability of requirement analysis, development and implementation of algorithms in computer communications						
3. Course content/structure:						
Analysis and categorization of algorithms in computer communications. Development methodology and implementation for algorithms in computer communications. Overview and systematization of DSP platforms. Algorithm implementation methods on DSP platforms. Computer simulation tools and DSP implementation tools. Lab experiments.						
4. Teaching methods:						
Choice and analysis of technical data by adviser support. Solving of projects defined by adviser. practical lab works on experiments defined by adviser. Writing of technical reports.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	group of authors	chosen professional books			2012	
2,	group of authors	chosen technical papers and datasheets			2012	

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Table 5.2 Course specification

Course:		<h2>Television and Image Processing Software 2</h2>				
Course id:	RT56					
Number of ECTS:	6					
Teacher:	Teslić Đ. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses						
1. Educational goal: Students will learn about the design, realization and testing software for digital TV sets.						
2. Educational outcomes (acquired knowledge): Students have learned about the design, realization and testing software for digital TV sets.						
3. Course content/structure: Realization of algorithms for image compression using software and physical architecture (MPEG 1/2/7/21, H.261/3/4, WMV). Realization of motion vector prediction software and programmable sequential networks. Software for presenting and processing video objects. Digital television – DTV software (TV picture compression standards, digital Television standards – DVB, transmission structure, compression standards for video signal, audio signal, handling errors, elements of physical architecture of DVB receiver, dedicated processors for digital television, DVB software.						
4. Teaching methods: Lectures, Tutorials, Computer practice, Consultations The course material is presented in two blocks. In the first block the students attend theoretical classes in the morning sessions. In the afternoon they attend practical classes. In the second block students develops the final exam paper.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Homework		Yes	5.00	Coloquium exam	No	20.00
Homework		Yes	5.00	Coloquium exam	No	20.00
Homework		Yes	5.00	Theoretical part of the exam	Yes	30.00
Homework		Yes	5.00	Practical part of the exam - tasks	Yes	40.00
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	V. Kovačević, N. Teslić, V. Mihić	Programska podrška u televiziji i obradi slike II, Skripte			2005	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Real-Time System Design</h2>					
Course id:	RT59						
Number of ECTS:	6						
Teachers:	Kukolj D. Dragan, Kovačević V. Jelena, Pap I. Ištvan						
Course status:	Elective						
Number of active teaching classes (weekly)							
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:			
3	0	3	0	0			
Precondition courses		None					
1. Educational goal:							
Students gain knowledge of the real time systems and are able to design and realize simple systems of this kind.							
2. Educational outcomes (acquired knowledge):							
Knowledge of the fundamental concepts, standards and technologies in this field as well as the ability to design and realize simple real time systems.							
3. Course content/structure:							
Introduction. Definition and classification of real time systems. Specific characteristics of real time systems. Interaction of real time systems with physical environment, process highway. Redundant and distributed system architecture in real time. Methods of verification and testing of real time systems. Expert real time systems, fuzzy control. Design of acquisition control systems (system configuration, applicative control for continuous and batch control ISA S-88 standard, simulation environment for development and testing application software). Design of control telecommunication networks. Systems for aircraft control in air traffic.							
4. Teaching methods:							
Lectures, tutorials, computer practice classes, consultations. During the semester students attend lecture and computer practice classes							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Project		Yes	30.00	Coloquium exam		No	40.00
				Theoretical part of the exam		Yes	30.00
				Practical part of the exam - tasks		Yes	40.00
Literature							
Ord.	Author	Title			Publisher		Year
1,	Branislav Atlagić	PROJEKTOVANJE SISTEMA ZA RAD U REALNOM VREMENU, skripta					2005

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Table 5.2 Course specification

Course:		<b>Adaptive and advanced control</b>				
Course id:	SEAM02					
Number of ECTS:	6					
Teacher:	Čongradac D. Velimir					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	1		
Precondition courses		None				
1. Educational goal:						
Acquisition of theoretical and practical fundamentals of linear regulator and estimator design, servo-regulators, adaptive and other modern control structures.						
2. Educational outcomes (acquired knowledge):						
The acquired knowledge can be used in solving concrete engineering problems and is a basis for further professional and scientific development.						
3. Course content/structure:						
Principles of state space regulator design. Principles of state and disturbance estimation. Structure of adaptive control systems. Direct and indirect adaptive control. Parameter estimation. Model reference adaptive control. Auto-tuning regulators and self-adaptive systems. Principles of predictive control.						
4. Teaching methods:						
Lectures, numerical calculation practice, computer practice classes, laboratory practice, consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Homework		Yes	50.00	Written part of the exam - tasks and theory	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	K. Astrom, B. Wittemark	Adaptive Control Systems		Adison Wesly	1995	
2,	Profesor	Štampani materijal koji pokriva pojedina predavanja i vežbe			2012	

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Table 5.2 Course specification

Course:		<b>Software Algorithms in Supervisory Control and Data Acquisition Systems</b>			
Course id:	SEAM03				
Number of ECTS:	6				
Teacher:	Čongradac D. Velimir				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal: The aim of the course is the detailed knowledge of the algorithms for solving optimization problems of SCADA systems.					
2. Educational outcomes (acquired knowledge): The outcome is competence to solve some optimization problems in SCADA systems.					
3. Course content/structure: Supervisory Control and Data Acquisition Systems (SCADA): definition, classification, basic characteristics, algorithmic problems and challenges; Graph Theory: Graph definition, basic concepts, types, search, system modeling using graphs; Basics algorithms based on graphs: a traveling salesman, graph partitioning, multilevel algorithms, graph coloring, dynamic algorithms (features, criteria), critical path. Examples of problem solving using algorithms based on graphs: the problems of transport and optimization of transport systems (airport, traffic lights, toll booths on the highway, courier, taxi), telephone exchange, computer networks, CPU load balancing in distributed SCADA systems, optimal workflow in NUS.					
4. Teaching methods: Teaching is conducted through the lectures and computer practice. Throughout the computer practice student is obliged to complete practically oriented tasks.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Computer exercise defence		Yes	30.00	Coloquium exam	
				Yes	40.00
				Yes	30.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	Profesor	Štampani materijal koji pokriva pojedina izlaganja i vežbe			2011
2,	Profesor	Skripta za računarske i labaratorijske vežbe			2011
3,	T. H. Cormen, C. E. Leiserson, R. L. Rivest, C. Stein	Introduction to Algorithms, Third Edition		MIT Press	2010

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Virtual Reality Systems</h2>			
Course id:	E2516				
Number of ECTS:	6				
Teachers:	Ivetić V. Dragan, Mihajlović R. Dragan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses      None					
1. Educational goal: Students are enabled to design and implement the systems of virtual/augmentative reality.					
2. Educational outcomes (acquired knowledge): The acquisition of skills and knowledge necessary for the development of systems of virtual/augmentative reality with practical work experience with non-immersive devices.					
3. Course content/structure: Milgram real-virtuality continuum and the metrics of virtuality/augmentativity, the elements of VR systems, VR devices- the immersive and non-immersive class, 3D audio, 3D video and tactile devices, the techniques of body, head, limb and eye monitoring, VR/AR interactivity, the techniques of programming VR systems with examples (VRML, X3D, Cortona SDK), examples of VR systems, systems of augmentative reality, the basic AR system architecture, examples of AR systems, the basic concepts of ubiquitous computing systems.					
4. Teaching methods: Lectures, computer practice, tutorial work. The subject matter is organized into two units which are evaluated through 2 tests during the course. In the computer practice classes students will use programs (DirectX/OpenGL/X3D) or the up-to-date authoring system to develop simple VR/AR environments with non/semi/immersive devices. Successfully completed practice is the requirement that has to be met before taking the examination. The examination is taken in the written form. The points gathered at the exam, tests and computer practice are added, forming the final grade.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Complex exercises		Yes	50.00	Theoretical part of the exam	
Test		Yes	10.00		
Test		Yes	10.00		
Literature					
Ord.	Author	Title		Publisher	Year
1,	D. Ivetić	Osnovi interaktivnih sistema sa elementima računarske grafike i multimedije, u pripremi			2007
2,	Mel Slater, Yiorgos Chrysanthou, Anthony Steed	Computer Graphics And Virtual Environments - From Realism to Real-Time		Addison-Wesley	2002

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Table 5.2 Course specification

Course:		<b>Data Compression</b>				
Course id:	E2534					
Number of ECTS:	6					
Teachers:	Ivetić V. Dragan, Popov B. Srđan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Students learn about principles, techniques, and methods of lossless and lossy data compression.						
2. Educational outcomes (acquired knowledge):						
Acquiring the basic knowledge in data compression. The acquired skills are used for development of software that uses binary data, text, image, video compression.						
3. Course content/structure:						
Data compression principles and techniques. Huffman coding. Arithmetic coding (JBIG). Dictionary techniques - implicit/explicit dictionaries (LZ77, LZ78, LZW). Prediction coding. Lossy compression - distortion criteria. Scalar quantization. Vector quantization. Differential encoding (DPCM, delta modulation, speech coding). Transform coding (DCT, wavelet). Subband coding. Application of data compression techniques.						
4. Teaching methods:						
Lectures, computer practice, consultations. The course material is divided into two parts and is tested in two tests during the duration of the course. In practice classes programs are created that implement compression techniques: general data compression, image compression, audio/speech compression. Successfully completed practice tasks are a prerequisite for taking final examination. The final examination is written. The final grade is based on the number of points on the examination, tests and practice tasks.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	50.00	Theoretical part of the exam	Yes	30.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Dragan Ivetić	Kompresija podataka		-	2005	
2,	Khalid Sayood	Introduction to Data Compression			2012	



Table 5.2 Course specification

Course:		<b>Inter Computer Communications and Computer Networks 2</b>				
Course id:	RT57					
Number of ECTS:	6					
Teacher:	Popović V. Miroslav					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses						
1. Educational goal: Teaching students to design, implement and test components of Internet technology and communication systems based on Internet technology.						
2. Educational outcomes (acquired knowledge): Ability to design, implement and test components of Internet technology and communication systems based on Internet technology.						
3. Course content/structure: Introduction. Part 1: Communication Protocol Engineering (Requirements. Design. Implementation. Test and Verification.) Part 2: Internal components of Internet technology (System of protocol converters of Internet core. Autonomous systems and confederations within Internet. Interior routing protocols. Security protocols. Internet management protocols. Internet of the Future.) Part 3: Systems based on Internet technology (Contact centers. Service Oriented Architecture.)						
4. Teaching methods: Lectures, Tutorials, Computer practice,., Consultations The course material is presented in two blocks. In the first block the students attend theoretical classes in the morning sessions. In the afternoon they attend practical classes. In the second block students develops the final exam paper.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise attendance		Yes	5.00	Theoretical part of the exam	Yes	30.00
Lecture attendance		Yes	5.00			
Project		Yes	50.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Miroslav Popović	Communication Protocol Engineering		CRC Press	2006	
2,	Daglas Komer	TCP/IP Internet			2005	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Dedicated Computer Structure Design 2</h2>				
Course id:	RT58					
Number of ECTS:	6					
Teachers:	Kovačević D. Vladimir, Atlagić S. Branislav					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Students will learn about the basics of designing dedicated computer structure using VHDL language and programmable structures.						
2. Educational outcomes (acquired knowledge):						
Students know the basic standards and technologies requires for designing dedicated computer structures and are able to use VHDL language of multiprocessor computer structures.						
3. Course content/structure:						
Real time design of computer supported systems. Design using VHDL, FPGA, CPLD, PLD based functional units. Design of digital comutator components using programmable logic structures.						
4. Teaching methods:						
Lectures, Tutorials, Computer practice,., Consultations During the term students attend lectures and computer practice classes.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Homework		Yes	30.00	Coloquium exam	No	40.00
				Theoretical part of the exam	Yes	30.00
				Practical part of the exam - tasks	Yes	40.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	B. Atlagić	Projektovanje namenskih računarskih struktura 2, skripta			2007	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Data Warehouse Systems</h2>				
Course id:	E2502					
Number of ECTS:	6					
Teacher:	Luković S. Ivan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Advanced students' education in the Data Warehouse (DW) system development and its application in Business Intelligence, i.e. software support of strategic and tactic management in organization systems.						
2. Educational outcomes (acquired knowledge):						
To gain necessary skills and knowledge for the design and implementation of business intelligence and data warehouse systems in industry practice, as well as coupling DW systems with decision support systems.						
3. Course content/structure:						
Characteristics, tasks and application domains of DW systems. Strategic system analysis as a prerequisite for the development of DW and business intelligence systems. Planning the DW system development process. A common methodology of the DW system development. A common DW system architecture. Enterprise DW systems and Data Mart systems. A common structure and the design of database schemas for DW systems. Methods and techniques of the initial load and subsequent refreshing of a DW database. Extraction, transforming and loading data into a DW database – ETL process. Computation of aggregated data in DW databases. Database Management Systems' mechanisms aimed at providing various DW system implementations. Preserving operational performances of DW systems. Decision support systems. OLAP tools and data analyses. Reporting techniques and tools. Data Mining techniques and tools in DW systems.						
4. Teaching methods:						
Teaching is performed through lessons, oral and computer exercises (in the computer classroom), as well as consultations. Through the teaching process, students are constantly motivated to an intensive discussion, problem oriented reasoning, independent study work and active participation in the whole lecturing process. The prerequisite to enter final exam is to complete all the pre-exam assignments by earning at least 30 points.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	10.00	Oral part of the exam	Yes	30.00
Complex exercises		Yes	10.00			
Exercise attendance		Yes	5.00			
Project		Yes	30.00			
Project task		Yes	15.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Inmon W. H.	Building The Data Warehouse (3rd Edition)		John Wiley & Sons, Inc, USA	2002	
2,	Ramakrishnan R., Gehrke J.	Database Management Systems		Mc Graw Hill	2000	
3,	Kimball R., Ross M.	The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling (2nd Edition)		John Wiley and Sons, Inc.	2002	
4,	Grupa autora	Priručnici za obezbeđenje upotrebe izabranog softverskog alata za razvoj DW sistema.			2005	
5,	Golfarelli Matteo, Rizzi, Stefano	Data Warehouse Design: Modern Principles and Methodologies		McGraw-Hill	2009	

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Table 5.2 Course specification

Course:		<b>Multimedia Systems</b>				
Course id:	E2505					
Number of ECTS:	6					
Teachers:	Ivetić V. Dragan, Suvajdžin Rakić B. Zorica, Mihajlović R. Dragan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal: Enabling students to collect, handle, archive, programme, synchronize and present multimedia data flow in the network environment.						
2. Educational outcomes (acquired knowledge): Acquired knowledge and skills are used for development/use of software/systems of expressed multimedia.						
3. Course content/structure: Multimedia (concepts, characteristics and media data flow). Characteristics of audio/video/image-graphic media (music-MIDI; speech; video-TV and HDTV / 3D). An overview of standards for compression and optical storage (standard algorithms; JPEG2000 and MPEG 1, 2, 4, 7 and 21; CD DA-ROM-WO-RW; DVD; holograph). MM communication systems (timer-user-control space and CSCW; requirements and limitations of the protocol on presentation-application and network-transportation ISO-OSI levels) and videoconference. MM data base (structures and operations). Synchronization of MM data (four-layer reference model and distributed systems). Program abstraction, tools and applications (programme and script languages; authoring systems and MM kiosk).						
4. Teaching methods: Lectures, Computer Practice, Consultations. The course is organized in 2 wholes which are checked in the form of 2 tests during the lectures. During Practice, multimedia contents are presented and manipulated on programs (DirectX or OpenGL) or authoring (Flash) levels, creating simple systems for exchange of multimedia contents in real time. The quality of the Practice work is evaluated. Successfully solved exercises are the examination prerequisites. The examination is taken in the written form. Points won at the examination, tests and prerequisites are added to form the final grade.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	50.00	Theoretical part of the exam	Yes	30.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	D. Ivetić	Osnovi interaktivnih sistema sa elementima računarske grafike i multimedije, u pripremi			2012	
2,	R. Steinmetz, K. Nahrstedt	Multimedia: Computing, Communications & Applications		Pretince Hall	1995	

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Table 5.2 Course specification

Course:		<b>Database Management Systems</b>					
Course id:	E2517						
Number of ECTS:	6						
Teacher:	Luković S. Ivan						
Course status:	Elective						
Number of active teaching classes (weekly)							
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:			
3	0	3	0	0			
Precondition courses		None					
1. Educational goal:							
Advanced education of students in the field of Database Management Systems (DBMS) applications, and database (DB) administration, with the possibility of their easy involvement in industry projects in the field of database system development.							
2. Educational outcomes (acquired knowledge):							
Acquiring of skills and knowledge necessary for the application of DBMSs in practice and database administration.							
3. Course content/structure:							
Features and tasks of DBMSs. Physical architecture of a DBMS. Memory management in a DBMS. File management in a DBMS. Physical database organization and performance management. Techniques for the usage of views, sequence generators and indexes at the DB server. Advanced SQL capabilities for database updates and queries. Query optimizers. Mechanisms for providing DB security and safety. DB backup, restore and recovery. Implementation of distributed databases. Software tools for database administration.							
4. Teaching methods:							
Teaching is performed through lessons, oral and computer exercises (in the computer classroom), as well as consultations. Through the teaching process, students are constantly motivated to an intensive discussion, problem oriented reasoning, independent study work and active participation in the whole lecturing process. The prerequisite to enter final exam is to complete all the pre-exam assignments by earning at least 30 points.							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Complex exercises		Yes	10.00	Oral part of the exam		Yes	30.00
Complex exercises		Yes	10.00				
Complex exercises		Yes	10.00				
Complex exercises		Yes	10.00				
Presentation		Yes	10.00				
Term paper		Yes	20.00				
Literature							
Ord.	Author	Title		Publisher		Year	
1,	Date C. J.	An Introduction to Database Systems (8th Edition)		Addison Wesley		2004	
2,	Ramakrishnan R., Gehrke J.	Database Management Systems		McGraw Hill, Inc.		2000	
3,	Mogin P, Luković I, Govedarica M	Principi projektovanja baza podataka		FTN Izdavaštvo		2004	
4,	Grupa autora	Priručnici za obezbeđenje administriranja izabranim SUBP				2005	
5,	Bryla Bob, Loney Kevin	Oracle Database 11g DBA Handbook		Oracle Press		2007	
6,	Ross Mistry	Microsoft SQL Server 2008 Management and Administration		Sams Publishing		2009	





Table 5.2 Course specification

Course:		<b>Industry Practice</b>				
Course id:	SEMSP0					
Number of ECTS:	3					
Teachers:						
Course status:		Mandatory				
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	0	3		
Precondition courses		None				
1. Educational goal:						
2. Educational outcomes (acquired knowledge):						
3. Course content/structure:						
4. Teaching methods:						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Literature						
Ord.	Author	Title		Publisher	Year	



Table 5.2 Course specification

Course:		<b>Research Work</b>				
Course id:	SEMSIR					
Number of ECTS:	5					
Teachers:						
Course status:		Mandatory				
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	5	0		
Precondition courses		None				
1. Educational goal:						
2. Educational outcomes (acquired knowledge):						
3. Course content/structure:						
4. Teaching methods:						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Literature						
Ord.	Author	Title		Publisher	Year	



Table 5.2 Course specification

Course:		<b>Master Thesys</b>				
Course id:	SEMZR0					
Number of ECTS:	17					
Teachers:						
Course status:		Mandatory				
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	0	10		
Precondition courses		None				
1. Educational goal:						
2. Educational outcomes (acquired knowledge):						
3. Course content/structure:						
4. Teaching methods:						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points

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Table 5.2 Course specification

Course:		<b>Social Networks</b>				
Course id:	E2523					
Number of ECTS:	6					
Teachers:	Gostojić L. Stevan, Nenadić M. Goran					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Understanding social concepts and technological infrastructure of social networks and social computing; understanding development trends of social computing; acquisition of knowledge and skills needed for development of social networking software; introduction to social network analysis and data mining; acquisition of basic knowledge about ethical and legal aspects of usage and development of social networking software and social network analysis and data mining.						
2. Educational outcomes (acquired knowledge):						
After successfully completing the course student: (1) understands social concepts and technological infrastructure of social networks and social computing, (2) understands development trends of social computing, (3) is qualified to develop social networking software, (4) is qualified in social network analysis and data mining, (5) is aware of ethical and legal aspects of usage and development of social networking software and social network analysis and data mining.						
3. Course content/structure:						
(1) overview of social networks and social computing, (2) Web 2.0, (3) identity management, (4) social network representation and analysis (graph theory and social networks, strong and weak ties, degree centrality, network segmentation, diffusion of information), (5) social computing standards, (6) social network data mining (classification and recommendation systems, sentiment analysis, opinion mining), (7) privacy and risks in social computing and (8) the future of social computing.						
4. Teaching methods:						
Teaching methods include: lectures, computer practice classes and consultations. During the lectures the content of the course is presented using the necessary didactic tools while student active participation is encouraged. The practical aspect of the course is covered at computer practice classes through assignments which students do independently or with the help of teaching assistants. The course lecturer and teaching assistants have consultations with the students. During the consultations the students are given additional explanations of the material covered at the lecture and practice classes.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		No	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Shashwat Srivastava and Apeksha Singh	Facebook Application Development with Graph API Cookbook		Packt Publishing	2011	
2,	Matthew A. Russell	Mining the Social Web: Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites		O'Reilly	2011	
3,	James Surowiecki	The Wisdom of Crowds		Oxford University Press	2008	
4,	David Easley and Jon Kleinberg	Networks, Crowds, and Markets: Reasoning About a Highly Connected World		Cambridge University Press	2010	
5,	Rudi Supek	Zanat sociologa: Strukturalna analiza		Školska knjiga	1983	

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Table 5.2 Course specification

Course:		<b>Text Mining</b>				
Course id:	E2524					
Number of ECTS:	6					
Teachers:	Kovačević D. Aleksandar, Nenadić M. Goran					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
The aims of the course are: provide students with the knowledge of important concepts and techniques of text mining and information extraction; make students capable of applying text mining (and information extraction) methods, tools and techniques.						
2. Educational outcomes (acquired knowledge):						
Students are acquainted with important concepts and techniques of text mining and information extraction and are capable of applying text mining (and information extraction) methods, tools and techniques.						
3. Course content/structure:						
Basic concepts and overview of the field of computational text analysis and information extraction. Pre-processing of the text. Lexical, syntactic and semantic analysis. The use of machine learning methods in the analysis of text: classification and clustering of textual documents. Probabilistic models for information extraction: Maximum Entropy Models, Hidden Markov Models, Conditional Random Fields. Rule-based information extraction. Automatic extraction of terms. Automatic extraction and semantic annotation of named entities in text. Automatic text summarisation. Systems for automatic answering questions. Visualization of text data. Information extraction from business reports. Automatic recognition of emotions and attitudes from text (opinion and sentiment mining). Information extraction in biology and medicine.						
4. Teaching methods:						
Lectures, laboratory exercises, consultations. The exam is oral. Exam score is based on the success of the laboratory exercises and the oral exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Ronen Feldman, James Sanger	The Text Mining Handbook: Advanced Approaches in Analyzing Unstructured Data		Cambridge University Press	2006	
2,	Sholom M. Weiss, Nitin Indurkha, Tong Zhang, Fred Damerau	Text Mining: Predictive Methods for Analyzing Unstructured Information		Springer	2004	
3,	Sophia Ananiadou, John Mcnaught	Text Mining for Biology And Biomedicine		Artech House	2005	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Contemporary educational technologies and standards</h2>					
Course id:	E2525						
Number of ECTS:	6						
Teachers:	Ivanović V. Dragan, Konjović D. Zora						
Course status:	Elective						
Number of active teaching classes (weekly)							
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:			
3	0	3	0	0			
Precondition courses      None							
1. Educational goal:							
Students are being introduced to the up-to-date educational technologies and standards and gain skills required for applying these technologies in educational settings.							
2. Educational outcomes (acquired knowledge):							
Upon successful completion of the course, a student understands the benefits of computer-supported education. He/she is capable to select and apply appropriate educational technologies and standards, while using, managing, customizing or developing e-learning software tools.							
3. Course content/structure:							
Up-to-date educational technologies: The history of educational technologies and the concept computer-supported learning; Up-to-date educational technologies and software tools; Modern approaches to education. ICT for contemporary education: Hardware, Software. Learning Management Systems. Intelligent Tutoring Systems. E-learning standards: Content representation, learning process. Open education. Pedagogical implications of contemporary educational technologies. E-learning strategies.							
4. Teaching methods:							
Classes, computer exercises, consultations. Exam is oral. Final grade is formed based on computer exercise grade and oral exam grade.							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Project		Yes	50.00	Oral part of the exam		Yes	50.00
Literature							
Ord.	Author	Title		Publisher		Year	
1,	William Horton, Katherine Horton	E-learning Tools and Technologies: A consumers guide for trainers, teachers, educators, and instructional designers		Wiley		2003	
2,	France Belanger, Dianne H. Jordan	Evaluation and Implementation of Distance Learning: Technologies, Tools and Techniques		IGI Publishing		2000	
3,	Marc Jeffrey Rosenberg	E-Learning: Strategies for Delivering Knowledge in the Digital Age		McGraw-Hill		2001	
4,	Beverly Park Woolf	Building Intelligent Interactive Tutors: Student-centered strategies for revolutionizing e-learning		Morgan Kaufmann		2008	
5,	Timothy K. Shih, Jason C. Hung	Future Directions in Distance Learning and Communication Technologies		IGI Global		2006	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Service Oriented Architectures</h2>				
Course id:	E2526					
Number of ECTS:	6					
Teachers:	Milosavljević P. Branko, Milanović N. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses      None						
1. Educational goal:						
Understanding of concepts and elements of designing and implementation of service oriented architectures in software systems.						
2. Educational outcomes (acquired knowledge):						
Upon successful completion of the course students will be able to design and implement contemporary service oriented architectures for software systems and SOA-specific methodologies, technologies and standards; analyze business organizations and models them as a set of services; orchestrate existing services for the creation of new services and applications.						
3. Course content/structure:						
SOA overview: integration of business processes and SOA; deriving services from the organization's mission; associating SOA design with the project management process. The SOA design process: transition from conceptual to executable services; structuring business requirements in a SOA; adapting services to business organization and needs; design patterns and SOA. Discovery and conceptual service design: defining service domains; atomic service determination; creating composite services; identifying needed resources; old information resources and their integration in SOA. Developing logical services: integration with service users; composition styles; principles of effective design; meeting business needs. Converting design to specification: specifying operations; specifying service contracts; specifying messages. Implementing services: parallel development; adapting the infrastructure for SOA; managing long-running business processes; service development. Managing SOA environment: evaluating SOA - Services Integration Maturity Model; functions and the use of Enterprise Service Bus.						
4. Teaching methods:						
Lectures; Computer practice. Consultations. The examination is oral. The final grade is formed on the bases of success at laboratory practice and oral examination.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam		
Project		Yes	50.00	Oral part of the exam		
Mandatory				Yes	50.00	
Literature						
Ord.	Author	Title		Publisher	Year	
1,	T. Erl	SOA Principles of Service Design		Prentice-Hall	2007	
2,	A. Rotem-Gal-Oz	SOA Patterns		Manning	2012	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Mobile Application Development</h2>				
Course id:	E2536					
Number of ECTS:	6					
Teachers:	Gostojić L. Stevan, Obradović J. Đorđe					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Acquisition of knowledge and skills needed for understanding concepts of mobile computing. Mastering technologies and tools for mobile application development.						
2. Educational outcomes (acquired knowledge):						
Knowledge of technologies for mobile application development. The student is competent to understand mobile computing concepts and to develop mobile applications.						
3. Course content/structure:						
Overview of mobile computing. Mobile devices' hardware. Communication protocols for mobile devices. Programming languages and operating systems for mobile devices. Mobile devices' user interface. Multimedia in mobile devices. Graphics. Network services. Location based services. Data bases. Security of mobile devices and systems.						
4. Teaching methods:						
Lectures; Computer practice classes; Consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Oral part of the exam	Yes	50.00
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Raj Kamal	Mobile Computing		Oxford University Press	2008	
2,	David Taniar	Mobile Computing: Concepts, Methodologies, Tools, and Applications		Information Science Reference	2009	
3,	David Taniar	Encyclopedia of Mobile Computing and Commerce		Information Science Reference	2007	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">IT Resources Management</h2>			
Course id:	E2537				
Number of ECTS:	6				
Teachers:	Ristić M. Sonja, Marković D. Vidan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal:					
Preparing students, future computer (SW / HW) engineers, for participation in the processes of providing quality IT services to defined business domain.					
2. Educational outcomes (acquired knowledge):					
After successfully completing the course the student is able to: 1. Understand the modes of organization of the company. Is able to handle the basic (core) processes of the company to support this process. Understands the basics of IT function. 2. Understand the classification of IT resources, the planning capacity of IT resources and budgets for IT resources. 3. Understand the basics of operational risk management including IT risks. 4. Understand the need for harmonization with the regulations depending on the business domain. 5. Understand the basics of information security management. 6. Understands the basics of IT control and audit. 7. Understand the difference between project management and service management. 8. Understand the concept of using best practices in the management of IT resources. 9. Understand the life cycle of IT services (service strategy, service design, service transition, service operation, and service retirement), and how to model IT service, etc.					
3. Course content/structure:					
1. Management of IT resources. Definition (of interest) of IT resources: Methods and systems for managing IT resources provided to satisfy the required functionality, quality, safety, and performance of IT solutions at minimal cost. 2. Planning and control of IT resources. Categorization of IT resources (HW, SW, HR), IT Resource Capacity Planning: IT planning, project planning and service IT resource planning and IT budget (CAPEX, OPEX, depreciation, etc.). Capacity control and exercise plans: methods and tools to control the capacity (bandwidth network, server performance, storage space systems, computer users (non) utilization SW licenses, the man spent days * developers, and others.). 3. IT risk management, IT security and compliance with regulatory requirements. The definition of risk, IT risk categorization, measurement of risk: qualitative and quantitative methods for risk management, IT risk association with operational risk management, information security basics: logical and physical security, procedures, policies and tools to ensure information security, regulatory requirements: SOX , examples of regulatory requirements finiansijskoj industry, IT controls and audit: IT control objectives and audits, COBIT, CMMI, process control and execution of IT audits, internal and external audit. 4. Project management vs. services management. A review of project management: definition, objectives, processes for the project, project resources. The relationship between IT projects and IT service operations: defining dependencies, IT resource planning complex (multi project and multi-service), etc..					
4. Teaching methods:					
Multimedijalna predavanja i vezbe na praktičnim primerima uz korišćenje odgovarajućih SW alata.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project defence		Yes	50.00	Oral part of the exam	
				Mandatory	Points
				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	Vidan Markovic	Informatičko sazrevanje kompanije		Želnid Beograd	2006
2,	R. Burton, G. DeSanctics, B. Obel	Organizational Design		Cambridge University Press	2006
3,	D. Tudor	Agile Projects and Services Management: Delivering IT Services using ITIL, PRINCE2 and DSDM Atern		DSDM Consortium	2010
4,	D. Parmenter	Key Performance Indicators		Wiley	2010
5,	F Gallegos, S. Senfet, D. Manson, C. Gonzales	IT Control and Audit		Auerbach Publications	2004

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Programm Optimization</h2>				
Course id:	SEM099					
Number of ECTS:	6					
Teacher:	Rakić S. Predrag					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
2. Educational outcomes (acquired knowledge):						
3. Course content/structure:						
4. Teaching methods:						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project defence		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Richard Gerber, Aart J. C. Bik, Kevin Smith, Xinmin Tian	The Software Optimization Cookbook: High Performance Recipes for IA-32 Platforms, 2nd Edition		Intel Press	2005	
2,	Agner Fog	Optimizing software in C++: An optimization guide for Windows, Linux and Mac platforms		On-line book	2012	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Intelligent Control Systems</h2>					
Course id:	SEAM01						
Number of ECTS:	6						
Teachers:	Bojanić M. Dubravka, Čongradac D. Velimir, Kulić J. Filip						
Course status:	Elective						
Number of active teaching classes (weekly)							
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:			
3	0	3	0	1			
Precondition courses		None					
1. Educational goal:							
Students learn about systems of automatic control based on computer intelligence methods.							
2. Educational outcomes (acquired knowledge):							
The acquired knowledge can be used in solving concrete engineering problems.							
3. Course content/structure:							
Application of artificial neural networks in the identification, diagnosis, prediction and control. Fuzzy systems in systems engineering. Neuro fuzzy systems: combining fuzzy logic and neural networks in control. Genetic algorithms in systems engineering. Design of classic and neuro fuzzy regulators using genetic algorithms. Support vector machines and their application in identification and control of systems.							
4. Teaching methods:							
Lectures. Computational and computer practice. Consultations. The exam is written and oral. Passing the written part is the prerequisite for the oral part. The final grade is formed on the bases of achievements at the colloquium, homework assignments and the quality of the written and oral part of the exam.							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Project		Yes	30.00	Oral part of the exam		Yes	30.00
				Practical part of the exam - tasks		Yes	40.00
Literature							
Ord.	Author	Title		Publisher		Year	
1,	V.Kecman	Learning and Soft Computing		MIT Press		2001	
2,	S.M.Kartalopoulos	Understanding Neural Networks and Fuzzy Logic		IEEE Press p.u.		1996	
3,	J.S.R.Jang; C.T.Sun; E.Mizutani	Neuro-Fuzzy and Soft Computing		Prentice Hall		1997	
4,	R.L.Haupt; S.E.Haupt	Practical Genetic Algorithms		Wiley-Interscience		2004	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Integration of Distributed Control Systems</h2>					
Course id:	SEAM06						
Number of ECTS:	6						
Teachers:	Čapko Lj. Darko, Erdeljan M. Aleksandar						
Course status:	Elective						
Number of active teaching classes (weekly)							
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:			
3	0	3	0	0			
Precondition courses		None					
1. Educational goal:							
The goal of this course is to acquire the necessary knowledge about the concepts and integration of distributed systems and their implementations.							
2. Educational outcomes (acquired knowledge):							
Outcomes are the knowledge, skills and abilities necessary for understanding the complexity of integration in distributed and SCADA systems and solve practical engineering problems in power systems.							
3. Course content/structure:							
Software architecture overview. Architectural styles: layered architectures, object-oriented architectures, data-centered architectures, event-based architectures. Service-oriented architecture (SOA) fundamentals: definition, requirements, design principles, interfaces, protocols, functionality, elements of SOA; service types and layers. SCADA services and description of services. SOA types in SCADA systems: fundamental, service composition architecture, service inventory architecture, service-oriented enterprise architecture; Technologies for SOA implementation; Web services and protocols. Enterprise service-bus (ESB); ESB infrastructure, enterprise application integration via services; examples of ESB based application integration in SCADA systems. XML based technologies used for interfacing with SOA services.							
4. Teaching methods:							
Teaching is conducted through lectures and computer exercises. During the exercises the student is required to apply their knowledge in practice.							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Project task		Yes	30.00	Oral part of the exam		Yes	30.00
Test		Yes	10.00				
Test		Yes	10.00				
Test		Yes	10.00				
Test		Yes	10.00				
Literature							
Ord.	Author	Title		Publisher		Year	
1,	Dirk Krafzig, Karl Banke, Dirk Slama	Enterprise SOA: Service-Oriented Architecture Best Practices		Pearson Education		2005	

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Table 5.2 Course specification

Course:		<b>Practicum in computer engineering and computer communications</b>				
Course id:	RT511					
Number of ECTS:	6					
Teachers:	Temerinac R. Miodrag, Teslić Đ. Nikola, Popović V. Miroslav, Kovačević V. Jelena, Pap I. Ištvan, Samardžija M. Dragan, Kukulj D. Dragan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses      None						
1. Educational goal: Educating students to use modern programming tools and frameworks for practical work in computer engineering and computer communications.						
2. Educational outcomes (acquired knowledge): Ability to use modern programming tools and frameworks for practical work in computer engineering and computer communications.						
3. Course content/structure: Tutorials and laboratory exercises for state of the art tools and frameworks.						
4. Teaching methods: Classes are held for the purpose of getting to know modern programming tools and frameworks through introductory lectures, and through the series of laboratory exercises for the purpose of training of students for practical work with the tools and frameworks in the area of computer engineering and computer communications.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam		
Laboratory exercise defence		Yes	70.00	Practical part of the exam - tasks		
				Yes	30.00	
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Boris Radin	Praktikum iz računarske tehnike i računarskih komunikacija, skripta			2012	

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Table 5.2 Course specification

Course:		<b>Computer game development</b>				
Course id:	E2528					
Number of ECTS:	6					
Teachers:	Ivetić V. Dragan, Obradović M. Ratko					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	3	0	0		
Precondition courses		None				
1. Educational goal:						
Enabling the student to understand the developmental process for modern computer games and enabling him or her to apply their knowledge in the are of highly interactive computer games.						
2. Educational outcomes (acquired knowledge):						
Acquired skills and competencies are used for the development of computer games, including both those intended for serious use and those intended for entertainment, and simulations.						
3. Course content/structure:						
The concept of a video game. The technology and the process of computer game development. Interaction and computer games(development in the instances of player versus the computer and in the instances of multiplayer gameplay). Simulation in computer games. The psychological aspects of computer game development (the concept of gameplay and user satisfaction metrics). The concept of storytelling and aesthetics in computer games. The applicability of computer games (the entertainment game market, serious games and games and education).						
4. Teaching methods:						
Lectures, computer laboratory exercises, consultations. The contents of the course are divided into two parts, the comprehension of each of which is tested using two tests conducted during lecture time. The exercises are conducted using the XNA library and authoring tool in order to study different aspects of computer game development. Knowledge thus acquired is tested using an independent project which includes the design and implementation of a simple but complete computer game. The work on this project is done in teams. The successful completion of the laboratory exercises is a precondition of the final exam. The final exam consists of a written examination. The final grade is obtained by adding up the results from the exam, the tests and the exercises.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	50.00	Written part of the exam - tasks and theory	Yes	30.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Dragan Ivetić	Proces razvoja računarskih igara			2012	
2,	Erik Bethke	Game Development and Production			2003	
3,	Aaron Reed	Learning XNA 4.0: Game Development for the PC, Xbox 360, and Windows Phone 7		O'Reilly	2010	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Domain Specific Modeling and Languages</h2>			
Course id:	E2530				
Number of ECTS:	6				
Teacher:	Luković S. Ivan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	0	3	0	0	
Precondition courses		None			
1. Educational goal:					
Getting knowledge about advanced techniques and methods of domain specific modeling and the development of domain specific languages.					
2. Educational outcomes (acquired knowledge):					
The acquired knowledge is used in practice, particularly in projects including system specification and development. It is applicable in all problem domains, where meta-meta models are to be used and specific meta-models are to be developed together with domain specific languages so as to solve practical problems.					
3. Course content/structure:					
Domain specific modeling methods and techniques. A notion and role of a meta-meta model. MOF 2.0 and the equivalent meta-meta models. Software tools for domain specific modeling. A notion, role, taxonomy and evolution of domain specific languages. Domain specific language development methods. Software tools for domain specific language development. Domain specific language implementation techniques. Methods and techniques of the problem domain analysis. Applications of domain specific languages in the domain specific modeling. Model transformations. Program code generators. Applications of domain specific modeling and languages in various problem domains.					
4. Teaching methods:					
Teaching is performed through lessons, oral and computer exercises (in the computer classroom), as well as consultations. Through the teaching process, students are constantly motivated to an intensive discussion, problem oriented reasoning, independent study work and active participation in the whole lecturing process. The prerequisite to enter final exam is to complete all the pre-exam assignments by earning at least 30 points.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Complex exercises		Yes	10.00	Oral part of the exam Mandatory      Points Yes              30.00	
Complex exercises		Yes	10.00		
Exercise attendance		Yes	5.00		
Project		Yes	30.00		
Project task		Yes	15.00		
Literature					
Ord.	Author	Title		Publisher	Year
1,	Kelly S., Tolvanen J. P.	Domain-Specific Modeling: Enabling Full Code Generation		Wiley-IEEE Computer Society Press	2008
2,	Kleppe A. G., Warmer J, Bast W.	MDA Explained: The Model Driven Architecture: Practice and Promise		Addison-Wesley	2003
3,	Mernik M.	Formal and Practical Aspects of Domain-Specific Languages: Recent Developments		IGI Global	2013
4,	Brambilla M., Cabot J., Wimmer M.	Model-Driven Software Engineering in Practice		Morgan & Claypool, USA	2012



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

### Standard 06. Programme Quality, Contemporaneity and International Compliance

The study programme Software Engineering and Information Technologies is in accordance with contemporary international scientific trends and state of the professional field and is comparable with similar programmes at higher education institutions abroad.

Software Engineering and Information Technologies study programme is formed in such a way to be complete and comprehensive and provide students with the latest scientific and professional knowledge in this field.

Software Engineering and Information Technologies study programme is comparable and coordinated with:

1. Software Engineering study programme implemented at Rochester Institute of Technology (<http://www.se.rit.edu/graduate-study>)

2. Software Engineering study programme implemented at Drexel University (<http://www.ece.drexel.edu/MSSE.html>)

3. Software Engineering study programme implemented at Florida Institute of Technology ([http://www.fit.edu/programs/grad/ms\\_software\\_engineering](http://www.fit.edu/programs/grad/ms_software_engineering))

4. Software Engineering study programme implemented at University of Glasgow (<http://www.gla.ac.uk/postgraduate/taught/softwareengineeringmsc/>)

5. Software Engineering study programme implemented at City University – London (<http://www.city.ac.uk/courses/postgraduate/software-engineering>)

6. Software Engineering and Management study programme implemented at University of Goeteborg (<http://www.itufak.gu.se/english/education/programmes/se120hec/>)

Faculty members, assistants and students have, for the last few years, been actively involved in the Campus Europea students exchange project. Large number of these students are studying some aspects of software engineering.



## Study Programme Accreditation

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### Standard 07. Student Enrollment

Although there is a high demand in job market for professionals in the area of software engineering, the Faculty of Technical Sciences, in accordance with social demands and its resources and approved number of students in the accreditation process, enrolls to graduate academic studies-Master of Software Engineering and Control Engineering on budget funded and self funded studies a certain number of students defined each year by the special decision of the Educational and Scientific Council of the Faculty of Technical Sciences.

The selection and enrolment of the applied candidates is based on their success during the previous education, and entrance examination as defined by the Regulations on Enrolment of Students to Study Programmes.

Students from other study programmes and persons who have completed studies which are worth at least 240 ETCS can enroll into this study programme, as defined by the Regulations on Enrolment of Students to Study Programmes. The committee for evaluation (formed by all department heads participating in the realization of the study programme) evaluate all the passed examinations of the candidates and based on the accepted number of points determine the year of studies the candidate can enroll to.

Candidates who have completed appropriate study programme gain right for enrollment at Master academic studies. Committee for quality control decides whether the candidates who gained right for enrollment are obligated to take entering exam. If Committee for quality control decides that examination has to be taken, candidates take the entering exam: tests in the field of study programme.

Committee, in accordance with the Regulations on Enrolment of Students to Study Programmes, has the right to approve enrollment of candidates who have not completed appropriate academic studies which are worth minimum 240 ETCS, if vacancies remain after enrollment of all candidates who meet the requirements. Candidates who have not completed appropriate undergraduate study programme can be approved to enroll if they successfully pass entering examination. Committee, in that case, determines courses from the undergraduate studies that student must additionally take and successfully pass. Total number of ETCS credits of those additional courses determined by Committee can not exceed 30 (thirty). Committee for quality control members are Head of the study programme and Heads of all departments to which the courses from the study programme belong, or teachers who Heads of those departments determine, in accordance with the Regulations on Enrolment of Students to Study Programmes.



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### Standard 08. Student Evaluation and Progress

The final grade in each course included in this programme is formed by continual monitoring of students' accomplishments throughout the academic year and by passing the final examination. Students master the study programme by taking examinations and thus obtaining a certain number of ECTS credits, in accordance with the study programme. Each course within the programme is worth a certain number of ECTS credits which students obtain by successfully passing the course examination.

The number of ECTS credits is based on the quantity and quality of work students are required to submit during a certain course and on the Faculty of Technical Sciences' unique methodology for all study programmes. Students' success in mastering a certain course is constantly monitored during classes and is expressed in points. The maximum number of points obtained in a course is 100.

Students obtain points from a course through their work during classes, completion of the pre exam duties and taking the examination. The minimal number of points a student can obtain by fulfilling the course prerequisites during classes is 30, the maximum 70.

Each course at the study programme has a clear and transparent mode of obtaining points. The ways of obtaining points during the classes includes the number of points obtained on the basis of each individual activity during the classes or completing pre exam duties and by passing the course examination.

The final success of students at a course is presented with a grade from 5 (fail) to 10 (excellent). The student's grade is based on the overall number of points obtained by fulfilling pre exam duties and taking the examination, and in accordance with the quality of acquired knowledge and skills.

For students to be able to take a course examination, they have to obtain at least 55% of the overall number of points through pre exam duties during the semester. Additional requirements for taking the examination are defined separately for every course.

Student advancement during the studies is defined by the Regulations on studying on master academic studies.

**Study Programme Accreditation**

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**Standard 09. Teaching Staff**

For the realization of the Software Engineering and Information Technology study programme, there is the faculty staff with necessary scientific, artistic and professional qualifications.

The number of teachers is adequate to the needs of the study programme and depends on the number of subjects and the number of classes for those subjects. The total number of staff members is adequate for the total number of classes at the study programme, so that a teacher has an average of 180 classes of active classes (lectures, consultations, tutorials, practice classes, etc.) a year, i.e. 6 classes a week. Of the total number of teachers all 100% are employed full time.

The number of assistants is adequate for the needs of the study programme. The total number of assistants at the study programme is adequate to cover total number of classes so that the assistants have an average of 300 hours of active classes a year, i.e. 10 classes a week. The scientific and professional qualifications of the teaching staff are adequate for the educational and scientific field and the level of their duties. Each teacher has at least five references in the scientific or professional field taught at the study programme.

The size of the group for lecture classes is up to 32 students, for practice classes up to 16 students and for laboratory practice up to 8 students.

None of the teachers has more than 12 hours of classes a week. All information regarding the teaching staff and assistants (CV, appointments, references) are available to public.

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Science, arts and professional qualifications

Name and last name:	Atlagić S. Branislav		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 07.01.1985		
Scientific or art field:	Computer Engineering and Computer Communication		
Academic career	Year	Institution	Field
Academic title election:	2011		Computer Engineering and Computer Communication
PhD thesis	2001	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1996	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1984	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E230	Logic Design of Computer Systems 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2. RT49	Real Time Software 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3. RT49A	Real Time Software 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
4. ESI006	Introduction to critical mission software for power grids	( ES0) Power Software Engineering, Undergraduate Academic Studies
5. ESI009	Smart Grid Communication Protocols	( ES0) Power Software Engineering, Undergraduate Academic Studies
6. ESI019	Critical mission software for power grids	( ES0) Power Software Engineering, Undergraduate Academic Studies
7. RT58	Dedicated Computer Structure Design 2	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8. ESI025	Simulation of Power Greed critical mission systems	( ES0) Power Software Engineering, Master Academic Studies
9. ESI033	Advanced Power Grid Communication Protocols	( ES0) Power Software Engineering, Master Academic Studies
10. DRNI02	Selected Topics in Advanced Software Architecture	( E20) Computing and Control Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Udžbenik "Logičko projektovanje računarskih sistema II", V.Kovačević, B.Atlagić, FTN 2007/2009.
2.	M.Popovic, B.Atlagic, V.Kovacevic, "Case study: a maintenance practice used with real-time telecommunications software", Journal of Software Maintenance and Evolution, John Wiley and Sons Ltd, March-April issue, 2001.
3.	D.Kukolj, M.Berko-Pušić, B.Atlagić, "Experimental Design of Supervisory Control Functions Based on Multilayer Perceptron", Artificial Intelligence for Engineering Design, Analysis and Manufacturing, 15(5) 2001, pp. 425-431.



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Representative references (minimum 5, not more than 10)

4.	D.Kukolj, B.Atlagic, M.Petrov, "Data clustering using a re-organizing neural network", Taylor & Francis Inc., Cybernetics and Systems, An Int. Journal, Vol. 37, No. 7, 2006, pp. 779-790.
5.	Generalizovani akviziciono upravljački sistem - GAUS
6.	B.Atlagic, M.Sagi, D.Milinkov, S.Culaja, B.Bogovac, "A way towards efficiency of SCADA infrastructure", ECBS 2012, Novi Sad 2012.
7.	B.Atlagic, D.Milinkov, M.Sagi, B.Bogovac, "High-Performance Networked SCADA Architecture For Safety-Critical Systems", ECBS-EERC 2011, Bratislava.
8.	B.Atlagic, V.Mihić, T.Maruna, "A Methodology for Specification and Development of Control Code in Industrial DCS Application", XIV International Conference on Systems Science, Wroclav 2001.
9.	B.Atlagic, M.Sagi, D.Milinkov, B.Bogovac, S.Culaja, "Model-based approach to the Development of SCADA applications", The 9th IEEE Workshop on Model-Based Development for Computer-Based Systems, Novi Sad 2012.
10.	B.Atlagic, D.Kukolj, V.Kovacevic, M.Popovic, "Application development environment of an integrated SCADA system", EUROCON 2003, Ljubljana 2003.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	3		
Current projects :	Domestic :	2	International : 1

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### Science, arts and professional qualifications

Name and last name:		Bojanić M. Dubravka	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 24.06.2003	
Scientific or art field:		Automatic Control and System Engineering - biomedicine	
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering - biomedicine
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	2003	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1998	School of Electrical Engineering - Beograd	Automatic Control and System Engineering
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	AU42	Technical Equipment for Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	AU43	Fundamentals of Biomedical Engineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies ( E20) Computing and Control Engineering, Undergraduate Academic Studies
3.	AU47	DSP Applications in Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	AU49	Methods of Medical Image Forming and Analysis	( E20) Computing and Control Engineering, Undergraduate Academic Studies
5.	AUN43	Biomedical Engineering Technologies	( E20) Computing and Control Engineering, Undergraduate Academic Studies
6.	GI007	Digital Signal Processing in Geomatics	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
7.	BMI112	Biomedical engineering in sport physiology	( BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	BMI113	Neuroengineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	BMI114	Neural Prosthesis	( BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	BMI122	Neurorehabilitation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
11.	BMI124	System Modeling and Simulation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
12.	BMI125	Biological Control Systems	( BM0) Biomedical Engineering, Undergraduate Academic Studies
13.	E2314	Microprocessor Based Control Devices	( E20) Computing and Control Engineering, Undergraduate Academic Studies
14.	SEAU03	Real-time control algorithms	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
15.	SEAU05	DSP Applications in Control Systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
16.	SEAU07	Signals and systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies



## Study Programme Accreditation

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Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
17. SEAU08	Microprocessor Based Control Devices	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
18. AU503	Methods of Analysing Electrophysiological Signals	( E20) Computing and Control Engineering, Master Academic Studies
19. AU504	Movement Control	( E20) Computing and Control Engineering, Master Academic Studies
20. AU505	Neural Prostheses	( E20) Computing and Control Engineering, Master Academic Studies
21. AU507	Principles of Biomedical Engineering	( E20) Computing and Control Engineering, Master Academic Studies
22. AU508	Information Flow in Medicine	( E20) Computing and Control Engineering, Master Academic Studies
23. BMIM3A	Biophysiological systems modelling	( BM0) Biomedical Engineering, Master Academic Studies
24. BMIM3C	Functional Electrical Therapy	( BM0) Biomedical Engineering, Master Academic Studies
25. SEAM01	Intelligent Control Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
26. SEAM04	Soft Sensors	( SE0) Software Engineering and Information Technologies, Master Academic Studies
27. DAU007	Selected Topics in Artificial Intelligence in Control and Signal Processing	( E20) Computing and Control Engineering, Doctoral Academic Studies
28. DAU008	Selected Chapters in Signal Processing in Biomedical Engineering	( E20) Computing and Control Engineering, Doctoral Academic Studies
29. DAU009	Selected Chapters in Biomedical Instrumentation and Telemetry	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Popovic-Bijelic A., Bijelic G., Jorgovanović N., Bojanić D., Popović M., Popović D.: Multi-field surface electrode for selective electrical stimulation , Artificial Organs, 2005, Vol. 29, No 6, pp. 448-452, ISSN 0160-564X
2.	Čongradac V., Bojanić D., Čapko D.: Algorithm for blinds control based on the optimization of blind tilt angle using a genetic algorithm and fuzzy logic, Solar Energy, 2012, Vol. 86, No 9, pp. 2762-2770, ISSN 0038-092X
3.	Bojanić D., Petrovački-Balj B., Jorgovanović N., Ilić V.: Quantification of dynamic EMG patterns during gait in children with cerebral palsy, Journal of Neuroscience Methods, 2011, No 198, pp. 325-331, ISSN 0165-0270
4.	Popovic, M.B., Jorgovanovic, N., Bijelic, G., Bojanic, D., Popovic, D.B., Synergistic Control of Grasping and Releasing In Humans with Paralysis, Proc of REDISCOVER 2004 Southeastern Europe, USA, Japan and European Community Workshop on Research and Education in Control and Signal Processing, June 14-16, 2004, Cavtat, Croatia, pp 86-89.
5.	Bijelic, G., Jorgovanovic, N., Bojanic, D., Popovic-Bijelic, A., Popovic, D.B., Actitrode – a selective Array Electrode: A Tool to Generate Grasp and Release by Surface Electrical Stimulation, MEDICON, Ischia, July 31-August 5, 2004.
6.	Popovic-Bijelic, A., Bijelic, G., Jorgovanovic, N., Bojanic, D., Popovic, D.B., Popovic, M.B., Multi-field surface electrode for selective electrical stimulation, Proc 8th Vienna Workshop on FES, Sep 10-13, 2004., pp 195-198
7.	Bojanić D., Petrović R., Jorgovanović N., Popović D.: Dyadic Wavelets for Real-time Heart Rate Monitoring, 8. NEUREL - Symposium on Neural Network Applications in Electrical Engineering, IEEE, belgrade, 25-27 Septembar, 2006, pp. 133-136, ISBN 1-4244-0432-0
8.	Bojanic, D., Popovic, D.B., "QRS detection from an ongoing ECG recordings by using dyadic wavelets", 2nd European Medical and Biological Engineering Conference, Vienna, December, 2002.
9.	Bojanić D.: Razvoj ekspertnog sistema za interpretaciju elektrofizioloških signala, Doktorska disertacija, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, januar 2012.
10.	Bojanić Dubravka, "Detekcija QRS kompleksa u EKG signalu korišćenjem dyadic wavelet transformacije", Magistarska teza, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad, februar 2003.

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	62
Total of SCI(SSCI) list papers :	3
Current projects :	Domestic : 1 International : 1



Science, arts and professional qualifications

Name and last name:	Čapko Lj. Darko		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 25.01.1999		
Scientific or art field:	Automatic Control and System Engineering		
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	2002	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1998	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E232	System Modeling and Simulation	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2. H213	System Modelling and Simulation 1	( G10) Geodesy and Geomatics, Undergraduate Academic Studies ( H00) Mechatronics, Undergraduate Academic Studies
3. BMI124	System Modeling and Simulation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
4. E2312	Software design for SCADA systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5. ESI013	Multi-tier applications development in power systems	( ES0) Power Software Engineering, Undergraduate Academic Studies
6. ESI020	Data structures and algorithms in power systems	( ES0) Power Software Engineering, Undergraduate Academic Studies
7. SEAU02	SCADA Software	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
8. SEAU09	Software design of SCADA systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9. AU502	Distributed Control Systems	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10. BMIM3D	Development of integrated biomedical systems	( BM0) Biomedical Engineering, Master Academic Studies
11. E2533	Discrete event simulation	( E20) Computing and Control Engineering, Master Academic Studies
12. E2535	Software Algorithms in Supervisory Control and Data Acquisition Systems	( E20) Computing and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
13.	ESI024 Applied algorithms in power systems	( ESO) Power Software Engineering, Master Academic Studies
14.	ESI034 Multi-tier applications development in Smart Grids	( ESO) Power Software Engineering, Master Academic Studies
15.	SEAM06 Integration of Distributed Control Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
16.	DAU006 Selected Chapters in Modeling and Simulation of Dynamic Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
17.	DAU018 Selected Chapters in Distributed Control Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
18.	ZRD25A Selected chapters from Artificial Ingeligence	( Z01) Safety at Work, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Vukmirović S., Erdeljan A., Čapko D., Lendak I., Nedić N., „Optimization of workflow scheduling in Utility Management System with hierarchical neural network“, International Journal of Computational Intelligence Systems., Vol. 4, No. 4, pp. 672-679, 2011., ISSN 1875-6891
2.	Vukmirović S., Erdeljan A., Lendak I., Čapko D., „A novel software architecture for Smart Metering systems“, Journal of Scientific and Industrial Research, Vol. 2010, No. 12, pp. 937-941, 2010., ISSN 0022-4456
3.	Čapko D., Erdeljan A., Vukmirović S., Lendak I., „A Hybrid Genetic Algorithm for Partitioning of Data Model in Distribution Management Systems“, Information technology and control, Vol. 40, No. 4, 2011., ISSN 1392-124X
4.	Čapko D., Erdeljan A., Popović M., Švenda G., „An Optimal Initial Partitioning of Large Data Model in Utility Management Systems“, Advances in Electrical and Computer Engineering, No. 4, 2011., ISSN 1582-7445
5.	Nedić N., Vukmirović S., Erdeljan A., Lendak I., Čapko D., „ A Genetic Algorithm Approach for Utility Management System Workflow Scheduling “, Information technology and control, Vol. 39, No. 4, pp. 310-316, 2010., ISSN 1392-124X
6.	Vukmirović S., Erdeljan A., Čapko D., Lendak I., „Extension of the Common Information Model with Virtual Meter“, Electronics and electrical engineering, Vol. 107, No. 1, pp. 59-64, 2011., ISSN 1392-1215
7.	Čapko D., Erdeljan A., Švenda G., Popović M., „Dynamic Repartitioning of Large Data Model in Distribution Management Systems“, Electronics and electrical engineering, Vol. 121, No. 4, pp. 83-85, 2012., ISSN 1392-1215
8.	Vukmirović S., Erdeljan A., Lendak I., Čapko D., „Optimal Workflow Scheduling in Critical Infrastructure Systems with Neural Networks“, Journal of Applied Research and Technology, Vol. 10, No. 2, pp. 114-121, 2012., ISSN 1665-6423
9.	Vukmirovic, Srdjan; Erdeljan, Aleksandar; Lendak, Imre; Capko, Darko: Unifying the Common Information Model (CIM), REVUE ROUMAINE DES SCIENCES TECHNIQUES-SERIE ELECTROTECHNIQUE ET ENERGETIQUE 2012 57 (3):301-310
10.	Velimir Congradac, Marta Prica, Marija Paspalj, Dubravka Bojanic, Darko Capko: Algorithm for blinds control based on the optimization of blind tilt angle using a genetic algorithm and fuzzy logic, Solar Energy 86 (2012), pp 2762–2770

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	0
Total of SCI(SSCI) list papers :	10
Current projects :	Domestic : 1 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Čongradac D. Velimir		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 15.06.1998		
Scientific or art field:	Automatic Control and System Engineering		
Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	2000	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1998	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	AU43	Fundamentals of Biomedical Engineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies ( E20) Computing and Control Engineering, Undergraduate Academic Studies
2.	AU50	Process Control by Computer	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
3.	GI005	Intelligent Control Systems	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	Z410A	Geospatial technologies and systems	(Z20) Environmental Engineering, Undergraduate Academic Studies
5.	Z410	Geoinformacione tehnologije i sistemi(uneti naziv na engleskom)	(Z20) Environmental Engineering, Undergraduate Academic Studies
6.	BMI112	Biomedical engineering in sport physiology	( BM0) Biomedical Engineering, Undergraduate Academic Studies
7.	BMI113	Neuroengineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	BMI120	Equipment and systems for helping the elderly, ill and disabled	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	BMI124	System Modeling and Simulation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	BMI125	Biological Control Systems	( BM0) Biomedical Engineering, Undergraduate Academic Studies
11.	E2311	Automation in smart office-residential buildings	( E20) Computing and Control Engineering, Undergraduate Academic Studies
12.	EMSAU <sub>1</sub>	Automatic Control Systems in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
13.	SEAU01	Nonlinear programming and evolutionary computations	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
14.	SEAU03	Real-time control algorithms	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
15.	SEAU04	Software of BMS	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
16.	SEAU06	Software of Process Computers	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
17.	ZC037	Automation applied in the industry and buildings	( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
18.	AU514	Totally Integrated Automatic Control Systems	( E20) Computing and Control Engineering, Master Academic Studies
19.	S054	Computer Modelling and Simulation	( S01) Postal Traffic and Telecommunications, Master Academic Studies



List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
20. SEAM01	Intelligent Control Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
21. SEAM02	Adaptive and advanced control	( SE0) Software Engineering and Information Technologies, Master Academic Studies
22. SEAM03	Software Algorithms in Supervisory Control and Data Acquisition Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
23. SEAM05	Dynamic Programming, combinatorial and network optimization	( SE0) Software Engineering and Information Technologies, Master Academic Studies
24. DAU017	Selected Topics from Totally Integrated Automatic Control Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
25. DAU018	Selected Chapters in Distributed Control Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Čongradac V., Kulić F.: Recognition of the importance of using artificial neural networks and genetic algorithms to optimize chiller operation, Energy and Buildings, 2012, Vol. 47, pp. 651-658, ISSN 0378-7788
2.	Čongradac V., Jorgovanović N., Stanišić D.: Assessing the energy consumption for heating and cooling in hospitals, Energy and Buildings, 2012, Vol. 48, pp. 146-154, ISSN 0378-7788
3.	Čongradac V., Bojanić D., Čapko D.: Algorithm for blinds control based on the optimization of blind tilt angle using a genetic algorithm and fuzzy logic, Solar Energy, 2012, Vol. 86, No 9, pp. 2762-2770, ISSN 0038-092X
4.	Čongradac V., Kulić F.: HVAC system optimization with CO2 concentration control using genetic algorithms, Energy and Buildings, 2009, ISSN 0378-7788
5.	Čongradac V.: Control of the lighting system using a genetic algorithm, Thermal Science, 2012, Vol. 16, No 1, pp. 237-250, ISSN 0354-9836, UDK: 621
6.	Čongradac V.: Business process management in sustainable property/asset management by using the totalobserver, Thermal Science, 2012, Vol. 16, No 1, pp. 269-279, ISSN 0354-9836, UDK: 621

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	6		
Current projects :	Domestic :	1	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Dejanović R. Igor		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 16.10.2000		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2012		Applied Computer Science and Informatics
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Computer Science
Magister thesis	2008	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	2000	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E235	Fundamentals of Information Systems and Software Engineering	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	E2S40	Software Patterns and Components	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
3.	ISIT08	Object oriented programming fundamentals	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	ISIT26	Upravljanje projektima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5.	ISIT27	Osnove softverskih arhitektura	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	ISIT36	Software Development Tools	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	ISIT3A	Metodologije i sistemi za upravljanje IT resursima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
8.	ISIT48	Tehnologije i sistemi za podršku korisnicima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
9.	SES202	Model Driven Software Development	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
10.	SES204	Advanced Programming Tecnics	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
11.	SES40	Software patterns and components	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12.	E2510	Software Configuration Management	( E20) Computing and Control Engineering, Master Academic Studies ( F20) Engineering Animation, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

		UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6		
		<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES                      Software Engineering and Information Technologies		
List of courses being held by the teacher in the accredited study programmes				
ID	Course name	Study programme name, study type		
13.	E2519 Domain-Specific Languages	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies		
14.	DRNI12 Selected Topics in Contemporary Software Development Methods	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies		
Representative references (minimum 5, not more than 10)				
1.	Gordana Milosavljević, Igor Dejanović, Branko Perišić: Brz razvoj adaptivnih poslovnih informacionih sistema, Yu Info, Kopaonik: 11-14 mart, 2007			
2.	*****Dejanović I., Perišić B., Milosavljević G.: Implementacija XText DSL-a uz oslonac na arpeggio parser, YU Info 2011 (CD), 6 pages			
3.	Dejanović I., Tumbas Živanov M., Milosavljević G., Perišić B.: Comparison of Textual and Visual Notations of DOMMLite Domain-Specific Language, 14. Advances in Databases and Information Systems, Novi Sad, 20-24 Septembar, 2010, pp. 20-24			
4.	Milosavljević G., Dejanović I., Perišić B., Milosavljević B.: UML Profile for Specifying User Interfaces of Business Applications, 14. Advances in Databases and Information Systems, Novi Sad, 20-24 Septembar, 2010, pp. 77-94			
5.	*****Milosavljević G., Dejanović I., Perišić B.: Ready for the industry: A practical approach to teaching mde. In 7th Educators Symposium@MODELS 2011: Software Modeling in Education, pages 31-40, Wellington, New Zealand, www.se.uni-oldenburg.de/documents/olnse-2-2011-EduSymp.pdf			
6.	Dejanović I., Perišić B., Milosavljević G.: Arpeggio: pakrat parser interpreter, 16. YU INFO, Kopaonik, 1-8 Mart, 2010			
7.	Dejanović I., Milosavljević G., Tumbas Živanov M., Perišić B.: Primena savremenih tehnika razvoja softvera u izradi studentskih projekata, 15. YU INFO, Kopaonik, 1-8 Mart, 2009			
8.	Dejanović I., Milosavljević G., Perišić B.: Uopredni prikaz dva popularna MDSD/MDA alata otvorenog koda , 13. YU INFO, Kopaonik, 1-8 Mart, 2005			
9.	Perišić B., Milosavljević G., Dejanović I., Milosavljević B.: UML Profile for Specifying User Interfaces of Business Applications, Computer Science and Information Systems (ComSIS), 2011, Vol. 8, No 2, pp. 405-426, ISSN 1820-0214			
10.	Dejanović I., Milosavljević G., Tumbas Živanov M., Perišić B.: A Domain-Specific Language for Defining Static Structure of Database Applications, Computer Science and Information Systems (ComSIS), 2010, Vol. 7, No 3, pp. 409-440, ISSN 1820-0214			
Summary data for teacher's scientific or art and professional activity:				
Quotation total :		0		
Total of SCI(SSCI) list papers :		0		
Current projects :		Domestic :	0	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:	Erdeljan M. Aleksandar		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 24.07.1989		
Scientific or art field:	Automatic Control and System Engineering		
Academic carier	Year	Institution	Field
Academic title election:	2011		Automatic Control and System Engineering
PhD thesis	2000	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	1993	School of Electrical Engineering - Beograd	Automatic Control and System Engineering
Bachelor's thesis	1989	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering

#### List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E126	System Control, Modeling and Simulation	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E232	System Modeling and Simulation	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	GI303A	Distributed Systems in Geomatics	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	H213	System Modelling and Simulation 1	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies ( H00) Mechatronics, Undergraduate Academic Studies
5.	BMI124	System Modeling and Simulation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	E2312	Software design for SCADA systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7.	ESI001	Software Tools in Power Engineering	( ES0) Power Software Engineering, Undergraduate Academic Studies
8.	ESI010	Basics of control in power systems	( ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	ESI015	Distributed Computer Systems in Power Systems	( ES0) Power Software Engineering, Undergraduate Academic Studies
10.	SEAU02	SCADA Software	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
11.	SEAU09	Software design of SCADA systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12.	SEI002	Architecture of Distributed Systems in Power Systems	( ES0) Power Software Engineering, Undergraduate Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
13. AU502	Distributed Control Systems	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14. H301	System Modeling and Symulation	( H00) Mechatronics, Master Academic Studies
15. S054	Computer Modelling and Simulation	( S01) Postal Traffic and Telecommunications, Master Academic Studies
16. BMIM3D	Development of integrated biomedical systems	( BM0) Biomedical Engineering, Master Academic Studies
17. E2532	Automatic Control Systems Project Management	( E20) Computing and Control Engineering, Master Academic Studies
18. E2533	Discrete event simulation	( E20) Computing and Control Engineering, Master Academic Studies
19. E2535	Software Algorithms in Supervisory Control and Data Acquisition Systems	( E20) Computing and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20. ESI030	Distributed Software Architectures for Smart Energy Grids	( ES0) Power Software Engineering, Master Academic Studies
21. SEAM06	Integration of Distributed Control Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
22. DAU006	Selected Chapters in Modeling and Simulation of Dynamic Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
23. DAU018	Selected Chapters in Distributed Control Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
24. ZRD25A	Selected chapters from Artificial Ingeligence	( Z01) Safety at Work, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Lendak I., Erdeljan A., Popović D.: Algorithm for cataloguing topologies in the Common Information Model (CIM), Computers Math. Appl. 61, No. 3, 715-721 (2011). ISSN 0898-1221
2.	Vukmirović S., Erdeljan A., Čapko D., Lendak I., Nedić N.: Optimization of workflow scheduling in Utility Management System with hierarchical neural network, International Journal of Computational Intelligence Systems, 2011, Vol. 4, No 4, pp. 672-679, ISSN 1875-6883
3.	Čapko D., Erdeljan A., Švenda G., Popović M.: Dynamic Repartitioning of Large Data Model in Distribution Management Systems, Electronics and electrical engineering, 2012, No 4(120), pp. 83-88, ISSN 1392-1215
4.	Ilić S., Vukmirović S., Erdeljan A., Kulić F.: Hybrid Artificial Neural Network System for Short-Term Load Forecasting, Thermal Science, 2012, Vol. 16, No S, pp. 215-224, ISSN 0354-9836
5.	Vukmirović S., Erdeljan A., Čapko D., Lendak I.: Extension of the Common Information Model with Virtual Meter, Electronics and electrical engineering, 2011, Vol. 107, No 1, pp. 59-64, ISSN 1392-1215
6.	Čapko D., Erdeljan A., Popović M., Švenda G.: An Optimal Initial Partitioning of Large Datasets in Utility Management Systems, Journal of Advances in Electrical and Computer Engineering, 2011, Vol. 11, No 4, pp. 41-46, ISSN 1582-7445
7.	Čapko D., Erdeljan A., Vukmirović S., Lendak I.: A HYBRID GENETIC ALGORITHM FOR PARTITIONING OF DATA MODEL IN DISTRIBUTION MANAGEMENT SYSTEMS, Information technology and control, 2011, Vol. 40, No 4, pp. 316-322, ISSN 1392-124X
8.	Vukmirović S., Nedić N., Erdeljan A., Lendak I., Čapko D.: A Genetic Algorithm Approach for Utility Management System Workflow Scheduling, Information technology and control, 2010, Vol. 39, No 4, pp. 310-316, ISSN 1392-124X
9.	Vukmirović S., Erdeljan A., Lendak I., Čapko D.: A novel software architecture for Smart Metering systems, Journal of Scientific and Industrial Research (JSIR), 2010, Vol. 2010, No 12, pp. 937-941, ISSN 0022-4456
10.	Čapko D., Erdeljan A., Popović M., Švenda G.: An Optimal Relationship-Based Partitioning of Large Datasets, LNCS, Springer Verlag, 2010, str. 555-558, ISBN 978-3-642-15575-8

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	1
Total of SCI(SSCI) list papers :	9
Current projects :	Domestic : 3 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Gostojić L. Stevan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.04.2007		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Master's thesis	2006	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E2E40	XML and WEB Services	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2. RI41	Internet Software Architectures	( E20) Computing and Control Engineering, Undergraduate Academic Studies
3. SEI41	Internet Software Architectures	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4. ISIT12	Osnove informacionih sistema	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5. ISIT27	Osnove softverskih arhitektura	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6. SES102	NoSQL Data Bases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7. SES301	IT Law	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8. E2523	Social Networks	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
9. E2536	Mobile Application Development	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
10. DRNI10	Selected Topics in E-Government	( E20) Computing and Control Engineering, Doctoral Academic Studies
11. DRNI18	Selected Topics in Distributed/Mobile computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Gostojić S.: Ontological Model of Legal Norms for Creating and Using Legislation, Computer Science and Information Systems (ComSIS), 2012, ISSN 1820-0214
2.	Gostojić S., Sladić G., Milosavljević B., Konjović Z.: Context-sensitive Access Control Model for Government Services, Journal of Organizational Computing and Electronic Commerce, 2012, Vol. 22, No 2, pp. 184-213, ISSN 1091-9392



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

3.	Gostojić S., Sladić G., Milosavljević B., Konjović Z.: Flexible Access Control for Judicial Processes, 6. International Conference on Methodologies, Technologies and Tools Enabling e-Government - MeTTeG12, Beograd: Fakultet tehničkih nauka, Novi Sad, , pp. 44-55, ISBN 978-86-7892-413-2
4.	Gostojić S., Sladić G., Milosavljević B.: Importing Document Hierarchy in the Alfresco System, 1. International Conference on Information Society Technology and Management, Kopaonik, 7-8 Mart, 2011
5.	Sladić G., Gostojić S., Milosavljević B., Konjović Z.: Handling Structured Data in the Alfresco System, 1. International Conference on Information Society Technology and Management, Kopaonik, 7-8 Mart, 2011, pp. 78-82
6.	Gostojić S., Konjović Z., Milosavljević B.: Modeling MetaLex/CEN Compliant Legal Acts, 8. IEEE International Symposium on Intelligent Systems and Informatics (SISY), Subotica,
7.	Arsovski S., Konjović Z., Milosavljević B., Gostojić S.: Editori za dokumente pravne regulative bazirani na otvorenim standardima i otvorenim izvorima, 16. YU INFO, Kopaonik, 1-8 Mart, 2010
8.	Gostojić S., Sladić G., Vidaković M.: Arhiviranje dokumenata u Alfresco sistemu, 15. YU INFO, Kopaonik, 1-8 Mart, 2009
9.	Sladić G., Milosavljević B., Gostojić S.: Digitalno potpisivanje dokumenata u Alfresco sistemu, 15. YU INFO, Kopaonik, 1-8 Mart, 2009
10.	Konjović Z., Milosavljević B., Sladić G., Gostojić S.: Sistem za upravljanje elektronskim dokumentima, 2010
Summary data for teacher's scientific or art and professional activity:	
Quotation total :	0
Total of SCI(SSCI) list papers :	2
Current projects :	Domestic : 2 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Ivanović V. Dragan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.04.2007		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	2006	Faculty of Technical Sciences - Novi Sad	Informatics
Magister thesis	-		Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E2E40	XML and WEB Services	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	GG11	Fundamentals in Computing	( G00) Civil Engineering, Undergraduate Academic Studies
3.	ISIT20	Object-oriented Programming Platforms	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	ISIT32	Technologies and platforms for digital contents and documents management	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5.	ISIT41	eGovernment technologies and systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	ISIT47	E-learning tools and technologies	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	SE0001	Introduction to Programming	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	SES103	Oral and written communication skills	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9.	SES301	IT Law	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
10.	E2507	Digital Archives	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
11. E2521	Business Process Management	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12. E2525	Contemporary educational technologies and standards	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
13. SEM013	E-government technologies	( SE0) Software Engineering and Information Technologies, Master Academic Studies
14. DRNI02	Selected Topics in Advanced Software Architecture	( E20) Computing and Control Engineering, Doctoral Academic Studies
15. DRNI06	Selected Topics in Digital Archives	( E20) Computing and Control Engineering, Doctoral Academic Studies
16. DRNI13	Selected Topics in Scientific-research Activity management	( E20) Computing and Control Engineering, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Ivanović, D., Surla, D. & Racković, M. (2010), "A CERIF data model extension for evaluation and quantitative expression of scientific research results", Scientometrics, DOI 10.1007/s11192-010-0228-2, Vol. 86, No. 1, pp. 155-172
2.	Ivanovic, L., Ivanovic, D., Surla, D. (2012), "A data model of theses and dissertations compatible with CERIF, Dublin Core and EDT-MS", Online Information Review, Vol. 36, No. 4, pp. 568-586
3.	Ivanović, D., Milosavljević, G., Milosavljević, B. & Surla, D. (2010), "A CERIF-compatible research management system based on the MARC 21 format", Program: Electronic library and information systems, DOI: 10.1108/00330331011064249, Vol. 44, No. 3, pp. 229-251
4.	Ivanović, D., Surla, D. & Konjović, Z. (2010), "CERIF compatible data model based on MARC 21 format", The Electronic Library, DOI: 10.1108/02640471111111433, Vol. 29, No. 1, pp. 52-70
5.	Milosavljević, G., Ivanović, D., Surla, D. & Milosavljević, B. (2010), "Automated Construction of the User Interface for a CERIF-Compliant Research Management System", The Electronic Library, Vol. 29, No 5, pp. 565-588
6.	Kovacevic, A., Ivanovic, D., Milosavljevic, B., Konjovic, Z., Surla, D. (2011), "Automatic extraction of metadata from scientific publications for CRIS systems", Program: electronic library and information systems, Vol. 45, No. 4, pp.376 – 396, DOI: 10.1108/00330331111182094
7.	Ivanović, L., Ivanović, D., Surla, D. (2012), Integration of a Research Management System and an OAI-PMH Compatible ETDs Repository at the University of Novi Sad, Republic of Serbia, Library resources and Technical services, Vol. 56, No. 2, pp. 104-112
8.	Ivanović D., Surla D., Racković M.: Journal evaluation based on bibliometric indicators and the CERIF data model, Computer Science and Information Systems (ComSIS), 2012, Vol. 9, No 2, pp. 791-811, ISSN 1820-0214
9.	Informacioni sistem naučno-istraživačke delatnosti
10.	Ivanović D.: Sistemi za skladištenje naučnih sadržaja, Zadužbina Andrejević, 2011, ISBN 978-86-7244-916-7

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	72
Total of SCI(SSCI) list papers :	8
Current projects :	Domestic : 2 International : 1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Ivetić V. Dragan		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 22.10.1990		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	1999	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1994	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1990	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E243	Human Computer Interaction	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	H207	Programming and Programming Languages	( F10) Engineering Animation, Undergraduate Academic Studies ( H00) Mechatronics, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	RI4A	Computer Graphics	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	E0243	Human-Computer Interaction	( ES0) Power Software Engineering, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
5.	E2505	Multimedia Systems	( E20) Computing and Control Engineering, Master Academic Studies ( ES0) Power Software Engineering, Master Academic Studies ( F20) Engineering Animation, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
6.	E2516	Virtual Reality Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
7.	E2528	Computer game development	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
8.	E2534	Data Compression	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies



List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
9. ESI035	Computer graphic algorithms for smart grid systems	( ES0) Power Software Engineering, Master Academic Studies
10. ESI036	Visualization techniques in power systems	( ES0) Power Software Engineering, Master Academic Studies
11. DRNI09	Selected Topics in Human Centered Computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
12. FDS151	Selected Chapters in Multimedia	( F00) Graphic Engineering and Design, Doctoral Academic Studies
13. FDS152	Selected Topics in Computer Graphics	( F00) Graphic Engineering and Design, Doctoral Academic Studies
14. DRNI15	Selected Topics in Advanced Computer Graphics	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
15. DRNI18	Selected Topics in Distributed/Mobile computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Dinu Dragan, Dragan Ivetic, "Request Redirection Paradigm in Medical Image Archive Implementation", Computer methods and programs in biomedicine, Elsevier, Vol. 107, No. 2, p.111-121, ISSN 0169-2607, Aug 2012
2.	Dragan Ivetic, Dinu Dragan, "Medical Image on the go!", Journal of Medical Systems, Springer, Vol. 35, No. 4, pp. 499-516, ISSN 0148-5598, August 2011.
3.	Dragan Ivetic, Srdjan Mihic, Branko Markoski, "Augmented AVI video file for road surveying", Computers and Electrical Engineering, Elsevier, Vol. 36, No. 1, pp. 169-179, ISSN 0045-7906, January 2010.
4.	Dinu Dragan, Dragan Ivetic, "Architectures of DICOM based PACS for JPEG2000 Medical Image Streaming", Computer Science and Information Systems Journal (ComSIS), vol. 6(1), ISSN: 1820-0214, pp. 185-203, ComSIS Consortium, Serbia, June 2009.
5.	Dragan Ivetic, Dusan Malbaski, "A dichotomous software life-cycle model", Journal of Applied Systems Studies, Nikitas. A. Assimakopoulos, Ed., Cambridge International Science Publishing, Cambridge, England, vol. 2, No. 2, 2001
6.	Dinu Dragan, Dragan Ivetic, "A Comprehensive Quality Evaluation System for PACS", Ubiquitous Computing and Communication Journal, Special Issue on ICIT 2009 Conference - Bioinformatics and Image, Vol. 4(3), ISSN: 1992-8424, pp. 642-650, UBICC Publisher, July 2009.
7.	Veljko Petrovic, Dragan Ivetic, "Education and out of the box thinking – linearization of Graham’s scan algorithm complexity as fruit of education policy", Ubiquitous Computing and Communications Journal, Special Issue on ICIT 2011 conference, ISSN: 1992-8424, pp. 43-51, UBICC Publisher, 2011.
8.	Dusan Malbaski, Dragan Ivetic, "Some notes on the formal definition of streams", Byron Papathanassiou, Ed., Yugoslav Journal of Operations Research, vol. 6, no. 2, 1996., 277-284.
9.	Ivetic Dragan, Dinu Dragan, "JPEG2000 Aims To Make Medical Image Ubiquitous", Egyptian Computer Science Journal, Vol. 31, No. 5, pp. 1-13, ISSN 1110-2586, Sept. 2009.
10.	Dragan D., Ivetic D.: Chapter 28: Tools for Ubiquitous PACS System, in "Proceedings of the International Conference on Human-centric Computing 2011 and Embedded Multimedia Computing 2011", Lecture Notes in Electrical Engineering, J.J. Park et al. (eds.), Berlin, Springer, 2011, str. 297-308, ISBN 978-94-007-2104-3

Summary data for teacher's scientific or art and professional activity:

Quotation total :	55		
Total of SCI(SSCI) list papers :	4		
Current projects :	Domestic :	2	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Jorgovanović Đ. Nikola		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 15.11.1999		
Scientific or art field:	Automatic Control and System Engineering		
Academic carier	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	1996	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1992	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	AU42	Technical Equipment for Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	AU43	Fundamentals of Biomedical Engineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies ( E20) Computing and Control Engineering, Undergraduate Academic Studies
3.	AU47	DSP Applications in Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	AU49	Methods of Medical Image Forming and Analysis	( E20) Computing and Control Engineering, Undergraduate Academic Studies
5.	AUN43	Biomedical Engineering Technologies	( E20) Computing and Control Engineering, Undergraduate Academic Studies
6.	GI006	Satellite Navigation and Navigation Service	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
7.	GI206	Systems and Signals in Geomatics	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
8.	Z411	Fundamentals of Instrumentation and Control	( Z20) Environmental Engineering, Undergraduate Academic Studies
9.	BM119A	The application of geoinformation technologies and systems in medicine	( BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	BMI112	Biomedical engineering in sport physiology	( BM0) Biomedical Engineering, Undergraduate Academic Studies
11.	BMI114	Neural Prosthesis	( BM0) Biomedical Engineering, Undergraduate Academic Studies
12.	BMI120	Equipment and systems for helping the elderly, ill and disabled	( BM0) Biomedical Engineering, Undergraduate Academic Studies
13.	BMI122	Neurorehabilitation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
14.	BMI124	System Modeling and Simulation	( BM0) Biomedical Engineering, Undergraduate Academic Studies
15.	E2314	Microprocessor Based Control Devices	( E20) Computing and Control Engineering, Undergraduate Academic Studies
16.	SEAU05	DSP Applications in Control Systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
17.	SEAU08	Microprocessor Based Control Devices	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
18.	AU504	Movement Control	( E20) Computing and Control Engineering, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
19.	AU505 Neural Prostheses	( E20) Computing and Control Engineering, Master Academic Studies
20.	AU507 Principles of Biomedical Engineering	( E20) Computing and Control Engineering, Master Academic Studies
21.	BMIM3B Soft Sensors	( BM0) Biomedical Engineering, Master Academic Studies
22.	BMIM3C Functional Electrical Therapy	( BM0) Biomedical Engineering, Master Academic Studies
23.	BMIM5C Brain Computer Interface	( BM0) Biomedical Engineering, Master Academic Studies
24.	E2532 Automatic Control Systems Project Management	( E20) Computing and Control Engineering, Master Academic Studies
25.	SEAM04 Soft Sensors	( SE0) Software Engineering and Information Technologies, Master Academic Studies
26.	DAU008 Selected Chapters in Signal Processing in Biomedical Engineering	( E20) Computing and Control Engineering, Doctoral Academic Studies
27.	DE518 Brain Computer Interface Systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
28.	DGI016 Selected Chapters in Systems and Signals	( GI0) Geodesy and Geomatics, Doctoral Academic Studies
29.	DAU009 Selected Chapters in Biomedical Instrumentation and Telemetry	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Popović Maneski L., Jorgovanović N., Ilić V., Došen S., Keller T., Popović B. M., Popović B. D.: Electrical stimulation for the suppression of pathological tremor, MED BIOL ENG COMPUT, 2011, Vol. 49, No 10, pp. 1187-1193, ISSN 0140-0118
2.	Popović-Bijelić A., Bijelić G., Jorgovanović N., Bojanić D., Popović M., Popović D.: Multi-field surface electrode for selective electrical stimulation , Artificial Organs, 2005, Vol. 29, No 6, pp. 448-452, ISSN 0160-564X
3.	Malešević N., Popović Maneski L., Ilić V., Jorgovanović N., Bijelić V., Keller T., Popović D.: A multi-pad electrode based functional electrical stimulation system for restoration of grasp, J NEUROENG REHABIL, 2012, Vol. 9, No 66, ISSN 1743-0003
4.	Čongradac V., Jorgovanović N., Stanišić D.: Assessing the energy consumption for heating and cooling in hospitals, Energy and Buildings, 2012, Vol. 48, pp. 146-154, ISSN 0378-7788
5.	Bojanić D., Petrovački-Balj B., Jorgovanović N., Ilić V.: Quantification of dynamic EMG patterns during gait in children with cerebral palsy, Journal of Neuroscience Methods, 2011, No 198, pp. 325-331, ISSN 0165-0270
6.	Krasnik R., Mikov A., Ilić V., Jorgovanović N., Demeši Drljan Č.: The use of Dynamic Electromyography in Gait Analysis, HealthMED, 2011, Vol. 5, No 4, pp. 888-893, ISSN 1840-2291
7.	Jorgovanović N., Došen S., Petrović R.: Novel Electronic Stimulator for Functional Electrical Therapy, Journal of Automatic Control, 2005, Vol. 15, No 5, pp. 27-30, UDK: 621.3-52
8.	Jorgovanović N.: Upravljanje funkcionalnom električnom stimulacijom za neurorehabilitaciju pokreta, Novi Sad, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, 2003
9.	Jorgovanović N.: NEURON - neuronski računarski sistem, Novi Sad, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, 1996
10.	Govedarica M., Petrovački D., Ristić A., Jovanović D., Popov S., Ristić A., Pajić V., Sladić D., Vrtunski M., Badnjarević I., Alargić I., Jorgovanović N., Tepić Ž., Bojanić D., Stanišić D., Ilić V., Pržulj Đ.: Geografski informacioni sistem za potrebe Ministarstva zaštite životne sredine, 2010

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	81
Total of SCI(SSCI) list papers :	6
Current projects :	Domestic : 1 International : 1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Konjović D. Zora		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.10.1981		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2003	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	1992	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Magister thesis	1985	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Bachelor's thesis	1973	Faculty of Sciences - Novi Sad	Mathematics

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E231	Numerical Algorithms and Numerical Software	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( G10) Geodesy and Geomatics, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2. E233	Internet Networks	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( G10) Geodesy and Geomatics, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3. E236A	Computational Intelligence Fundamentals	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4. E2K42	Knowledge Based Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5. ISIT41	eGovernment technologies and systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6. BMI101	Introduction to Medical Informatics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
7. SES103	Oral and written communication skills	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8. SES301	IT Law	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
9. E2513	Semantic Web	( E20) Computing and Control Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
10. E2514	Biologically inspired computing	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
11. EP002	EBusiness technologies and systems	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
12. E2525	Contemporary educational technologies and standards	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
13. SEM013	E-government technologies	( SE0) Software Engineering and Information Technologies, Master Academic Studies
14. DAU002	Selected Chapters in Computing	( F00) Graphic Engineering and Design, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies
15. DRNI07	Selected Chapters in Computational Intelligence	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
16. FDS152	Selected Topics in Computer Graphics	( F00) Graphic Engineering and Design, Doctoral Academic Studies
17. DAU014	Selected Topics in Computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
18. DRNI10	Selected Topics in E-Government	( E20) Computing and Control Engineering, Doctoral Academic Studies
19. DRNI17	Selected Topics in ICT enhanced learning	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Obradovic Djordje, Konjovic Zora, Pap Endre, Ralevic Nebojsa (2011). The maximal distance between imprecise point objects, Fuzzy Sets and Systems, Vol. 170 no. 1, pp. 76-94
2.	Obradovic Djordje, Konjovic Zora, Pap Endre, Rudas Imre (2012). Linear Fuzzy Space Based Road Lane Detection. Knowledge-Based Systems (rad objavljen u elektronskom obliku <a href="http://www.sciencedirect.com/science/article/pii/S0950705112000032">http://www.sciencedirect.com/science/article/pii/S0950705112000032</a> )
3.	Kovačević Aleksandar, Konjović Zora, Milosavljević Branko, Nenadić Goran (2012). Mining methodologies from NLP publications: A case study in automatic terminology recognition, Computer Speech And Language, Vol. 26 no. 2, pp. 105-126
4.	Gostojić Stevan, Sladić Goran, Milosavljević Branko, Konjović Zora (2012). Context-sensitive Access Control Model for Government Services. Journal of Organizational Computing and Electronic Commerce, Vol. 22 no. 2, pp. 184-213
5.	Sladić Goran, Milosavljević Branko, Surla Dušan, Konjović Zora (2012). Flexible Access Control Framework for MARC Records. Electronic Library (ISSN: 0264-0473), 30:5, pp. 623-652
6.	Savić Goran, Segedinac Milan, Konjović, Zora (2012). Automatic Generation of E-Courses Based on Explicit Representation of Instructional Design. Computer Science and Information Systems. Vol. 9 no. 2, pp. 839 – 869.
7.	Sladić Goran, Milosavljević Branko, Konjović Zora, Vidaković Milan (2011). Access Control Framework for XML Document Collections. Computer Science and Information Systems / ComSIS (ISSN: 1820-0214), 8:3, pp. 591-609
8.	Ivanovic Dragan, Surla Dusan, Konjovic Zora (2011). CERIF compatible data model based on MARC 21 format, Electronic Library, Vol. 29 no. 1, pp. 52-70
9.	Kovacevic Aleksandar, Ivanovic Dragan, Milosavljevic Branko, Konjovic Zora, Surla Dusan (2011). Automatic extraction of metadata from scientific publications for CRIS systems, Program-Electronic Library and Information Systems, Vol. 45 no. 4, pp. 376-396



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

10. Segedinac, Milan, Konjović, Zora, Segedinac Mirjana, Savić, Goran (2011). A Formal Approach to Organization of Educational Objectives. Psihologija, Vol. 44 no. 4, pp. 307-323.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	15			
Current projects :	Domestic :	2	International :	1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Kovačević D. Vladimir	
Academic title:		Emeritus Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.06.2010	
Scientific or art field:		Computer Engineering and Computer Communication	
Academic carier	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	1975	Military-Technical Faculty - Zagreb	Electrical and Computer Engineering
Magister thesis	1969	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1963	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
List of courses being held by the teacher in the accredited study programmes			
ID	Course name	Study programme name, study type	
1.	RT58 Dedicated Computer Structure Design 2	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies	
2.	DRT02 Selected Topics in Computer System Architectures	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies	
Representative references (minimum 5, not more than 10)			
1.	V.Kovačević, M.Popović, M.Temerinac, N.Teslić, Arhitekture i algoritmi digitalnih signal procesora I, Fakultet tehničkih nauka u Novom Sadu, 2004.		
2.	V. Kovačević, M. Popović, Sistemska programska podrška u realnom vremenu, Univerzitet u N. Sadu, Fakultet tehničkih nauka, 2002.		
3.	M. Popović, V. Kovačević, An Approach to Internet-Based Virtual Call Center Implementation, Networking - ICN 2001, Part I, Lecture Notes in Computer Science, Series Editors: G. Goos, J. Hartmanis, J. van Leeuwen, Volume Editor: P. Lorenz, ISBN 3-540-42302-8 Springer-Verlag Berlin Heidelberg New York, 2001, pp 75-84.		
4.	M. Popović, B. Atlagić, V. Kovačević, "Case study: a maintenance practice used with real-time telecommunication software", Journal of Software Maintenance and Evolution: Research and Practice, John Wiley & Sons, Ltd., 2001, No. 13, pp 97-126.		
5.	V.Kovačević, M.Popović, E.Šečerov, "Requirements for Operating Systems included in Virtual Machine System", System Science Journal, Vol.17, No.1, 1991.		
6.	N. Teslić, V. Kovačević, M. Temerinac, "An Approach in Fast IC Development for Digital Video Processing based on FPGA-s", FACTA UNIVERSITATES, March 2000.		
7.	Katona M., Pižurica A., Teslić N., Kovačević V., Philips W.: A Real-Time Wavelet-Domain Video Denoising Implementation in FPGA, EURASIP Journal on Embedded Systems, 2006, Vol. 2006, No Article ID 16035, pp. 1-12, ISSN 1687-3955, UDK: doi: 10.1155/ES/2006/16035		
8.	Katona M., Pižurica A., Teslić N., Kovačević V., Philips W.: FPGA Design and Implementation of a Wavelet-Domain Video Denoising System, Lecture notes in computer science, 2005, Vol. 3708, No Oct 2005, pp. 650-657, ISSN 0302-9743, UDK: doi: 10.1155/ES/2006/16035_82		
9.	Popović M., Kovačević V.: An Approach to Internet-Based Virtual Call Center Implementation, Lecture notes in computer science, 2001, pp. 75-84, ISSN 0302-9743		
10.	Teslić N., Kovačević V., Temerinac M.: An Approach in Fast IC Development for Digital Video Processing Based on FPGA-s, FACTA UNIVERSITATES, 2000, Vol. 13, No 2, pp. 245-256, UDK: http://factaee.efak.ni.ac.rs/fu2k02/fu10.pdf		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		39	
Total of SCI(SSCI) list papers :		3	
Current projects :		Domestic :	1
		International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Kovačević V. Jelena	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad	
		01.12.1999	
Scientific or art field:		Computer Engineering and Computer Communication	
Academic carier	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	2010		Computer Engineering and Computer Communication
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
Magister thesis	2003	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	RT44	DSP Architecture and Algorithms 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	RT46	DSP Architecture and Algorithms 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	RT52	Dedicated Computer Structure Design 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
4.	IGB340	Fundamentals of Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
5.	EK465	Architectures of digital signal processors	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	RT59	Real-Time System Design	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	RT511	Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
8.	DRT06	Selected chapters on DSP systems	( E20) Computing and Control Engineering, Doctoral Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## Representative references (minimum 5, not more than 10)

1.	Kovacevic Jelena, Samardzija Dragan, Temerinac Miodrag, "Joint coding rate control for audio streaming in short range wireless networks", IEEE TRANSACTIONS ON CONSUMER ELECTRONICS Vol: 55 Nr: 2 Str: 486 - 491 ISBN: ISSN: 0098-3063, 2009 (M22)
2.	Kovacevic Jelena, Samardzija Dragan, Temerinac Miodrag, "Optimized Joint Coding Algorithm for Audio Streaming in Short Range Wireless Networks", International Conference on Consumer Electronics, Las Vegas, ISBN: 978-1-4244-4701-5, Izdavac: IEEE Consumer Electronic Society, 2009.
3.	Simic Dragan, Lukac Zeljko, Stefanovic Dejan, Kovacevic Jelena, Babic-Zdravkovic Sanja, "Real-time implementation of waveform interpolative voice codec with aspect to very low bit-rates" MIPRO - International convention on information and communication technology, electronics and microelectronics, Croatian Society For Microprocessor Systems And Information Systems, Microelectronics And Electronics, ISBN: 953-233-003-8, 2004.
4.	Jovanovic Marija, Kovacevic Jelena, "Partitioning DSP Applications on a Multi-core Architecture Based on Load Balancing", IEEE Eastern European Conference on the Engineering of Computer Based Systems, Str: 154 – 155, ISBN: 978-1-4244-4677-3, Izdavac: IEEE, 2009.
5.	Jovanovic Marija, Sajic Dejan, Kovacevic Jelena, "Optimization of lossless audio decoders on a class of embedded systems with two cores", International Conference on Digital Signal Processing, str. 1-6, ISBN: 978-1-4244-3297-4, Izdavac: IEEE, 2009.
6.	Popovic Miroslav, Basicevic Ilija, Velikic Ivan, Kovacevic Jelena, " A Model-Based Statistical Usage Testing of Communication Protocols", 13th Annual IEEE International Symposium and Workshop on Engineering of Computer Based Systems (ECBS'06), Str: 377 – 386, ISBN: 0-7695-2546-6, Izdavac: ECBS
7.	Popovic Miroslav, Kovacevic Jelena, "A Statistical Approach to Model-Based Robustness Testing", 14th Annual IEEE International Conference and Workshop on Engineering of Computer Based Systems, str: 485 – 494, ISBN: 0-7695-2772-8, Izdavac: IEEE, 2007.
8.	Djukic Miodrag, Četic Nenad, Kovačević Jelena, Popovic Miroslav, "A C Compiler Based Methodology For Implementing Audio DSP Applications on a Class of Embedded Systems", ISCE, IEEE, ISBN: 978-1-4244-2422-1, 2008.
9.	Gajic Marko, Kovacevic Jelena, Petrovic Djordje, Temerinac Miodrag, Teslic Nikola, "A SMART POST PROCESSING ALGORITHM FOR REMOVING AUDIO DISTORTION" IBC 2011, Amsterdam Vol., Nr., Str.0-0, ISBN:, ISSN:, Izdavac: IBC 2011
10.	Gajic Marko, Kovacevic Jelena, Djukic Miodrag, Peckai-Kovac Robert, "Using a Simple Algorithm in SPP for Audio Quality Improvement Checkout" 19th Telecommunications forum TELFOR 2011, Serbia, Belgrade, November 22-24, 2011. Vol., Nr., Str.1115-1118, ISBN:978-1-4577-1498-6, ISSN:CFP1198P-CDR, Izdavac: Društvo za telekomunikacije – TELFOR

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	0		
Current projects :	Domestic :	0	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Kovačević D. Aleksandar		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 15.07.2007		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Informatics
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Informatics
Bachelor's thesis	2003	Faculty of Sciences - Novi Sad	Information-Communication Systems

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E2K42	Knowledge Based Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	ISIT03	Introduction to Programming	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
3.	ISIT27	Osnove softverskih arhitektura	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	ISIT29	XML Technologies	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5.	ISIT47	E-learning tools and technologies	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	GI111	Information technologies in geodesy	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
7.	SES203	Machine Learning	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	E2503	Data Mining and Data Analysis Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
9.	E2514	Biologically inspired computing	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
10.	GS014	The application of information technologies in energy efficiency	( G10) Energy Efficiency in Buildings, Specialised Academic Studies
11.	E2524	Text Mining	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
12.	E2527	Business Intelligence	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
13.	SEM005	Decision Support Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
14.	DRNI07	Selected Chapters in Computational Intelligence	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
15.	DRNI14	Selected Chapters in Machine Learning	( E20) Computing and Control Engineering, Doctoral Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

1.	Pretraživanje zvučnih zapisa
2.	Adaptivni sistem za pretraživanje zvučnih zapisa
3.	Kovačević, A., Milosavljević, B. "The Use of R-Trees for Content-Based Audio Retrieval". In Proceedings of the 13th Scientific Conference on Industrial Systems, Herceg Novi, 2005. M63
4.	Kovačević A., Milosavljević, B., Konjović, Z. "Tjuniranje prostora osobina za pretraživanje zvučnih zapisa". Zbornik radova YUInfo 2006, Kopaonik, Srbija, 2006. ISBN: 86-85525-01-2. M63
5.	Kovačević, A., Milosavljević, B., Konjović, Z., and Vidaković, M. 2010. "Adaptive content-based music retrieval system". Multimedia Tools and Applications, 47(3) (May. 2010), pp. 525-544. doi: <a href="http://dx.doi.org/10.1007/s11042-009-0336-2">http://dx.doi.org/10.1007/s11042-009-0336-2</a> . ISSN: 1380-7501 (Print), 1573-7721 (Online). M23.
6.	Kovačević, A., Ivanović D., Milosavljević B., Konjović Z., Surla D., 2011. "Automatic extraction of metadata from scientific publications for CRIS systems" Program: Electronic library and information systems, 45(4), pp. 376 - 396. doi: <a href="http://dx.doi.org/10.1108/00330331111182094">http://dx.doi.org/10.1108/00330331111182094</a> . ISSN: 0033-0337. M23
7.	Aleksandar Kovačević, Automatizovano izdvajanje semantike iz naučnih članaka u oblasti informatike, doktorska disertacija, Fakultet tehničkih nauka, Novi Sad, 2011.
8.	Majstorović D, Pele Z, Kovačević A, Čelanović N. "Computer Based Emulation of Power Electronics Hardware", In Proceedings of the First IEEE Eastern European Conference on the Engineering of Computer Based Systems, Novi Sad, Serbia, pages 56-64, 2009. ISBN: 978-0-7695-3759-7. M33
9.	Slivka, J. Kovačević, A., Konjović, Z., 2010. "Co-training based algorithm for datasets without the natural feature split." In Proceedings of the 8th International Symposium on Intelligent Systems and Informatics, Subotica, Serbia, 279-284, 2010. ISBN: 978-1-4244-7395-3. M33
10.	Miljković, D., Gajić, Lj., Kovačević, A., Konjović, Z., 2010. The use of data mining for basketball matches outcomes prediction. In Proceedings of the 8th International Symposium on Intelligent Systems and Informatics, Subotica, Serbia, 2010. 309-312. ISBN: 978-1-4244-7395-3. M33.
Summary data for teacher's scientific or art and professional activity:	
Quotation total :	12
Total of SCI(SSCI) list papers :	3
Current projects :	Domestic : 2 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Kukolj D. Dragan	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.05.1983	
Scientific or art field:		Computer Engineering and Computer Communication	
Academic carier	Year	Institution	Field
Academic title election:	2003	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	1993	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1988	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1982	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
List of courses being held by the teacher in the accredited study programmes			
ID	Course name	Study programme name, study type	
1.	RT43 Engineering of Computer Based Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies	
2.	RT59 Real-Time System Design	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies	
3.	RT511 Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies	
4.	DRT09 Computational Intelligence Based Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies	
Representative references (minimum 5, not more than 10)			
1.	D. Kukolj, E. Levi, Identification of Complex Systems Based on Neural and Takagi-Sugeno Fuzzy Model, IEEE SMC-part B, Vol. 34, No. 1, February 2004, pp.272-282.		
2.	D. Kukolj, S. Kuzmanovic, E. Levi, Design of a Near-Optimal, Wide-Range Fuzzy Logic Controller, Fuzzy Sets & Systems, Vol. 120, No. 1, May 2001, pp. 17-34.		
3.	D. Kukolj, S. Kuzmanovic, E. Levi, Design of a PID-Like Dual Fuzzy Logic Controller, IFAC Engineering Applications of Artificial Intelligence, Vol. 14, no. 6, 2001, pp. 785-803.		
4.	D. Kukolj, B. Atlagić, M. Petrov, Unlabeled data clustering using a re-organizing neural network, Cybernetics and Systems, An Int. Journal, Vol. 37, No. 7, 2006, pp. 779-790.		
5.	D. Kukolj, Design of Supervisory Control Functions Based on Feedforward Neural Networks, Cybernetics & Systems: An International Journal, Vol. 31, No. 7, 2000, pp. 749-761.		
6.	D. Kukolj, D. Popovic, M. Borota, Applied Unsupervised Learning in Model Reduction of Linear Dynamic Systems, Computers & Mathematics with Applications, Vol.33, No. 3, 1997, pp.95-103.		
7.	D. Kukolj, ALGORITMI MREŽNOG PROGRAMIRANJA, Univerzitet u Novom Sadu, Novi Sad, 2001.		
8.	D. Kukolj, F. Kulić, PROJEKTOVANJE SISTEMA AUTOMATSKOG UPRAVLJANJA U PROSTORU STANJA, Univerzitet u Novom Sadu, Novi Sad, 1995.		
9.	D. Kukolj et al., Determining Topological Changes And Critical Load Levels Of A Power System By Means Of Artificial Neural Networks, Electric Machines and Power Systems, Vol.25, No.8, Oct. 1997, pp. 917-926.		
10.	D. Kukolj, et al., Fast Dynamic Stability Analysis of a Power System Using Artificial Neural Networks, ETEP -European Transactions on Electrical Power Engineering. Vol.8, No.3, May-June 1998, pp. 207-212.		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		50	
Total of SCI(SSCI) list papers :		15	
Current projects :		Domestic :	International :
		1	1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Kulić J. Filip		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.09.1994		
Scientific or art field:	Automatic Control and System Engineering		
Academic carier	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	1999	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	AU44	Control Systems Design	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	E226	Automatic Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( H00) Mechatronics, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E238A	Control Systems Technology	( BM0) Biomedical Engineering, Undergraduate Academic Studies ( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	EEI302	Systems of Automatic Control in Power Engineering	( ZC0) Clean Energy Technologies, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	H1405	Optimization Methods	( H00) Mechatronics, Undergraduate Academic Studies
6.	H302	Control Systems 2	( H00) Mechatronics, Undergraduate Academic Studies
7.	M325	Automatic Control Systems	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies
8.	BMI125	Biological Control Systems	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	E2315	Electrical Machines in Automatic Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EMSAU <sub>1</sub>	Automatic Control Systems in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	SEAU01	Nonlinear programming and evolutionary computations	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
12.	SEAU03	Real-time control algorithms	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
13.	DE410S	Selected Topics in the Field of Automatic Control	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

### List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
14. E2515	Intelligent Control Systems	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15. M2550	Automatic Control Systems in Motor Vehicles	( M22) Mechanization and Construction Engineering, Master Academic Studies
16. E2532	Automatic Control Systems Project Management	( E20) Computing and Control Engineering, Master Academic Studies
17. SEAM01	Intelligent Control Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies
18. DAU007	Selected Topics in Artificial Intelligence in Control and Signal Processing	( E20) Computing and Control Engineering, Doctoral Academic Studies
19. DE410	Selected Topics in the Field of Automatic Control	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
20. SID04	Current State in the Field	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( E20) Computing and Control Engineering, Doctoral Academic Studies ( F00) Graphic Engineering and Design, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies ( G00) Civil Engineering, Doctoral Academic Studies ( G10) Geodesy and Geomatics, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies ( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies ( S00) Traffic Engineering, Doctoral Academic Studies ( Z00) Environmental Engineering, Doctoral Academic Studies
21. DAU017	Selected Topics from Totally Integrated Automatic Control Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
22. SID04	Present State in the Field	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies ( Z01) Safety at Work, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)		
1.	Dragan Kukolj, Vesna Bengin, Filip Kulić: Osnovi klasične teorije automatskog upravljanja kroz rešene probleme, Sombor, Somel, 1995. 241str., UDK: 681.5(075.8),	
2.	Dragan Kukolj, Filip Kulić: Projektovanje sistema automatskog upravljanja u prostoru stanja, Novi Sad, Fakultet tehničkih nauka, 1995. 232str., UDK: 681.5(075.8),	
3.	D.Kukolj, F.Kulić, E.Levi: Design Of The Speed Controller For Sensorless Electric Drives Based On AI Techniques: A Comparative Study, Artificial Intelligence in Engineering, 2000, Vol. 14, str. 165- 174	
4.	D.Kukolj, S.Kuzmanović, E.Levi, F.Kulić: Design of Near Optimal, Wide Range Fuzzy Logic Controller, Fuzzy Sets and Systems, 2001, Vol. 120, No. 1, str. 17- 34	
5.	D.Kukolj, F.Kulić, D.Popović, Z.Gorečan: Determining Topological Changes and Critical Load Levels of a Power System by Means of Artificial Neural Network, Electric Machines and Power Systems, 1997, Vol. 25, No. 8, str. 917- 926, ISSN 0731-356x.	
6.	D.Kukolj, D.Popović, F.Kulić, Z.Gorečan: Fast Dynamic Stability Analysis of a Power System Using Artificial Neural Networks, European Transactions on Electrical Power (ETEP), 1998, Vol. 8, No. 3, str. 207- 212, ISSN 1430-144X.	
7.	D.Popović, D.Kukolj, F.Kulić: Monitoring and Assessment of Voltage Stability Margins Using Artificial Neural Networks with a Reduced Input Set, IEE Proc. -Gener. Transm. Distrib, 1998, Vol. 145, No. 4, str. 355- 362, ISSN 1350-2360.	



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

8.	Matić Dragan, Kulić Filip, Pineda-Sanchez Manuel, Kamenko Ilija: "Support vector machine classifier for diagnosis in electrical machines: Application to broken bar", Expert Systems With Applications, vol.39 br.10, str. 8681-8689, 2012.
9.	Čongradac Velimir, Kulić Filip: "Recognition of the importance of using artificial neural networks and genetic algorithms to optimize chiller operation", Energy and Buildings, vol. 47, str. 651-658; April 2012.
10.	Ilić Slobodan; Vukmirović Srđan; Erdeljan Aleksandar; Kulić Filip: "Hybrid Artificial Neural Network System for Short-Term Load Forecasting, Thermal Science, vol.16, br. , str. S215-S224, 2012

Summary data for teacher's scientific or art and professional activity:

Quotation total :	32		
Total of SCI(SSCI) list papers :	12		
Current projects :	Domestic :	2	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Lendak I. Imre	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad	
		01.02.2005	
Scientific or art field:		Automatic Control and System Engineering	
Academic career	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	2007	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	2002	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E232	System Modeling and Simulation	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( E50) Power Software Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	GI303A	Distributed Systems in Geomatics	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
3.	E2312	Software design for SCADA systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	ESI003	Electric power software development	( E50) Power Software Engineering, Undergraduate Academic Studies
5.	ESI011	Software security and safety in power engineering	( E50) Power Software Engineering, Undergraduate Academic Studies
6.	ESI016	Smart Grid Programming	( E50) Power Software Engineering, Undergraduate Academic Studies
7.	ESI017	Mobile computing in power systems	( E50) Power Software Engineering, Undergraduate Academic Studies
8.	SEAU02	SCADA Software	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
9.	AU502	Distributed Control Systems	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	S054	Computer Modelling and Simulation	( S01) Postal Traffic and Telecommunications, Master Academic Studies
11.	BMIM3D	Development of integrated biomedical systems	( BM0) Biomedical Engineering, Master Academic Studies
12.	E2533	Discrete event simulation	( E20) Computing and Control Engineering, Master Academic Studies
13.	E2535	Software Algorithms in Supervisory Control and Data Acquisition Systems	( E20) Computing and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	ESI033	Advanced Power Grid Communication Protocols	( E50) Power Software Engineering, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
15. ESI037	Smart Grid security and safety	( ES0) Power Software Engineering, Master Academic Studies
16. ESI038	Service oriented architectures in Smart Grid	( ES0) Power Software Engineering, Master Academic Studies
17. SEAM03	Software Algorithms in Supervisory Control and Data Acquisition Systems	( SE0) Software Engineering and Information Technologies, Master Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Lendak I., Erdeljan A. & Popović D. (2011), „Algorithm for cataloguing topologies in the Common Information Model (CIM)“, Computers and mathematics with applications, February 2011, vol 61 (3), pp. 715-721. DOI 10.1016/j.camwa.2010.12.021
2.	Vukmirović S., Erdeljan A., Čapko D., Lendak I., Nedić N. (2011), „Optimization of workflow scheduling in Utility Management System with hierarchical neural network“, International Journal of Computational Intelligence Systems, 2011, vol 4 (4), pp. 672-679.
3.	Lendak I., Ivancevic N., Vukmirovic S., Varga E., Nenadic K. & Erdeljan A. (2012), „Client Side Internet Technologies in Critical Infrastructure Systems“, International Journal of Computers, Communications & Control (IJCCC), 2012, vol 7 (5), pp. 878-890.
4.	Vukmirovic S., Erdeljan A., Lendak I. & Capko D. (2012), „Unifying the Common Information Model (CIM)“, Revue Roumaine des Sciences Techniques-Serie Electrotechnique et Energetique, 2012, vol 57 (3), pp. 301-310.
5.	Vukmirovic S., Erdeljan A., Lendak I. & Capko D. (2012), „Optimal Workflow Scheduling in Critical Infrastructure Systems with Neural Networks“, Journal of Applied Research and Technology, 2012, vol 10 (2), pp. 114-121.
6.	Čapko D., Erdeljan A., Vukmirović S. & Lendak I. (2011), „A Hybrid Genetic Algorithm for Partitioning of Data Model in Distribution Management Systems“, Information Technology and Control, 2011, vol 40 (4), pp. 316-322.
7.	Vukmirović S., Erdeljan A., Lendak I. & Čapko D. (2011), „Extension of the Common Information Model with Virtual Meter“, Electronics and electrical engineering, ISSN 1392 – 1215, 2011, vol 1 (111), pp. 59-64.
8.	Vukmirović S., Erdeljan A., Lendak I. & Čapko D. (2010), „A novel software architecture for smart metering systems“, Journal of Scientific & Industrial Research, December 2010, vol 69, pp. 937-941.
9.	Nedić N., Vukmirović S., Erdeljan A., Lendak I. & Čapko D. (2010), „A genetic algorithm approach for utility management system workflow scheduling“, Information technology and control, 2010, vol 39 (4), pp. 310-319.
10.	Erdeljan A., Lendak I., Vukmirović S. & Čapko D. (2007), „Otvorena softverska arhitektura za modeliranje, simulaciju i upravljanje distributivnim vodovodnim sistemima“, Vodoprivreda, 2007, ISSN 0350-0519, vol 229-230, pp. 291-302.

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	25		
Total of SCI(SSCI) list papers :	9		
Current projects :	Domestic :	1	International : 1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Luković S. Ivan		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 18.05.1991		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2006	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	1996	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1993	School of Electrical Engineering - Beograd	Applied Computer Science and Informatics
Bachelor's thesis	1990	Military-Technical Faculty - Zagreb	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E2I40	Database Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	E2I41	Information System Engineering	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
3.	GI205	Information Systems and Databases	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	GI408A	Geospatial Databases	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5.	RI43A	Databases 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
6.	RI43B	Databases 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
7.	0RI43B	Databases 2	( ES0) Power Software Engineering, Undergraduate Academic Studies
8.	BM118E	Databases	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	EE417A	Databases	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	SE0013	Data Organization	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
11.	SE0016	Databases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12.	E2502	Data Warehouse Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

### List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
13. E2517	Database Management Systems	( E20) Computing and Control Engineering, Master Academic Studies ( E50) Power Software Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14. E2518	Software Based Business Process Modeling	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
15. E2530	Domain Specific Modeling and Languages	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
16. DRNI02	Selected Topics in Advanced Software Architecture	( E20) Computing and Control Engineering, Doctoral Academic Studies
17. DRNI04	Selected Topics in Database Management	( E20) Computing and Control Engineering, Doctoral Academic Studies
18. DRNI05	Selected Topics in Software Standardization and Quality	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
19. DRNI08	Selected Topics in Information Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies

### Representative references (minimum 5, not more than 10)

1.	Luković I., Ivančević V., Čeliković M., Aleksić S.: DSLs in Action with Model Based Approaches to Information System Development, in the book: Formal and Practical Aspects of Domain-Specific Languages: Recent Developments; Chapter 17., IGI Global, USA, 2013, pp. 502-532, ISBN 978-1-4666-2092-6.
2.	Luković I.: From the Synthesis Algorithm to the Model Driven Transformations in Database Design, 10. International Scientific Conference on Informatics, Herlany: Slovak Society for Applied Cybernetics and Informatics and Technical University of Košice - Faculty of Electrical Engineering and Informatics, 23-25 Novembar, 2009, pp. 9-18, ISBN 978-80-8086-126-1. (Invited paper).
3.	Luković I.: Application of Information System Development Tools and Methods - Some Experiences from Industry and Research Projects in Serbia, 9. International Business Informatics Conference – Symposium on Business Informatics in Central and Eastern Europe, Vienna: Austrian Computer Society and University of Vienna, 25-27 Februar, 2009, pp. 119-128, ISBN 978-3-85403-242-7. (Invited paper).
4.	Luković I: An Approach to Specification and Generation of Software Systems using Form Types, 2nd Conference on Compilers, Related Technologies and Applications (CoRTA 2008), July 11, 2008, Braganca, Portugal, Proceedings, Polytechnic Institute of Braganca, Portugal, ISBN: 978-972-745-096-1, pp. 4. (Invited talk).
5.	Mogin P, Luković I, Govedarica M: Principi projektovanja baza podataka, II izdanje, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, Novi Sad, 2004, ISBN: 86-80249-81-5, 700 str.
6.	Mogin P, Luković I: Principi baza podataka, Univerzitet u Novom Sadu, Fakultet tehničkih nauka i MP "Stylos", Novi Sad, 1996, 350 str.
7.	Obrenović N., Aleksić S., Popović A., Luković I.: Transformations of Check Constraint PIM Specifications, COMPUTING AND INFORMATICS, SLOVAK ACADEMY OF SCIENCES, ISSN 1335-9150, 2012, Vol. 31, No. 5, pp. 1045-1079.
8.	Luković I, Mogin P, Pavićević J, Ristić S, "An Approach to Developing Complex Database Schemas Using Form Types", Software: Practice and Experience, John Wiley & Sons Inc, Hoboken, USA, ISSN: 0038-0644, DOI: 10.1002/spe.820, Vol. 37, No. 15, 2007, pp. 1621-1656.
9.	Luković I., Pereira Varanda M., Oliveira N., Cruz D., Henriques Rangel P.: A DSL for PIM Specifications: Design and Attribute Grammar based Implementation, Computer Science and Information Systems (ComSIS), ISSN 1820-0214, 2011, Vol. 8, No 2, pp. 379-403.
10.	Čeliković M., Luković I., Aleksić S., Ivančević V.: A MOF based Meta-Model and a Concrete DSL Syntax of IIS*Case PIM Concepts, Computer Science and Information Systems, ISSN 1820-0214, 2012, Vol. 9, No 3, pp. 1075-1103.

### Summary data for teacher's scientific or art and professional activity:

Quotation total :	22
Total of SCI(SSCI) list papers :	5
Current projects :	Domestic : 1 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Marković D. Vidan	
Academic title:		Associate Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Production Systems, Organization and Management	
Academic career	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Production Systems, Organization and Management
PhD thesis	1999	Faculty of Sciences - Novi Sad	Informatics
Magister thesis	1994	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	1990	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	IM1314	Computer aided project management	(I20) Engineering Management, Undergraduate Academic Studies
2.	IM1719	Implementation of information systems in insurance	(I20) Engineering Management, Undergraduate Academic Studies
3.	SE0017	Software Development Methodologies	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	SES101	Software Engineering Economy	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5.	F402	Electronic Publishing	( F00) Graphic Engineering and Design, Master Academic Studies
6.	E2537	IT Resources Management	( SE0) Software Engineering and Information Technologies, Master Academic Studies
7.	IM2317	IT Project management	(I20) Engineering Management, Master Academic Studies
8.	IM2321	Management of project oriented enterprises	(I20) Engineering Management, Master Academic Studies
9.	IM2714	Disaster risk management cycle	(I20) Engineering Management, Master Academic Studies
Representative references (minimum 5, not more than 10)			
1.	Marković V., Maksimović R.: A contribution to continual software service improvement based on the six-step service improvement method, INTERNATIONAL JOURNAL OF SOFTWARE ENGINEERING AND KNOWLEDGE ENGINEERING, 2012, Vol. 22, No 4, pp. 549-569, ISSN 0218-1940		
2.	Popović, D., Damjanović, S, Marković, V.: Systolic Right Ventricular Adaptional Changes in Athletes and Predictors of the Maximal Functional Capacity: A Pulsed Tissue Doppler Study, Journal of Sports Medicine and Physical Fitness, ISSN 0022-4707		
3.	Marković, V., Maksimović, R.: A contribution to software service improvement based on LSP method, African journal of business management, Vol. 4(15), pp. 3277-3288, 2010, ISSN 1993-8233		
4.	Marković, V., Prilog sistematskom podizanju CMM nivoa poduzeća, Svijet Osiguranja, listopad 2005., pp. 43-46		
5.	Tomašević M., Marković V.: CONTRIBUTION TO THE USER REQUESTS MANAGEMENT BASED ON ITIL IMPLEMENTATION, 4. International Scientific and Expert Conference - TEAM, Slavonski Brod, 17-19 Oktobar, 2012, pp. 185-188		
6.	Marković, V., Informatičko sazrevanje kompanije, Želnid, Beograd, str. 363, 2006.		
7.	Marković V., Advantage software for health insurance, Green Shield Canada, Windsor, Ontario, Canada, pp. 15, 2001.		
8.	Marković V., Intelligent Call Center Agent, Green Shield Canada, Windsor, Ontario, Canada, pp. 72, 2000.		
9.	Marković V., Council Agenda System, The Corporation of The City of Windsor, Windsor, Ontario, Canada, pp. 17, 1996.		
10.	Marković V., A Contribution to Applying Layer Pattern in Modeling JIT System's Architecture, XV Conference on Applied Mathematics, PRIM2002, Zlatibor, str 63-75, 2002.		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		0	
Total of SCI(SSCI) list papers :		3	
Current projects :		Domestic :	0
		International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Marković -. Milan	
Academic title:		Guest Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Computer Science	
Academic carieer	Year	Institution	Field
Academic title election:			
List of courses being held by the teacher in the accredited study programmes			
ID	Course name	Study programme name, study type	
1.	E233 Internet Networks	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( G10) Geodesy and Geomatics, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies	
2.	F501 WEB Design	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies	
3.	ISIT28 Informaciona bezbednost	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies	
4.	BMI95 Introduction to Computer Science	( BM0) Biomedical Engineering, Undergraduate Academic Studies	
5.	SE0001 Introduction to Programming	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies	
6.	SE0011 Introduction to Software Engineering	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies	
7.	SE0017 Software Development Metodologies	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies	
8.	SE0024 Software Construction and Testing	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies	
9.	SE239A Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies	



**Study Programme Accreditation**  
MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
10. E2522	Software Standardization and Quality	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11. SEM009	Identity Management	( SE0) Software Engineering and Information Technologies, Master Academic Studies
12. SEM017	Information Security	( SE0) Software Engineering and Information Technologies, Master Academic Studies
Representative references (minimum 5, not more than 10)		
Summary data for teacher's scientific or art and professional activity:		
Quotation total :		
Total of SCI(SSCI) list papers :		
Current projects :	Domestic :	International :

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:	Mihajlović R. Dragan		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 24.09.1990		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	1988	Faculty of Electrical Engineering - Sarajevo	Applied Computer Science and Informatics
Bachelor's thesis	1973	Faculty of Electrical Engineering - Sarajevo	Applied Computer Science and Informatics
Magister thesis	1070	Faculty of Electrical Engineering - Sarajevo	Electrical and Computer Engineering

#### List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	AU54	Geoinformation Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( G10) Geodesy and Geomatics, Undergraduate Academic Studies
2.	E243	Human Computer Interaction	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	GI029	Utility Information Systems and their Application	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
4.	GI205	Information Systems and Databases	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
5.	RI43A	Databases 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
6.	RI43B	Databases 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
7.	RI4A	Computer Graphics	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	0RI43B	Databases 2	( ES0) Power Software Engineering, Undergraduate Academic Studies
9.	BM118E	Databases	( BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	E0243	Human-Computer Interaction	( ES0) Power Software Engineering, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
11.	EE417A	Databases	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
12. E2505	Multimedia Systems	( E20) Computing and Control Engineering, Master Academic Studies ( ES0) Power Software Engineering, Master Academic Studies ( F20) Engineering Animation, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
13. E2516	Virtual Reality Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
14. FDS151	Selected Chapters in Multimedia	( F00) Graphic Engineering and Design, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Mihajlović D., Informacioni sistemi i projektovanje baza podataka, FTN Novi Sad, 1998
2.	Mihajlović D, Obradović D, Jedan algoritam sažimanja srpskohrvatskih reči, Informatika br 4, pp45-47, 1982
3.	Mihajlović D, Obradović D, An evaluation of textual documents indexing methods, Yujor, 1992, pp107-112.
4.	Mihajlović D i ostali, Softversko rešenje za farmaceutski informacioni sistem, Diskobolos 97.
5.	Mihajlović D, Kecman Ž, Farmaceutski informacioni sistem, I kongres farmaceuta Jugoslavije, Vrnjačka Banja, 1994
6.	Mihajlović D, Izbor parova leksičkih jedinica iz poznatog rečnika za automatizovano postavljanje relacija u tezaurusu
7.	Mihajlović D, Odredjivanje vrsta reči iz srpskohrvatskog jezika primenom računara, Informatica, br 1, pp52-54, 1988
8.	Perišić B, Obradović D, Mihajlović D, Standardizacija metodologije projektovanja informacionih sistema software-inženjerski aspekti, Standardizacija i kvalitet u informacionim tehnologijama, beograd 1995.
9.	Mihajlović D, Nićin V, Prilog razvoju automastke obrade informacija u INDOK-delatnosti u organima uprave, Dani informatike 80, pp73-83, Novi Sad
10.	Obradović D, Perišić B, Mihajlović D, Konjović Z, Stanje i trendovi u projektovanju informacionih sistema, IPME, Beograd, 1992

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	
Total of SCI(SSCI) list papers :	
Current projects :	Domestic : <input type="text"/> International : <input type="text"/>

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:		Milanović N. Nikola	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Applied Computer Science and Informatics	
Academic career	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2003		Applied Computer Science and Informatics
Bachelor's thesis	1995		Applied Computer Science and Informatics
Magister thesis	-		Applied Computer Science and Informatics

#### List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	F209	Multimedia	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
2.	ISIT21	Internet mreže	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
3.	ISIT2D	Web design	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	SE0008	Algorithms and Data structures	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	SE0016	Databases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
6.	SES102	NoSQL Data Bases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7.	SES201	Advanced Web Technologies	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	SES302	High Technology Management	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9.	E2506	Advanced Internet Infrastructure	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	E2513	Semantic Web	( E20) Computing and Control Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies



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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
11. E2519	Domain-Specific Languages	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12. E2526	Service Oriented Architectures	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies

Representative references (minimum 5, not more than 10)

1.	N. Milanovic, M. Malek. Current Solutions for Web Service Composition. IEEE Internet Computing, 8(6):51-59, 2004. (SCI 11/86)
2.	N. Milanovic, M. Malek, A. Davidson, V. Milutinovic. Routing and Security in Mobile Ad Hoc Networks. IEEE Computer, 37(2):61-65, 2004. (SCI 16/86)
3.	N. Milanovic, M. Malek. Search Strategies for Automatic Web Service Composition. International Journal of Web Services Research, 3(2):1-32, 2006. (SCI 37/86)
4.	N. Milanovic, B. Milic. Automatic Generation of Service Availability Models. IEEE Transactions of Service Computing, 2010. 4(1):56-69, 2011
5.	P. Ibach, N. Milanovic, J. Richling, V. Stantchev, A. Wiesner, Malek M. CERO: CE Robots Community. IEE Proceedings Software, Special Issue on Embedded Systems, 152(5):210-214, 2005. (SCI 71/86)

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	0		
Current projects :	Domestic :	0	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Milosavljević R. Gordana		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad		
	01.12.1995		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2010		Computer Science
Magister thesis	2001	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Computer Science

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E242	Software Specification and Modeling	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	F209	Multimedia	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
3.	RI53	Business Information Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	ISIT08	Object oriented programming fundamentals	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5.	ISIT12	Osnove informacionih sistema	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	ISIT22	Osnove baza podataka	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	ISIT26	Upravljanje projektima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
8.	ISIT27	Osnove softverskih arhitektura	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
9.	ISIT35	Poslovna informatika	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
10.	ISIT37	Konfigurisanje i administracija baza podataka	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
11.	SE0016	Databases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12.	SE0017	Software Development Metrodologies	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
13.	SES202	Model Driven Software Development	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
14.	SES204	Advanced Programming Tecnics	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies

		UNIVERSITY OF NOVI SAD			
		FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6			
<b>Study Programme Accreditation</b>					
MASTER ACADEMIC STUDIES			Software Engineering and Information Technologies		
List of courses being held by the teacher in the accredited study programmes					
ID	Course name	Study programme name, study type			
15.	E2508	Agile Software Development Methodology	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies		
16.	DRNI08	Selected Topics in Information Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies		
17.	DRNI12	Selected Topics in Contemporary Software Development Methods	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies		
Representative references (minimum 5, not more than 10)					
1.	B. Milosavljević, M. Vidaković, S. Komazec, G. Milosavljević.: User Interface Code Generation for EJB-Based Data Models Using Intermediate Form Representations. Principles and Practice of Programming in Java, Kilkenny, Ireland, 2003				
2.	B. Milosavljević, M. Vidaković, S. Komazec, G. Milosavljević: User Interface Code Generation for Data-Intensive Applications with EJB-Based Data Models, Software Engineering Research and Practice (SERP'03), Las Vegas, USA, 2003				
3.	G. Milosavljević, B. Perišić: Really Rapid Prototyping of Large-Scale Business Information Systems, IEEE International Workshop on Rapid System Prototyping, San Diego, USA, 2003				
4.	Milosavljević G., Ivanović D., Milosavljević B., Surla D.: Automated Construction of the User Interface for a CERIF-Compliant Research Management System, The Electronic Library, 2011, Vol. 29, No 5, pp. 565-588, ISSN 0264-0473				
5.	Perišić B., Milosavljević G., Dejanović I., Milosavljević B.: UML Profile for Specifying User Interfaces of Business Applications, Computer Science and Information Systems (ComSIS), 2011, Vol. 8, No 2, pp. 405-426, ISSN 1820-0214				
6.	Ivanović D., Milosavljević G., Milosavljević B., Surla D.: A CERIF-Compatible Research Management System Based on the MARC 21 Format, Program: Electronic Library and Information Systems, 2010, Vol. 44, No 3, pp. 229-251, ISSN 0033-0337				
7.	Dejanović I., Milosavljević G., Tumbas Živanov M., Perišić B.: A Domain-Specific Language for Defining Static Structure of Database Applications, Computer Science and Information Systems (ComSIS), 2010, Vol. 7, No 3, pp. 409-440, ISSN 1820-0214				
8.	Dejanović I., Perišić B., Milosavljević G., Stričević N.: Towards a foundation for distributed version control of SLE artifacts. In 3rd International Workshop on Model-Based Software and Data Integration, Birmingham, England				
9.	Milosavljević G., Dejanović I., Perišić B.: Ready for the industry: A practical approach to teaching mde. In 7th Educators Symposium@MODELS 2011: Software Modeling in Education, pages 31-40, Wellington, New Zealand, www.se.uni-oldenburg.de/documents/olnse-2-2011-EduSymp.pdf				
10.	Dejanović I., Tumbas Živanov M., Milosavljević G., Perišić B.: Comparison of Textual and Visual Notations of DOMMLite Domain-Specific Language, 14. Advances in Databases and Information Systems, Novi Sad, 20-24 September, 2010, pp. 20-24				
Summary data for teacher's scientific or art and professional activity:					
Quotation total :		0			
Total of SCI(SSCI) list papers :		0			
Current projects :		Domestic :	0	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Milosavljević P. Branko		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.10.1998		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1999	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E2E40	XML and WEB Services	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	E2E41	E-Business Systems Security	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	F209	Multimedia	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
4.	F214I2	Raster Graphics	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
5.	G1I00	Computer Practicum	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
6.	RI41	Internet Software Architectures	( E20) Computing and Control Engineering, Undergraduate Academic Studies
7.	SEI41	Internet Software Architectures	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	ISIT03	Introduction to Programming	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
9.	ISIT08	Object oriented programming fundamentals	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
10.	ISIT22	Osnove baza podataka	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
11.	ISIT28	Informaciona bezbednost	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
12.	ISIT29	XML Technologies	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
13.	BMI95	Introduction to Computer Science	( BM0) Biomedical Engineering, Undergraduate Academic Studies
14.	EIWDS	Web-based Measurement and Data Acquisition Systems	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
15. SE0001	Introduction to Programming	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
16. E2506	Advanced Internet Infrastructure	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17. F402	Electronic Publishing	( F00) Graphic Engineering and Design, Master Academic Studies
18. E2521	Business Process Management	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
19. E2526	Service Oriented Architectures	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
20. DE417	Web-based Measurement Systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
21. DRNI02	Selected Topics in Advanced Software Architecture	( E20) Computing and Control Engineering, Doctoral Academic Studies
22. DRNI03	Selected Topics in Internet-Based Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
23. DRNI06	Selected Topics in Digital Archives	( E20) Computing and Control Engineering, Doctoral Academic Studies
24. FDS151	Selected Chapters in Multimedia	( F00) Graphic Engineering and Design, Doctoral Academic Studies
25. FDS152	Selected Topics in Computer Graphics	( F00) Graphic Engineering and Design, Doctoral Academic Studies
26. FDS224	Selected Chapters in Programming	( F00) Graphic Engineering and Design, Doctoral Academic Studies
27. DRNI19	Selected Topics in Information Security	( E20) Computing and Control Engineering, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Branko Milosavljević. Models for Extensible Multimedia Document Retrieval. In IEEE 6th International Symposium on Multimedia Software Engineering, Miami, FL, 2004.
2.	Branko Milosavljević, Milan Vidaković, Srđan Komazec, and Gordana Milosavljević. User Interface Code Generation for Data-Intensive Applications with EJB-Based Data Models. In Software Engineering Research and Practice (SERP'03), Las Vegas, NV 2003.
3.	Branko Milosavljević and Zora Konjović. Design of an XML-Based Extensible Multimedia Information Retrieval System. In IEEE Multimedia Software Engineering (MSE2002), Newport Beach, CA, 2002. pp. 114-121.
4.	G. Sladić, B. Milosavljević, Z. Konjović. Extensible Access Control Model for XML Document Collections, Intl. Conf. on Security and Cryptography ICETE-SECURITY'07, Barcelona, Spain, 2007.
5.	Branko Milosavljević, Milan Vidaković, and Zora Konjović. Automatic code generation for database-oriented web applications. In James Power and John Waldron, editors, Recent Advances in Java Technology: Theory, Application, Implementation, pages 89-98. Trinity College Dublin, 2003.



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

6.	Danijela Tešendić, Branko Milosavljević, and Dušan Surla. A library circulation system for city and special libraries. <i>The Electronic Library</i> , 27(1):162-186, 2009. ISSN: 0264-0473, DOI: 10.1108/02640470910934669.
7.	Jelena Radjenović, Branko Milosavljević, and Dušan Surla. Modelling and implementation of catalogue cards using FreeMarker. Program: electronic library and information systems, 43(1):62-76, 2009. ISSN: 0033-0337, DOI: 10.1108/00330330910934110.
8.	Milan Vidaković, Branko Milosavljević, Zora Konjović, and Goran Sladić. Extensible Java EE-based agent framework and its application on distributed library catalogues. <i>Computer Science and Information Systems (ComSIS)</i> , 6(2):1-28, 2009. ISSN: 1820-0214, DOI: 10.2298/csis0902001V.
9.	Aleksandar Kovačević, Branko Milosavljević, Zora Konjović, and Milan Vidaković. Adaptive content-based music retrieval system. <i>Multimedia Tools and Applications</i> , 47(3):525-544, 2010. ISSN: 1380-7501, DOI: 10.1007/s11042-009-0336-2.
10.	Bojana Dimić, Branko Milosavljević, and Dušan Surla. XML schema for UNIMARC and MARC 21. <i>The Electronic Library</i> , 28(2):245-262, 2010. ISSN: 0264-0473, DOI: 10.1108/02640471011033611.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	15		
Current projects :	Domestic :	2	International : 1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:			Nenadić M. Goran
Academic title:			Guest Professor
Name of the institution where the teacher works full time and starting date:			-
Scientific or art field:			Applied Computer Science and Informatics
Academic carier	Year	Institution	Field
Academic title election:	2012		Applied Computer Science and Informatics
PhD thesis	2003		Mathematical Sciences
Magister thesis	1997		Mathematical Sciences
Bachelor's thesis	1993		Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E2K40A	Soft Computing	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2. ISIT2D	Web design	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
3. SE0001	Introduction to Programming	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4. SE0014	Computer organisation	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5. SE0016	Databases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
6. SE0024	Software Construction and Testing	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7. SE0031	Operating Systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8. SE239A	Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9. SES40	Software patterns and components	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies



List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
10. E2503	Data Mining and Data Analysis Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
11. E2506	Advanced Internet Infrastructure	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12. E2523	Social Networks	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
13. E2524	Text Mining	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
14. E2527	Business Intelligence	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
15. SEM013	E-government technologies	( SE0) Software Engineering and Information Technologies, Master Academic Studies

Representative references (minimum 5, not more than 10)

1.	Spasic, I., Sarafraz, F., Keane, J., Nenadic, G.: Extraction of Medications from Hospital Discharge Letters with Pattern Matching and Semantic Rules, J. of American Medical Informatics Association, 17(5): 532-535, 2010
2.	Gerner, M., Nenadic, G., Bergman, C.: LINNAEUS: A Species Name Identification System for Biomedical Literature, BMC Bioinformatics 11:85, 2010
3.	Yang, H., Spasic, I., Keane, J., Nenadic, G.: A Text Mining Approach to the Prediction of a Disease Status from Clinical Discharge Summaries, J. of American Medical Informatics Association, 16(4):596-600
4.	Yang, H., Keane, J., Bergman, C., Nenadic, G.: Assigning Roles to Protein Mentions: the Case of Transcription Factors, Journal of Biomedical Informatics, Vol. 42(5), pp. 887-894
5.	Yang, H., Nenadic, G., Keane, J.: Identification of Transcription Factor Contexts in Literature using Machine Learning Approaches, BMC Bioinformatics 2008, 9(Suppl 3):S11
6.	Rice, S., Nenadic, G., Stapley, B.: Mining Protein Function from Text Using Term-based Support Vector Machines, BMC Bioinformatics 2005, 6(Suppl 1):S22
7.	Krauthammer, M., Nenadic, G.: Term Identification in the Biomedical Literature, Journal of Biomedical Informatics, Vol. 37(6), 2004, pp. 512-526
8.	Nenadic, G., Spasic, I., Ananiadou, S.: Terminology-driven Mining of Biomedical Literature, Bioinformatics 19:8, 2003, pp. 938-943
9.	Nenadic, G., Mima, H., Spasic, I., Ananiadou, S., Tsujii, J.: Terminology-based Literature Mining and Knowledge Acquisition in Biomedicine, Int. J. of Medical Informatics, Vol. 67(1-3), 2002, pp. 33-48

Summary data for teacher's scientific or art and professional activity:

Quotation total :	
Total of SCI(SSCI) list papers :	
Current projects :	Domestic :      International :

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:		Obradović M. Ratko	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 02.09.1993	
Scientific or art field:		Computer Graphics	
Academic career	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Computer Graphics
PhD thesis	2000	Faculty of Sciences - Novi Sad	Computer Graphics
Magister thesis	1997	Faculty of Sciences - Novi Sad	Computer Graphics
Bachelor's thesis	1993	Faculty of Technical Sciences - Novi Sad	Machine Elements, Construction Principles, Machine and Mechanism Theory, Power and Motion Transfer and Eng. Communication

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	IA020	Advanced Display Technologies	( F10) Engineering Animation, Undergraduate Academic Studies
2.	M108	Engineering Graphic Communications	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
3.	S012	Descriptive Geometry and Engineering Drawing	( S00) Traffic and Transport Engineering, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	IA006	Spatial Shape Design	( F10) Engineering Animation, Undergraduate Academic Studies
5.	IA009	3D Modeling	( F10) Engineering Animation, Undergraduate Academic Studies
6.	IA014	Advanced Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
7.	IGA013	Character Animation	( F10) Engineering Animation, Undergraduate Academic Studies
8.	IGA055	Special Visual Effects	( F10) Engineering Animation, Undergraduate Academic Studies
9.	IGB034	Video in Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
10.	IGB340	Fundamentals of Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
11.	ZC007	Engineering Graphic Communications	( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
12.	IA018	Computer Geometry	( F20) Engineering Animation, Master Academic Studies
13.	AD0010	Advanced Animation and Video Post Techniques in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
14.	E2528	Computer game development	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
15.	IA005	History of Animation	( F20) Engineering Animation, Master Academic Studies
16.	AIDO8	Advanced Interdisciplinary Scientific Visualization	( F20) Engineering Animation, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Milojević Z., Navalusić S., Milankov M., Obradović R., Harhaji V., Desnica E.: System for femoral tunnel position determination based on the X - ray, HealthMED, 2011, Vol. 5, No 4, pp. 894-900, ISSN 1840-2991
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	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6		
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES                      Software Engineering and Information Technologies		
Representative references (minimum 5, not more than 10)			
2.	Milojević Z., Navalušić S., Milankov M., Obradović R., Desnica E., Harhaji V.: Methodology for 3D femur approximate model generation, HealthMED, 2011, Vol. 5, No 5, pp. 1211-1217, ISSN 1840-2991		
3.	Bojić S., Golub M., Müller J., Obradović R., Martinov M.: Convective drying of naked seeded oil pumpkin seeds (Cucurbita pepo L.) in a medium scale batch dryer with different modes of air circulation., Zeitschrift für Arznei- und Gewürzpflanzen, 2012, Vol. 17, No 3, pp. 108-115, ISSN 1431-9292		
4.	Obradović R., Popkonstantinović B., Beljin B.: Algorithm for Approximation Transitional Developable Surfaces Between two Polygons, rad je u štampi, Technics Technologies Education Management / TTEM, 2012, Vol. 7, No 4, ISSN 1840-1503		
5.	Obradović R., Petter O., Vidaković M., Popkonstantinović B., Popović B., Milojević Z.: Using Contemporary 3D Web Technologies in the Process of CAD Model Design (prihvaćen za objavljivanje u 2013), Technics Technologies Education Management, 2013, Vol. 8, No 1, 2/3, ISSN 1840-1503		
6.	Obradović R., Vujanović M., Popkonstantinović B., Šiđanin P., Beljin B., Kekeljević I.: Fine Arts Subjects at Computer Graphics Studies at the Faculty of Technical Sciences in Novi Sad, rad je u štampi, Technics Technologies Education Management / TTEM, 2013, Vol. 8, No 1, ISSN 1840-1503		
7.	Obradović R., Obradović M., Mišić S., Popkonstantinović B., Petrović M., Malešević B.: Investigation of Concave Cupolae Based Polyhedral Structures and Their Potential Application in Architecture, rad je u štampi, Technics Technologies Education Management / TTEM, 2013, Vol. 8, No 3, ISSN 1840-1503		
8.	Milojević Z., Navalušić S., Obradović R., Milankov M., Dragoi M., Beju L.: System for 3D Approximate Model Generation of the Femur and Screw Built into Human Knee, Academic Journal of Manufacturing Engineering – AJME, 2010, Vol. 8, No 1, pp. 73-78, ISSN 1583-7904		
9.	Obradović R.: The Plane Section of the Surface of Revolution, Facta universitatis - series: Architecture and Civil Engineering, 2005, Vol. 3, No 2, pp. 235-242, ISSN 0354-4605, UDK: 514.752.2:681.3.06(045)=20		
10.	Obradović R., Milojević Z.: Plane section of cone and cylinder in computer geometry, Facta universitatis - series: Architecture and Civil Engineering, 2005, Vol. 2, No 3, pp. 195-207, ISSN 0354-4605		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		50	
Total of SCI(SSCI) list papers :		7	
Current projects :		Domestic :	0
		International :	1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Obradović J. Đorđe		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.07.1998		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2011		Applied Computer Science and Informatics
Magister thesis	2003	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E236A	Computational Intelligence Fundamentals	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2. E2K40A	Soft Computing	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3. ISIT26	Upravljanje projektima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4. ISIT30	Business process management systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5. ISIT41	eGovernment technologies and systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6. SE0006	Object oriented programming 1	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7. SE0013	Data Organization	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8. SE239A	Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9. E2511	Fuzzy Systems	( E20) Computing and Control Engineering, Master Academic Studies ( ES0) Power Software Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies



**Study Programme Accreditation**  
MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
10. E2512	Neural Networks	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11. EP002	EBusiness technologies and systems	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
12. E2536	Mobile Application Development	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
13. DRNI07	Selected Chapters in Computational Intelligence	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
14. DRNI14	Selected Chapters in Machine Learning	( E20) Computing and Control Engineering, Doctoral Academic Studies
15. DRNI17	Selected Topics in ICT enhanced learning	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
16. DRNI18	Selected Topics in Distributed/Mobile computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Konjović Z., Obradović Đ., Racković M., Object oriented implementation of the neural network training system, Proc. Of Seventh IFSA '97 World Congress, Prague 1997.
2.	Obradović Đ. Jovanović D., Konjović Z., Govedarica M., Web based software system supporting detection of topographical symbols, InterGeoEast 2006.
3.	Obradović Đ. Racković M., Algorithmic Structure for Representation of the Various Neural Network Models, XI Conference on Applied Mathematics PRIM '96 Budva 1996.
4.	Konjović Z., Fišl I., Obradović Đ., "Specification of the language for reporting in library information system", YuInfo'98, Kopaonik 1998.
5.	Obradović Đ., Konjović Z., "The system for the computer supported testing students knowledge", YuInfo'99, Kopaonik 1999.
6.	Šolajić D., Obradović Đ., Konjović Z., "Reengineering in the anthropomorphic gait simulation system", PRIM 2000
7.	Obradović Đ., Konjović Z., "Anthropomorphic Gait Simulation System", PRIM 2000
8.	Obradović Đ., Šolajić D., Konjović Z. "Softverski sistem za administriranje procesa izvođenja nastave", YUINFO 2004
9.	Šolajić D., Obradović Đ., Konjović Z., "Web bazirana aplikacija za podršku razvoju softverskog projekta" YUINFO 2004
10.	Jovanović D., Obradović Đ., Konjović Z., Govedarica M., Softverski sistem za detekciju topografskih znakova na kartama i mapama, YuInfo, Kopaonik 2005.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0
Total of SCI(SSCI) list papers :	0
Current projects :	Domestic : 0      International : 0

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:	Okanović Đ. Dušan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.02.2004		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	2002	Faculty of Technical Sciences - Novi Sad	Computer Science

#### List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E233	Internet Networks	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( G10) Geodesy and Geomatics, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	ISIT23	Web Programming	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies
3.	ISIT30	Business process management systems	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	ISIT34	Identity Management	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies
5.	ISIT36	Software Development Tools	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	ISIT43	Configuration and Administration of Computer Systems	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	ISIT45	eTrade and eBanking technologies and systems	( S11) Software and Information Technologies (Indija), Undergraduate Professional Studies
8.	SE0024	Software Construction and Testing	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9.	SE239A	Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
10.	EP007	Document and content management	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
11.	AD0008	Web design in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
12.	E2522	Software Standardization and Quality	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
13.	DRNI05 Selected Topics in Software Standardization and Quality	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)		
1.	Okanović D., van Hoorn A., Konjović Z., Vidaković M.: SLA-Driven Adaptive Monitoring of Distributed Applications for Performance Problem Localization, Computer Science and Information Systems (ComSIS), 2012, ISSN 1820-0214	
2.	Dušan Okanović, Zora Konjović, Automatska inicijalizacija klasa iz XML datoteke, Zbornik radova YU INFO 2005 (CD), Kopaonik 2005.	
3.	Dušan Okanović, Milan Vidaković, Upotreba JMX MLet servisa za ažuriranje verzija Java aplikacija, Zbornik radova YU INFO 2007 (CD), Kopaonik 2007.	
4.	Đorđe Obradović, Milan Vidaković, Zora Konjović, Dušan Okanović, "Generator ekranskih formi za JBoss Seam bazirane aplikacije", Zbornik radova YU INFO 2008 (CD), Kopaonik 2008.	
5.	Dušan Okanović, Milan Vidaković, "Primena jBPM okruženja u implementaciji eUprave", Zbornik radova YU INFO 2009 (CD), Kopaonik 2009.	
6.	Valentin Penca, Siniša Nikolić, Dušan Okanović, "Detekcija Skype saobraćaja sistemom za detekciju upada u mrežu Snort", Zbornik radova YU INFO 2009 (CD), Kopaonik 2009.	
7.	Okanović D., Vidaković M.: Software Performance Prediction Using Linear Regression, 2. International Conference on Information Society Technology and Management, Kopaonik, 29 mart-3 februar, 2012	
8.	Okanović D., van Hoorn A., Konjović Z., Vidaković M.: Towards Adaptive Monitoring of Java EE Applications, 5. International Conference on Information Technology - ICIT, Amman, 11-13 Maj, 2011, ISBN 9957-8583-0-0	
9.	Okanović D., Konjović Z., Vidaković M.: Continuous Monitoring System for Software Quality Assurance, 15. International Scientific Conference on Industrial Systems - IS, Novi Sad, 14-16 Septembar, 2011	
10.	Okanović D., Vidaković M.: One Implementation of The System for Application Version Tracking and Automatic Updating, Proceedings of the IASTED International Conference on Software Engineering - SE 2007, Innsbruck, 12-14 februar 2008.	
Summary data for teacher's scientific or art and professional activity:		
Quotation total :	0	
Total of SCI(SSCI) list papers :	0	
Current projects :	Domestic :	0 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Pap I. Ištván		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	-		
Scientific or art field:	Computer Engineering and Computer Communication		
Academic career	Year	Institution	Field
Academic title election:	2010		Computer Engineering and Computer Communication
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	2008		Computer Engineering
Magister thesis	2001	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	1998	Faculty of Technical Sciences - Novi Sad	Computer Science

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. RT43	Engineering of Computer Based Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
2. RT52A	Dedicated Computer Structure Design 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies
3. RT52B	Dedicated Computer Structure Design for Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4. SE1006	Object Oriented Programming 2	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5. SERT03	Embedded system design 1	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
6. RT59	Real-Time System Design	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7. RT511	Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
8. DRT10	Selected chapters of embedded computer based systems	( E20) Computing and Control Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Pap I., Lukić N., Marčeta Z., Teslić N., Schu M.: Real-time video quality assessment platform, 27. International Conference on Consumer Electronics, Las Vegas: IEEE Consumer Electronics Society, , pp. 1-2, ISBN 978-1-4244-4701-5, UDK: 10.1109/ICCE.2009.5012206
2.	Mrazovac B., Bjelica M., Pap I., Teslić N.: Smart audio/video playback control based on presence detection and user localization in home environment
3.	Mrazovac B., Bjelica M., Teslić N., Pap I.: Towards Ubiquitous Smart Outlets for Safety and Energetic Efficiency of Home Electric Appliances, 1. IEEE International Conference on Consumer Electronics - Berlin (ICCE-Berlin), Berlin: IEEE Consumer Electronic Society, 6-8 Oktobar, 2011, pp. 324-328, UDK: <a href="http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6031795">http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6031795</a>
4.	Pap I., Šarić Z., Vukosavljev S., Teslić N., Temerinac M.: Hands-free Voice Communication Platform Integrated With TV, 27. International Conference on Consumer Electronics, Las Vegas: IEEE Consumer Electronics Society, , pp. 1-2, ISBN 978-1-4244-4701-5, UDK: 10.1109/ICCE.2009.5012265
5.	Pap I., Šarić Z., Teslić N.: Hands-free Voice Communication with TV, IEEE Transactions on Consumer Electronics, 2011, Vol. 57, No 2, pp. 606-614, ISSN 0098-3063, UDK: doi: 10.1109/TCE.2011.5955198



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FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

6.	Pap I., Šarić Z., Jovičić S., Teslić N.: Adaptive microphone array for unknown desired speaker's transfer function, JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, 2007, Vol. 122, No 2, pp. 44-49, ISSN 10.1121/1.2749077, UDK: <a href="http://dx.doi.org/10.1121/1.2749077">http://dx.doi.org/10.1121/1.2749077</a>
7.	Pap I., Šarić Z., Pal S., Velikić I.: Hands-free VoIP solution for embedded platforms in consumer electronics, 1. IEEE International Conference on Consumer Electronics - Berlin (ICCE-Berlin), Berlin: IEEE Consumer Electronics Society, 6-8 Oktobar, 2011, pp. 22-25, ISBN 978-1-4577-0233-4, UDK: 10.1109/ICCE-Berlin.2011.6031822
8.	Kaštelan I., Katona M., Pap I., Davidović M., Rešetar I.: A Full-Duplex Hands-Free Videophone Add-on Device for Digital Television Sets, 1. IEEE International Conference on Consumer Electronics - Berlin (ICCE-Berlin), Berlin: IEEE Consumer Electronics Society, 6-8 Oktobar, 2011, pp. 382-385, ISBN 978-1-4577-0232-7, UDK: <a href="http://dx.doi.org/10.1109/ICCE-Berlin.2011.6031817">http://dx.doi.org/10.1109/ICCE-Berlin.2011.6031817</a>
9.	Kaštelan I., Katona M., Pap I., Davidović M., Rešetar I.: An Integrated Audio and Video Communication System for Digital Television Sets, 2. IEEE Eastern European Conference on the Engineering of Computer Based Systems, Bratislava: IEEE Computer Society, 5-6 Septembar, 2011, pp. 78-84, ISBN 978-0-7695-4418-2, UDK: <a href="http://dx.doi.org/10.1109/ECBS-EERC.2011.20">http://dx.doi.org/10.1109/ECBS-EERC.2011.20</a>
10.	Bjelica M., Pap I., Teslić N., Coulon J.: Set-top box-based home controller, 14. IEEE International Symposium on Consumer Electronics (ISCE2010), Braunschweig: IEEE Consumer Electronics Society, 7-10 Jun, 2010, pp. 1-6, ISBN 978-1-4244-6672-6/10, UDK: <a href="http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5523704">http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5523704</a>

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	2			
Current projects :	Domestic :	0	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Perišić R. Branko		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.04.1983		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carier	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Education Specialist Thesis	2007	Software Engineering Institute at Carnegie Mellon University - Pittsburgh	Computer Science
Education Specialist Thesis	2004	Software Engineering Institute at Carnegie Mellon University - Pittsburgh	Computer Science
PhD thesis	1994	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1986	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1977	Faculty of Electrical Engineering - Sarajevo	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E235	Fundamentals of Information Systems and Software Engineering	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	E242	Software Specification and Modeling	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E2S40	Software Patterns and Components	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	RI45	Software Design	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5.	RI53	Business Information Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
6.	ISIT22	Osnove baza podataka	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	ISIT26	Upravljanje projektima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
8.	ISIT28	Informaciona bezbednost	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
9.	ISIT2E	Osnove projektovanja softvera	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
10.	ISIT33	Integracija i verifikacija softverskih aplikacija	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
11. SE0011	Introduction to Software Engineering	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12. SE0017	Software Development Methodologies	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
13. SES103	Oral and written communication skills	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
14. SES40	Software patterns and components	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
15. E2508	Agile Software Development Methodology	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
16. E2509	Protection and Recovery of Software Systems	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17. GS014	The application of information technologies in energy efficiency	( G10) Energy Efficiency in Buildings, Specialised Academic Studies
18. E2522	Software Standardization and Quality	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
19. DRNI05	Selected Topics in Software Standardization and Quality	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
20. DRNI08	Selected Topics in Information Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
21. DAU014	Selected Topics in Computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
22. DRNI12	Selected Topics in Contemporary Software Development Methods	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	B. Perišić, G. Milosavljević "A Method and Tool for Rapid Prototyping of Large Scale Business Information Systems" COMSIS 2004
2.	Perišić B., Milosavljević G., Dejanović I., Milosavljević B.: UML Profile for Specifying User Interfaces of Business Applications, Computer Science and Information Systems (ComSIS), 2011, Vol. 8, No 2, pp. 405-426, ISSN 1820-0214
3.	Dejanović I., Milosavljević G., Tumbas Živanov M., Perišić B.: A Domain-Specific Language for Defining Static Structure of Database Applications, Computer Science and Information Systems (ComSIS), 2010, Vol. 7, No 3, pp. 409-440, ISSN 1820-0214



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FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

4.	Branko Perišić "DMIS-Distributed Medical Information System Concept&Structure", SystemScienceJournal NO.1 Vol.13 1987
5.	Dejanović I., Perišić B., Milosavljević G., Stričević N.: Towards a foundation for distributed version control of SLE artifacts. In 3rd International Workshop on Model-Based Software and Data Integration
6.	Milosavljević G., Dejanović I., Perišić B.: Ready for the industry: A practical approach to teaching mde. In 7th Educators Symposium@MODELS 2011: Software Modeling in Education, pages 31-40, Wellington, New Zealand, www.se.uni-oldenburg.de/documents/olnse-2-2011-EduSymp.pdf
7.	Milosavljević G., Dejanović I., Perišić B., Milosavljević B.: UML Profile for Specifying User Interfaces of Business Applications, 14. Advances in Databases and Information Systems, Novi Sad, 20-24 September, 2010, pp. 77-94
8.	Dejanović I., Tumbas Živanov M., Milosavljević G., Perišić B.: Comparison of Textual and Visual Notations of DOMMLite Domain-Specific Language, 14. Advances in Databases and Information Systems, Novi Sad, 20-24 September, 2010, pp. 20-24
9.	G.Milosavljević, B.Perišić "Really Rapid Prototyping of Large-Scale Business Information Systems", IEEE Workshop on Rapid Systems Prototyping San Diego 2003
10.	Perišić B., Zečević I.: Program package University organizational structure Korisnik: FTN Novi Sad, Univerzitet u Novom Sadu Rađeno za: TEMPUS , 2007

Summary data for teacher's scientific or art and professional activity:

Quotation total :	12			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	1	International :	6

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:	Popov B. Srđan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 05.09.2001		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	2007	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1999	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

#### List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E111	Programming Languages and Data Structures	( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2. E214	Programming Languages and Data Structures	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies
3. URZP11	Fundamentals of Information Technologies	( ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
4. URZP23	Applied Information Technologies	( ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
5. URZP44	Application of geoinformation technology in risk management	( ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
6. IMDS45	Application of information and satellite technology in risk management	( I22) Engineering Management, Specialised Academic Studies
7. E2534	Data Compression	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
8. DRNI01	Selected Topics in Computer Programming	( E20) Computing and Control Engineering, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
9. IMDR45	Application of Information and Satellite Technologies in Risk Management	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies

#### Representative references (minimum 5, not more than 10)

1.	Jovčić N., Radonić (Jakšić) J., Turk Sekulić M., Vojinović-Miloradov M., Popov S.: Identification of emission sources of particle-bound polycyclic aromatic hydrocarbons in the vicinity of the industrial zone of the city of Novi Sad DOI: 10.2298/HEMIND120113062J, Hemijska industrija, 2012, ISSN 0367-598X
2.	Čosić Đ., Popov S., Sakulski D., Pavlović A.: Geo-Information Technology for Disaster Risk Assessment, Acta Geotechnica Slovenica, 2011, Vol. 8, No 2011/1, pp. 64-74, ISSN 1854-0171
3.	Malbaški D., Kupusinac A., Popov S.: The Impact of Coding Style on the Readability of C Programs, TTEM. Tehnics technologies education management, 2011, Vol. 6, No 4, pp. 1073-1082, ISSN 1840-1503
4.	Sakulski D., Čosić Đ., Popov S.: Implementation of Innovative Technologies for Disaster Risk Reduction, 1. International Conference Natural Hazards, Novi Sad: University of Novi Sad, Faculty of Science, 5 Maj, 2012, pp. 15-16, ISBN 978-86-7031-276-0
5.	Sakulski D., Čosić Đ., Popov S., Pavlović A., Laban M.: Disaster risk management and fire safety, 1. International conference Protection, Ecology, Security, Bar: Fakultet za pomorstvo Kotor, 24-26 Maj, 2012, pp. 75-81
6.	Simić J., Popov S., Čosić Đ., Sakulski D., Novaković T., Popović Lj., Pavlović A., Luhović A.: The aspect of bringing data in spatial relationship during the process of teaching at the subject "Disaster risk management", UDK: 37.01:004 (082)
7.	Pavlović A., Čosić Đ., Popov S., Kolaković S.: Indikatori praćenja hazardnih pojava poplave i suše u cilju poboljšanja planiranja melioracija, Tematski zbornik radova "Melioracije 07 - stanje i perspektive-", 2012, No 12, pp. 136-146, ISSN 978-86-7520-107-6, UDK: 626.8(082)



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FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

8.	Popović Lj., Popov S., Čosić Đ., Sakulski D.: Impact of Visualization on Data Availability, UDK: CIP je dostupan u Univerzitetskoj biblioteci Rijeke pod brojem 121219001
9.	Alargić I., Badnjarević I., Vrtunski M., Popov S.: Setting the platform for testing the quality of DTM in the format of DTM-ASCII , 8. IEEE International Symposium on Intelligent Systems and Informatics (SISY), Subotica, , pp. 253-256, ISBN 978-1-4244-7395-3
10.	Popov S., Pavlović A., Čosić Đ., Hlebjan M.: Interfacing Data Structures of Legacy Systems, 8. IEEE International Symposium on Intelligent Systems and Informatics (SISY), Subotica: 2010 IEEE , , pp. 409-411, ISBN 978-1-4244-7395-3

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	2	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Popović V. Miroslav		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 21.03.1985		
Scientific or art field:	Computer Engineering and Computer Communication		
Academic carier	Year	Institution	Field
Academic title election:	2002	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	1990	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1988	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1984	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E23A2	Real Time System Programming 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2. E23M	Real Time System Programming 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
3. SE0032	Parallel Programming	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4. SE1006	Object Oriented Programming 2	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5. SERT01	System Programming 1	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
6. RT57	Inter Computer Communications and Computer Networks 2	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
7. RT511	Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
8. DAU002	Selected Chapters in Computing	( F00) Graphic Engineering and Design, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies
9. DRT01	Selected Chapters in Real Time Systems Software	( E20) Computing and Control Engineering, Doctoral Academic Studies
10. DAU014	Selected Topics in Computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Vladimir Kovačević, Miroslav Popović, Sistemska programska podrška u realnom vremenu 1: Programski alati i paralelno programiranje, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, 2011.
2.	Vladimir Kovačević, Miroslav Popović, Sistemska programska podrška u realnom vremenu 2: Operativni sistemi za rad u realnom vremenu, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, 2011.

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6		
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES                      Software Engineering and Information Technologies		
Representative references (minimum 5, not more than 10)			
3.	Miroslav Popović, Communication Protocol Engineering, CRC Press, Boca Raton, Florida, 2006, ISBN 0849398142.		
4.	Čapko D., Erdeljan A., Popović M., Švenda G.: An Optimal Relationship-Based Partitioning of Large Datasets, LNCS, Springer Verlag, 2010, str. 555-558, ISBN 978-3-642-15575-8		
5.	Popović M., Bašičević I.: Test case generation for the task tree type of architecture, Information and Software Technology, Elsevier, 2010, Vol. 52, No 6, pp. 697-706, ISSN 0950-5849		
6.	Popović M., Kuprešanin I., Bašičević I.: Generic method for statistical testing of parallel programs based on task trees, Scientific Research and Essays, 2012, Vol. 7, No 11, pp. 1992-2248, ISSN 1992-2248		
7.	Čapko D., Erdeljan A., Švenda G., Popović M.: A Dynamic Repartitioning of Large Data Model in Distribution Management Systems, Electronics and electrical engineering, 2012, Vol. 5, No 121, pp. 1392-1215, ISSN 1392-1215		
8.	Čapko D., Erdeljan A., Popović M., Švenda G.: An Optimal Initial Partitioning of Large Datasets in Utility Management Systems, Journal of Advances in Electrical and Computer Engineering, 2011, Vol. 11, No 4, pp. 41-46, ISSN 1582-7445		
9.	Bašičević I., Kukulj D., Popović M.: On the application of fuzzy-based flow control approach to High Altitude Platform communications, Applied Intelligence, 2010, Vol. 2093, pp. 75-84, ISSN 1573-7497		
10.	Bašičević I., Popović M.: Use of SIP Protocol in Development of Telecom Services , Journal of The Communications Network, 2008, Vol. 3, No October, ISSN 1477-4739		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		216	
Total of SCI(SSCI) list papers :		11	
Current projects :		Domestic :	1
		International :	1

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:	Rakić S. Predrag		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.01.2003		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

#### List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E225	Operating Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies
2.	EE301	Operating Systems and Competitive Programming	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	ISIT04	Osnove računara	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	SE0014	Computer organisation	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5.	SE0031	Operating Systems	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
6.	SE0033	Generic and Meta Programming	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7.	SEM099	Programm Optimization	( SE0) Software Engineering and Information Technologies, Master Academic Studies

#### Representative references (minimum 5, not more than 10)

1.	Rakić P., Milašinić D., Živanov Ž., Suvajdžin Z., Nikolić M., Hajduković M.: MPI-CUDA parallelization of a finite-strip program for geometric nonlinear analysis: A hybrid approach, <i>Advances in Engineering Software</i> , 2011, Vol. 42, No 5, pp. 273-285, ISSN 0965-9978
2.	Hajduković M., Milašinić D., Nikolić M., Rakić P., Živanov Ž., Stričević L.: Scope of MPI/OpenMP/CUDA Parallelization of Harmonic Coupled Finite Strip Method Applied on Large Displacement Stability Analysis of Prismatic Shell Structures, <i>Computer Science and Information Systems (ComSIS)</i> , 2012, Vol. 9, No 2, pp. 741-761, ISSN 1820-0214
3.	Živanov Ž., Rakić P., Hajduković M.: COLIBROS: Educational operating system, <i>Computer Science and Information Systems (ComSIS)</i> , 2010, Vol. 7, No 4, pp. 705-719, ISSN 1820-0214, UDK: 004.45
4.	Rakić P., Stričević L., Suvajdžin Z.: Statically Typed Matrix: in C library, 5. Balkan Conference in Informatics, Novi Sad, 16-20 Septembar, 2012
5.	Stričević L., Rakić P., Hajduković M.: Finite Strip Method Construction Analysis Program Execution Speed Improvement on an MPI Cluster by Using Multiple Network Links, 20. Telekomunikacioni forum TELFOR, Beograd: Telecommunications Society, 20-22 Novembar, 2012, pp. 1405-1408, ISBN 978-1-4673-2982-8
6.	Živanov Ž., Rakić P., Hajduković M.: Wireless sensor network application programming and simulation system, <i>Computer Science and Information Systems (ComSIS)</i> , 2008, Vol. 5, No 1, pp. 109-126, ISSN 1820-0214
7.	Živanov Ž., Rakić P., Hajduković M.: Using code generation approach in developing kiosk applications, <i>Computer Science and Information Systems (ComSIS)</i> , 2008, Vol. 5, No 1, pp. 41-59, ISSN 1820-0214
8.	Milašinić D., Živanov Ž., Rakić P., Suvajdžin Z., Nikolić M., Hajduković M., Borković A., Milaković I.: A Finite-Strip Analysis of Nonlinear Shear-Lag Effect Supported by Automatic Visualization
9.	Milašinić D., Borković A., Živanov Ž., Rakić P., Hajduković M., Furtula B.: Large Displacement Stability Analysis of Columns using the Harmonic Coupled Finite-Strip Method



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

- |     |  |
|-----|--|
| 10. | Rakić P., Stričević L., Živanov Ž., Suvajdžin Z., Hajduković M.: Računarska učionica - iskustva u pripremi i korišćenju, INFO M, Beograd, 2007, Vol. 6, No 21, pp. 9-13, ISSN 1450-6254, UDK: 659.25 |
|-----|--|

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	5			
Current projects :	Domestic :	1	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Ristić M. Sonja		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.10.2006		
Scientific or art field:	Information-Communication Systems		
Academic career	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Information-Communication Systems
PhD thesis	2003	Faculty of Economics - Subotica	Information-Communication Systems
Magister thesis	1994	Faculty of Economics - Subotica	Information-Communication Systems
Bachelor's thesis	1989	Faculty of Economics - Subotica	Economics
Bachelor's thesis	1983	Faculty of Sciences - Novi Sad	Mathematics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	Z201	Fundamentals of Computer Technologies	(Z20) Environmental Engineering, Undergraduate Academic Studies
2.	Z201A	Fundamentals of Computer Technologies	( Z01) Safety at Work, Undergraduate Academic Studies
3.	ISIT3A	Metodologije i sistemi za upravljanje IT resursima	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	H401	Object Oriented Technologies	( H00) Mechatronics, Undergraduate Academic Studies
5.	II1002	Computer Technologies	( I10) Industrial Engineering, Undergraduate Academic Studies
6.	IM1010	Fundamentals of Information Technologies	( I20) Engineering Management, Undergraduate Academic Studies
7.	IM1506	Database Design	( I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
8.	IM1512	Object-oriented Information Technologies	( I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
9.	IM1516	Database Systems	( I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
10.	IM1519	Information System Architecture and Computer Networks	(I20) Engineering Management, Undergraduate Academic Studies
11.	SE0016	Databases	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12.	IMDS33	Structures of Modern Information and Communication Systems	( GI0) Geodesy and Geomatics, Specialised Academic Studies ( I12) Industrial Engineering, Specialised Academic Studies ( I22) Engineering Management, Specialised Academic Studies
13.	IMDS36	Advanced data models and database systems	( GI0) Geodesy and Geomatics, Specialised Academic Studies ( I12) Industrial Engineering, Specialised Academic Studies ( I22) Engineering Management, Specialised Academic Studies
14.	PLM11	Product Data Management	( I1U) Industrial Engineering - Product Lifecycle Management and Development, Master Academic Studies
15.	LIM02	Business Information Systems	( LIM) Logistic Engineering and Management, Master Academic Studies
16.	E2537	IT Resources Management	( SE0) Software Engineering and Information Technologies, Master Academic Studies



List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
17. IIDS8	Selected chapters from Information, management and communication systems	( G10) Geodesy and Geomatics, Specialised Academic Studies ( I12) Industrial Engineering, Specialised Academic Studies
18. IM2513	Data Warehouse Design	( I10) Industrial Engineering, Master Academic Studies (I20) Engineering Management, Master Academic Studies
19. IMDS73	Selected chapters from Information management	( I22) Engineering Management, Specialised Academic Studies
20. PLM04	Product Data Management	( I20) Engineering Management, Specialised Professional Studies
21. IMDR33	Structures of Modern Information and Communication Systems	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
22. IMDR36	Advanced Data Models and Database Systems	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies ( Z01) Safety at Work, Doctoral Academic Studies
23. IMDR73	Selected chapters from Information management	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
24. IMDR81	Selected chapters from Information, management and communication systems	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Luković I., Popović A., Mostić J., Ristić S.: A Tool for Modeling Form Type Check Constraints and Complex Functionalities of Business Applications, Computer Science and Information Systems (ComSIS), 2010, Vol. 7, No 2, pp. 359-385, ISSN 1820-0214
2.	Lukovic I, Mogin P, Pavicevic J, Ristic S, An Approach to Developing Complex Database Schemas Using Form Types, Software: Practice and Experience, Volume 37, Issue 15, Pages 1621-1656, December 2007. Online ISSN: 1097-024X Print ISSN: 0038-0644 Copyright 2007 John Wiley & Sons, Ltd. Hoboken, USA, Published Online: May 29 2007 12:28PM DOI: 10.1002/spe.820
3.	Aleksić S., Ristić S., Luković I., Čeliković M.: A Design Specification and a Server Implementation of the Inverse Referential Integrity Constraints, Computer Science and Information Systems (ComSIS), 2013, Vol. 10, ISSN 1820-0214 (Accepted for publishing)
4.	Ristić S., Luković I., Pavičević J., Mogin P.: Resolving Database Constraint Collisions Using IIS*Case Tool, Journal of Information and Organizational Sciences (JIOS), 2007, Vol. 31, No 1, pp. 187-206, ISSN 1846-3312, UDK: 004.651
5.	Luković I., Ristić S., Mogin P., Pavičević J.: Database Schema Integration Process – A Methodology and Aspects of Its Applying, Novi Sad Journal of Mathematics, 2006, Vol. 36, No 1, pp. 115-150, ISSN 1450-5444
6.	Luković I., Mogin P., Govedarica M., Ristić S.: The Structure of A Subschema and Its XML Specification, Journal of Information and Organizational Sciences (JIOS), 2002, Vol. 26, No 1-2, pp. 69-85, ISSN 1846-3312
7.	Ristić S., Aleksić S., Luković I., Banović J.: Form-Driven Application Development, Acta Electrotechnica et Informatica, Faculty of Electrical Engineering and Informatics, Technical University Kosice, 2012, Vol. 12, No 1, pp. 9-16
8.	Ristić S.: Lean Thinking Principles in the Context of Model-Driven Software Development, 1. International Scientific Conference on Lean Technologies - LeanTech, Novi Sad: Faculty of Technical Sciences, 13-14 Septembar, 2012, pp. 233-239, ISBN 978-96-7892-445-3
9.	Ristić S., Luković I., Aleksić S., Banović J., Al-Dahoud A.: An Approach to the Specification of User Interface Templates for Business Applications, 5. Balkan Conference in Informatics, Novi Sad: ACM New York, USA, 16-20 Septembar, 2012, pp. 124-129, ISBN 978-1-4503-1240-0
10.	Ristić S., Rakić-Skoković M., Al-Dahoud A.: An Overview of the Approaches for A PLM Application's Customization, 15. International Scientific Conference on Industrial Systems - IS, Novi Sad: Faculty of Technical Sciences; Department of Industrial Engineering and Management; University of Novi Sad, 14-16 Septembar, 2011, pp. 217-222, ISBN 978-86-7892-341-8

Summary data for teacher's scientific or art and professional activity:

Quotation total :	14
Total of SCI(SSCI) list papers :	3
Current projects :	Domestic : 2      International : 2

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:		Samardžija M. Dragan	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.11.2008	
Scientific or art field:		Computer Engineering and Computer Communication	
Academic carier	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	2004	Rutgers University - Newark, New Jersey	Electrical and Computer Engineering
Magister thesis	2000	Rutgers University - Newark, New Jersey	Electrical and Computer Engineering
Bachelor's thesis	1996	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

#### List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E23B	Fundamentals of Computer Networks 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2. E23B1	Computer Network Fundamentals 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3. SE0015	Prenos podataka i računarske komunikacije	( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4. RT511	Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
5. DRT08	Selected Topics in Wireless Computer Communications	( E20) Computing and Control Engineering, Doctoral Academic Studies

#### Representative references (minimum 5, not more than 10)

1.	Unquantized and Uncoded Channel State Information Feedback in Multiple Antenna Multiuser Systems, IEEE Transactions on Communication, 2006, Vol. 54, str. 1335- 1345
2.	Blind Successive Interference Cancellation for DS-CDMA Systems, IEEE Transactions on Communications, 2002, Vol. 50, str. 276- 290
3.	Pilot Assisted Estimation of MIMO Fading Channel Response and Achievable Data Rates, IEEE Transactions on Signal Processing, 2003, Vol. 51, str. 2882- 2890
4.	Compressed Transport of Baseband Signals in Radio Access Networks, IEEE Transactions on Wireless Communications, Volume 11, Issue 9, pp. 3216 - 3225, 2012
5.	Peer-to-Peer MIMO Radio Channel Measurements in a Rural Area, IEEE Transactions on Wireless Communications, 2007, Vol. 6, str. 3229- 3237
6.	Impact of Pilot Design on Achievable Data Rates in Multiple Antenna Multiuser TDD Systems, IEEE JSAC, Special Issue on Optimization of MIMO Transceivers, 2007, Vol. 25, str. 1370- 1379
7.	Prototype Experience for MIMO BLAST over Third Generation Wireless System, IEEE JSAC on MIMO Systems and Applications: Part I, 2003, Vol. 21, str. 440- 451
8.	Joint Coding Rate Control for Audio Streaming in Short Range Wireless Networks, IEEE Transactions on Consumer Electronics, 2009, Vol. 55, No. 2, str. 486- 491, ISSN ISSN: 0098-3063.
9.	A Human Detection Method for Residential Smart Energy Systems Based on Zigbee RSSI Changes, IEEE Transactions on Consumer Electronics, vol.58, no.3, pp.819-824, August 2012
10.	Experimental Evaluation of Unsupervised Channel Deconvolution for Wireless Multiple-Transmitter/Multiple-Receiver Systems, Electronics Letters IEE, 2002, Vol. 38, No. 20, str. 1214- 1216

#### Summary data for teacher's scientific or art and professional activity:

Quotation total :	311
Total of SCI(SSCI) list papers :	11



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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Current projects :	Domestic :	0	International :	0
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	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Sladić S. Goran		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.02.2004		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Computer Science
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	2002	Faculty of Technical Sciences - Novi Sad	Computer Science

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E239A	Web Programming	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E2E41	E-Business Systems Security	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E2K41	Distributed Artificial Intelligence and Intelligent Agents	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	EOS36	Elektronsko poslovanje i ugovaranje	( E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
5.	F501	WEB Design	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
6.	ISIT10	Introduction to Software Development	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	ISIT20	Object-oriented Programming Platforms	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
8.	ISIT2A	Software Development Techniques	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
9.	SE0006	Object oriented programming 1	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
10.	SE0014	Computer organisation	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

### List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
11. SE0017	Software Development Methodologies	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12. SE0024	Software Construction and Testing	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
13. SES103	Oral and written communication skills	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
14. E2501	Electronic Payment Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
15. EP007	Document and content management	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
16. E2522	Software Standardization and Quality	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17. SEM009	Identity Management	( SE0) Software Engineering and Information Technologies, Master Academic Studies
18. SEM013	E-government technologies	( SE0) Software Engineering and Information Technologies, Master Academic Studies
19. SEM017	Information Security	( SE0) Software Engineering and Information Technologies, Master Academic Studies
20. DRNI03	Selected Topics in Internet-Based Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
21. DRNI16	Selected Topics in Electronic Business	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
22. DRNI19	Selected Topics in Information Security	( E20) Computing and Control Engineering, Doctoral Academic Studies

### Representative references (minimum 5, not more than 10)

1.	Sladić G., Milosavljević B., Surla D., Konjović Z.: Flexible Access Control Framework for MARC Records, The Electronic Library, 2012, Vol. 30, No 5, pp. 623-652, ISSN 0264-0473, DOI:10.1108/02640471211275684
2.	Gostojić S., Sladić G., Milosavljević B., Konjović Z.: Context-sensitive Access Control Model for Government Services, Journal of Organizational Computing and Electronic Commerce, 2012, Vol. 22, No 2, pp. 184-213, ISSN 1091-9392, DOI:10.1080/10919392.2012.667717
3.	Sladić G., Milosavljević B., Konjović Z., Vidaković M.: Access Control Framework for XML Document Collections, Computer Science and Information Systems (ComSIS), 2011, Vol. 8, No 3, pp. 591-609, ISSN 1820-0214, DOI: 10.2298/CSIS100827002S
4.	Vidaković M., Milosavljević B., Konjović Z., Sladić G.: Extensible Java EE-Based Agent Framework and Its Application on Distributed Library Catalogues, Computer Science and Information Systems (ComSIS), 2009, Vol. 6, No 2, pp. 1-28, ISSN 1820-0214, DOI: 10.2298/csisis0902001V
5.	Sladić G., Milosavljević B., Konjović Z.: Extensible Access Control Model for XML Document Collections, 1. International Conference on Security and Cryptology - SECRIPT, Barcelona: INSTICC, 28-31 Jul, 2007, pp. 373-380, ISBN 9789898111128
6.	Sladić G.: Kontrola pristupa u poslovnim sistemima, Beograd, Zadužbina Andrejević, 2011, ISBN 978-86-525-0000-0
7.	Sladić G.: Kontrola pristupa XML dokumentima, Zadužbina Andrejević, 2008, ISBN 978-86-7244-683-8



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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

8.	Vidaković M., Sladić G., Komazec S.: Sistemi za upravljanje elektronskim sadržajima i njihova primena u e-upravi, InfoM, Časopis za informacionu tehnologiju i multimedijalne sisteme, 2006, No 20, pp. 36-41, ISSN 1451-4397
9.	Sladić G., Milosavljević B., Konjović Z.: Kontrola pristupa XML dokumentima, Info-M, 2005, Vol. 4, No 15-16, pp. 53-59
10.	Milosavljević B., Komazec S., Sladić G.: Open source sistemi za upravljanje dokumentima u e-upravi, Info-M, 2006, Vol. 5, No 20, pp. 25-35

Summary data for teacher's scientific or art and professional activity:

Quotation total :	54			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	2	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:		Surla I. Dušan	
Academic title:		Emeritus Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Informatics	
Academic carieer	Year	Institution	Field
Academic title election:	2010		Informatics
PhD thesis	1980	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Magister thesis	1976	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Bachelor's thesis	1969	Faculty of Mathematics - Beograd	Mathematics
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	E2507	Digital Archives	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
2.	DRNI02	Selected Topics in Advanced Software Architecture	( E20) Computing and Control Engineering, Doctoral Academic Studies
3.	DRNI06	Selected Topics in Digital Archives	( E20) Computing and Control Engineering, Doctoral Academic Studies
4.	DRNI10	Selected Topics in E-Government	( E20) Computing and Control Engineering, Doctoral Academic Studies
5.	DRNI13	Selected Topics in Scientific-research Activity managment	( E20) Computing and Control Engineering, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)			
1.	Vukobratović, M., Borovac, B., Surla, D., Stokić, D., Biped Locomotion, Monograph, Springer-Verlag, 1990.		
2.	P?p, E., Surla, D., Lebesgue Measure of ALFA-Cuts Approach for Finding the Height of the Membership Function, Fuzzy Sets and Systems 111 (2000) 341-350.		
3.	Racković, M., Vukobratović, M., Surla, D., On Reducing Numerical Complexity of Complex Robots Dynamics, Journal of Intelligent and Robotic Systems, 24. 269-293, 1999.		
4.	Racković, M., Vukobratović, M., Surla, D., Generation of Dynamic Models of Complex Robotic Mechanisms in Symbolic Form, Robotica (1998) volume 16, pp. 23-36.		
5.	Surla, D., Racković, M., The Application of PSI-transform for Determining a Near - Optimal Path in the Presence of Polyhedral Obstacles, Computing 48, 203-212 (1992).		
6.	Tošić, R., Surla, D., The Set of Admissible Positions for a two-DOF Linkage in the Presence of Obstacles , Z. Angew. Math. Mech. 71(1991)2, 129-132. (1991).		
7.	Surla, D., Obradović, D., Konjović, Z., Planning of Trajectories for the Motion of Planar Mechanisms in the Presence of Obstacles, Automatika 31, 1990, Vol. 1-2, pp. A.287-A.295.		
8.	Borovac, B., Vukobratović, M., Surla, D., An Approach to Biped Control Synthesis, Robotica (1989) Vol. 7. 231-241.		
9.	Vukobratović, M., Surla, D., Konjović, Z., Borovac, B., Dynamic Nominals and Control Synthesis for Artificial Anthropomorphic Walk Producing Mechanisms, System Science 15 (1989)3, 21-30. (1989).		
10.	Surla, D., Konjović, Z., Determination of the Collision-Free Region for a Two-Link Mechanism in the Presence of Obstacles, Automatika 29(1988)1-2, A.363-A.369. (1988).		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		52	
Total of SCI(SSCI) list papers :		10	
Current projects :		Domestic :	International :
		1	0

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Suvajdžin Rakić B. Zorica		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.12.1998		
Scientific or art field:	Applied Computer Science and Informatics		
Academic career	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2008	Faculty of Technical Sciences - Novi Sad	Computer Science
Magister thesis	2000	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1998	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E225	Operating Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies
2.	E234	Compilers	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
3.	EE301	Operating Systems and Competitive Programming	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	H207	Programming and Programming Languages	( F10) Engineering Animation, Undergraduate Academic Studies ( H00) Mechatronics, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
5.	ISIT12	Osnove informacionih sistema	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	ISIT22	Osnove baza podataka	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	SE0034	Compilers	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
8.	E2505	Multimedia Systems	( E20) Computing and Control Engineering, Master Academic Studies ( ES0) Power Software Engineering, Master Academic Studies ( F20) Engineering Animation, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
9.	F402	Electronic Publishing	( F00) Graphic Engineering and Design, Master Academic Studies
10.	DRNI08	Selected Topics in Information Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Rakić P., Milašinović D., Živanov Ž., Suvajdžin Rakić Z., Nikolić M., Hajduković M.: MPI-CUDA parallelization of a finite-strip program for geometric nonlinear analysis: A hybrid approach, Advances in Engineering Software, 2011, Vol. 42, No 5, pp. 273-285, ISSN 0965-9978
2.	Zorica Suvajdžin, Miroslav Hajduković, A Structure Editor for the Program Composing Assistant, Computer Science and Information Systems, Volume 3, Number 1, Beograd, jun 2006., pp 65-76
3.	Miroslav Hajduković, Zorica Suvajdžin, Žarko Živanov, Character oriented program editing - habit or necessity, Novi Sad Journal of mathematics, vol. 33, no. 1, Novi Sad, 2003., pp 53-65



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FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

4.	Hajduković M., Suvajdžin Z., Živanov Ž. Naziv: A problem of program execution time measurement Naziv časopisa: Novi Sad Journal of mathematics , Novi Sad Journal of Mathematics, 2003, Vol. 33, No 1, pp. 67-73, ISSN 1450-5444, UDK: 51
5.	Rakić P., Stričević L., Suvajdžin Rakić Z.: Statically Typed Matrix: in C library, 5. Balkan Conference in Informatics, Novi Sad: ACM, 16-20 Septembar, 2012, pp. 217-222
6.	Milašinović D., Živanov Ž., Rakić P., Suvajdžin Rakić Z., Nikolić M., Hajduković M., Borković A., Milaković I.: A Finite-Strip Analysis of Nonlinear Shear-Lag Effect Supported by Automatic Visualization
7.	Suvajdžin Rakić Z., Rakić P.: Computers and Education, 1. VIPSI, Nepoznato, 3-4 April, 2009, ISBN 86-7466-117-3
8.	Zorica Suvajdžin, Miroslav Hajduković, Program Composing Assistant For Novice Programmers, The ASEE Mid-Atlantic Spring Conference 2006, Brooklyn NY, April 2006, abstract+5 pages (CD-ROM)
9.	Zorica Suvajdžin, Miroslav Hajduković, Towards Program Composing Assistants, Proceedings of the 2005 International Conference on Programming Languages and Compilers, PLC'05, Las Vegas, Nevada, USA, jun 2005, pp 142-147
10.	Rakić P., Živanov Ž., Suvajdžin Rakić Z., Stričević L., Hajduković M.: Characteristics of Operating System for Wireless Sensor Network Applications, 9. International Symposium Interdisciplinary Regional Research - ISIRR, Novi Sad, , pp. 50-50

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	0			
Current projects :	Domestic :	0	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Temerinac R. Miodrag		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	-		
Scientific or art field:	Computer Engineering and Computer Communication		
Academic career	Year	Institution	Field
Academic title election:	1997	Faculty of Technical Sciences - Novi Sad	Computer Engineering and Computer Communication
PhD thesis	2003	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Magister thesis	1979	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1976	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E240	Fundamentals of DSP Architecture and Algorithms 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2. E2401	Fundamentals of DSP Architecture and Algorithms 2	( E20) Computing and Control Engineering, Undergraduate Academic Studies
3. RT510	Algorithms and DSP platforms in computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
4. RT511	Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
5. DAU001	Selected Chapters in Telecommunications and Signal Processing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
6. DRT04	Selected Chapters in Computer Communications	( Z01) Safety at Work, Doctoral Academic Studies
7. DRT07	Development and implementation of multimedia algorithms	( E20) Computing and Control Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Osnovi algoritama i struktura DSP, S. Berber i M. Temerinac, 2004
2.	Arhitekture i algoritmi DSP I, V. Kovačević, M. Popović, M. Temerinac, N. Teslić, 2005
3.	Principi telekomunikacija I i II, M. Temerinac, 1988
4.	Osnovi telekomunikacija, V. Milošević, Ž. Trpovski, M. Temerinac, 1994
5.	Temerinac-Ott M., Temerinac M.: "Discrete Fourier-Invariant Signals: Design and Applications", Elsevier Science Publishers, 2012, Vol. 60, No 3, pp. 1108-1120, UDK: 10.1109/TSP.2011.2178602
6.	Miodrag Temerinac, Carsten Noeske, Ralf Herz, Steffen Zimmermann, Volker Wagner, „Eine neue DSP Plattform für Multimedia-Anwendungen“, it - Information Technology 45(6): (2003)
7.	Hilsinger U., Bock C., Fiesel H. and Temerinac M., "Neues Konzept für drahtlose High-End-Audioübertragung", Elektronik, Sonderheft Wireless 02/2002, pp. 50-55
8.	Teslić N., Zlokolica V., Peković V., Tekcan T., Temerinac M.: Packet-loss error detection system for DTV and set-top box functional testing, IEEE Transactions on Consumer Electronics, 2010, Vol. 56, No 3, pp. 1311-1319, ISSN 0098-3063, UDK: 10.1109/TCE.2010.5606264
9.	Kovačević J., Samardžija D., Temerinac M.: Joint coding rate control for audio streaming in short range wireless networks, IEEE TRANSACTIONS ON CONSUMER ELECTRONICS 2009 55 (2):486-491, 2009, Vol. 55, No 2, pp. 486-491, ISSN 0098-3063
10.	Marijan D., Teslić N., Temerinac M., Peković V.: On the Effectiveness of the System Validation Based on the Black Box Testing Methodology, JOURNAL OF ELECTRONIC SCIENCE AND TECHNOLOGY OF CHINA, 2009, Vol. 2009, No 7(4), pp. 1-4, UDK: <a href="http://d.wanfangdata.com.cn/Periodical_zgdzj-e200904020.aspx">http://d.wanfangdata.com.cn/Periodical_zgdzj-e200904020.aspx</a>

Summary data for teacher's scientific or art and professional activity:

Quotation total : | 0



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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Total of SCI(SSCI) list papers :	22			
Current projects :	Domestic :	1	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

### Science, arts and professional qualifications

Name and last name:		Teslić Đ. Nikola	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Computer Engineering and Computer Communication	
Academic career	Year	Institution	Field
Academic title election:	2011		Computer Engineering and Computer Communication
PhD thesis	1999	Faculty of Technical Sciences - Novi Sad	Computer Engineering
Magister thesis	1997	Faculty of Technical Sciences - Novi Sad	Computer Engineering
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Computer Engineering

#### List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E227A	Logic Design of Computer Systems 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2. E244	Selected Chapters in Physical Architecture Design	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3. RT50	Television and Image Processing Software 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4. EK465	Architectures of digital signal processors	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5. SERT02	Basics of computer engineering	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
6. RT56	Television and Image Processing Software 2	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
7. RT511	Practicum in computer engineering and computer communications	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
8. DRT04	Selected Chapters in Computer Communications	( Z01) Safety at Work, Doctoral Academic Studies
9. DRT04	Selected Chapters in television software	( E20) Computing and Control Engineering, Doctoral Academic Studies

#### Representative references (minimum 5, not more than 10)

1.	Arhitekture i algoritmi DSP 1, Vladimir Kovačević, Miroslav Popović, Miodrag Temerinac, Nikola Teslić
2.	Zbirka rešenih zadataka iz logičkog projektovanja. računarskih sistema I : projektovanje digitalnih sistema. Mihajlo Katona, Nikola Teslić, Vladimir Kovačević

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6			
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES                      Software Engineering and Information Technologies			
Representative references (minimum 5, not more than 10)				
3.	Z. Šarić, S. Jovičić, V. Kovačević, N. Teslić, D. Kukolj, SYSTEM AND TECHNIQUE FOR SPEAKER LOCALIZATION USING MICROPHONE ARRAY, filed 21.november, 2006, No. P-2006/0642.			
4.	D. Kukolj, V. Kovačević, N. Teslić, I. Papp, TECHNIQUE FOR DIRECTION OF ARRIVAL ESTIMATION FROM SOUND SOURCE USING DUAL MICROPHONE SYSTEM, filed 3.november, 2006, No. P-2006/0612.			
5.	Z. Šarić, S. Jovičić, V. Kovačević, N. Teslić, I. Papp, TECHNIQUE AND SYSTEM FOR AUTOMATIC GAIN CONTROL (AGC) USING MICROPHONE ARRAY, filed 3.november, 2006, No. P-2006/0611.			
6.	Majstorović D., Čelanović I., Teslić N., Čelanović N., Katić V.: Ultra-Low Latency Hardware-in-the-Loop Platform for Rapid Validation of Power Electronics Designs, IEEE Transaction on Industrial Electronics, 2011, Vol. 58, No 10, pp. 4708-4716, ISSN 0278-0046, UDK: <a href="http://dx.doi.org/10.1109/TIE.2011.2112318">http://dx.doi.org/10.1109/TIE.2011.2112318</a>			
7.	Pap I., Šarić Z., Jovičić S., Teslić N.: Adaptive microphone array for unknown desired speaker's transfer function, JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA, 2007, Vol. 122, No 2, pp. 44-49, ISSN 10.1121/1.2749077, UDK: <a href="http://dx.doi.org/10.1121/1.2749077">http://dx.doi.org/10.1121/1.2749077</a>			
8.	Katona M., Kaštelan I., Peković V., Teslić N., Tekcan T.: Automatic black box testing of television systems on the final production line, IEEE Transactions on Consumer Electronics, 2011, Vol. 57, No 1, pp. 224-231, ISSN 0098-3063, UDK: 10.1109/TCE.2011.5735506			
9.	Pap I., Šarić Z., Teslić N.: Hands-free Voice Communication with TV, IEEE Transactions on Consumer Electronics, 2011, Vol. 57, No 2, pp. 606-614, ISSN 0098-3063, UDK: doi: 10.1109/TCE.2011.5955198			
10.	Marijan D., Zlokolica V., Teslić N., Peković V., Tekcan T.: Automatic Functional TV Set Failure Detection System, IEEE Transactions on Consumer Electronics, 2010, Vol. 56, No 1, pp. 125-133, ISSN 0098-3063, UDK: 10.1109/TCE.2010.5439135			
Summary data for teacher's scientific or art and professional activity:				
Quotation total :		0		
Total of SCI(SSCI) list papers :		6		
Current projects :		Domestic :	2	International :                      10

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Vidaković P. Milan		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 20.01.1998		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1998	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E239A	Web Programming	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E2K41	Distributed Artificial Intelligence and Intelligent Agents	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	F501	WEB Design	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
4.	GI211	Geoinformatics	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5.	GI111	Information technologies in geodesy	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
6.	SE0006	Object oriented programming 1	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7.	SE239A	Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	E2501	Electronic Payment Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
9.	EP007	Document and content management	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
10.	AD0008	Web design in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
11.	DRNI03	Selected Topics in Internet-Based Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
12. DRNI05	Selected Topics in Software Standardization and Quality	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
13. FDS152	Selected Topics in Computer Graphics	( F00) Graphic Engineering and Design, Doctoral Academic Studies
14. DAU014	Selected Topics in Computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
15. DRNI16	Selected Topics in Electronic Business	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
16. DRNI18	Selected Topics in Distributed/Mobile computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Vidaković, M., Milosavljević, B., "Internationalisation of the BISIS Library Information System", Proceedings of the 28th International Unicode Conference, Orlando, USA, September 7-9, 2005.
2.	Vidaković, M., Sladić, G., Zarić, M., "Metadata Harvesting Using Agent Technology", Proceedings of the 8th IASTED International Conference on Software Engineering and Applications (SEA 2004), Cambridge, USA, November 9-11, 2004., pp. 489-493
3.	Vidaković M., Sladić G., Komazec S., "Sistemi za upravljanje elektronskim sadržajima i njihova promena u eUpravi", Info M: časopis za informacione tehnologije i multimedijalne sisteme, 2006., pp. 36-41, ISSN 1451-4397
4.	Vidaković, M., Zubić, T., Milosavljević, B., Pupovac, B., Tošić, T., "Processing Bibliographic Documents in the Library Information System BISIS", Proceedings of the International Conference on Distributed Library Information Systems, Ohrid, Former Yugoslav Republic of Macedonia, June 1-6, 2004., pp. 65-91.
5.	Vidaković, M., Sladić, G., Konjović, Z., "Security Management In J2EE Based Intelligent Agent Framework", Proceedings of the 7th IASTED International Conference on Software Engineering and Applications (SEA 2003), Marina Del Rey, USA, November 3-5, 2003., pp. 128-133.
6.	Milosavljević B., Vidaković M., Komazec S. and Milosavljević G., "User Interface Code Generation for Data-Intensive Systems with EJB-based Data Models", In Software Engineering Research and Practice, Las Vegas, NV, USA, 2003.
7.	Vidaković, M., Konjović, Z., "EJB Based Intelligent Agents Framework", Proceedings of the 6th IASTED International Conference on Software Engineering and Applications (SEA 2002), Cambridge, USA, November 4-6, 2002., pp. 343-348.
8.	Vidaković M., "Agentska okruženja", Zadužbina Andrejević. Beograd, 2007, ISBN: 9-788672-446210
9.	Milosavljević B., Vidaković M., Java i Internet programiranje, FTN izdavaštvo, 2007., ISBN 978-86-7892-047-9
10.	Okanović D., Vidaković M., „Upotreba JMX mlet servisa za ažuriranje verzija aplikacija“, Zbornik radova YulInfo 2007 (CD), Kopaonik 2007.

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	119
Total of SCI(SSCI) list papers :	7
Current projects :	Domestic : 1 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES      Software Engineering and Information Technologies	

Science, arts and professional qualifications

Name and last name:	Živanov S. Žarko		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad		
	01.01.2001		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2012		Applied Computer Science and Informatics
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	2007	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	2000	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E217	Computer Architecture	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies
2.	E223A	Object Programming	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies
3.	E225	Operating Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies
4.	E234	Compilers	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
5.	SZP01	Selected topics in Information technologies	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
6.	E2529	Parallel and distributed architectures	( E20) Computing and Control Engineering, Master Academic Studies ( ES0) Power Software Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	E2534	Data Compression	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies

Representative references (minimum 5, not more than 10)

1.	Žarko Živanov, Ivan Nejgebauer, Lazar Stričević, Miroslav Hajduković: Praktikum računarskih vežbi za predmet ARhitektura računara
2.	Rakić P., Milašinović D., Živanov Ž., Suvajdžin Z., Nikolić M., Hajduković M.: MPI-CUDA parallelization of a finite-strip program for geometric nonlinear analysis: A hybrid approach, Advances in Engineering Software, 2011, Vol. 42, No 5, pp. 273-285, ISSN 0965-9978
3.	Hajduković M., Milašinović D., Nikolić M., Rakić P., Živanov Ž., Stričević L.: Scope of MPI/OpenMP/CUDA Parallelization of Harmonic Coupled Finite Strip Method Applied on Large Displacement Stability Analysis of Prismatic Shell Structures, Computer Science and Information Systems (ComSIS), 2012, Vol. 9, No 2, pp. 741-761, ISSN 1820-0214
4.	Živanov Ž., Rakić P., Hajduković M.: COLIBROS: Educational operating system, Computer Science and Information Systems (ComSIS), 2010, Vol. 7, No 4, pp. 705-719, ISSN 1820-0214, UDK: 004.45
5.	Živanov Ž., Rakić P., Hajduković M.: Wireless sensor network application programming and simulation system, Computer Science and Information Systems (ComSIS), 2008, Vol. 5, No 1, pp. 109-126, ISSN 1820-0214



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Software Engineering and Information Technologies

Representative references (minimum 5, not more than 10)

6.	Živanov Ž., Rakić P., Hajduković M.: Using code generation approach in developing kiosk applications, Computer Science and Information Systems (ComSIS), 2008, Vol. 5, No 1, pp. 41-59, ISSN 1820-0214
7.	*****Autori: Suvajdžin Z., Hajduković M., Živanov Ž. Naziv: Character oriented program editing – habit or necessity? Naziv časopisa: Novi Sad Journal of mathematics
8.	*****Autori: Hajduković M., Suvajdžin Z., Živanov Ž., Hodžić E. Naziv: A problem of program execution time measurement Naziv časopisa: Novi Sad Journal of mathematics
9.	*****Milašinović D., Živanov Ž., Rakić P., Suvajdžin Z., Nikolić M., Hajduković M., Borković A., Milaković I.: A Finite-Strip Analysis of Nonlinear Shear-Lag Effect Supported by Automatic Visualization.
10.	Rakić P., Milašinović D., Živanov Ž., Hajduković M.: MPI-CUDA Parallelisation of the Finite Strip Method for Geometrically Nonlinear Analysis, 1. Internationale Conference on Parallel, Distributed and Grid Computing for Engineering, Pecs: Civil-Comp Press, , ISBN 978-1-905088-29-4

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	7			
Current projects :	Domestic :	0	International :	0