STUDY PROGRAMME ACCREDITATION MATERIAL:

POSTAL TRAFFIC AND TELECOMMUNICATIONS

MASTER ACADEMIC STUDIES

Novi Sad

2012.

Prevod sa srpskog jezika:

Jelisaveta Šafranj

Ivana Mirović

Marina Katić

Vesna Bodganović

Dragana Gak

Ličen Branislava

Content

Content

Programme name	Postal Traffic and Telecommunications
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, proffesional or art field	Traffic Engineering
Type of studies	Master Academic Studies
Study scope, expressed in ECTS	60
Academic degree, abbreviation	Master in Traffic Engineering, M.Traff.Eng.
Study length	1
Programme implementation starting year	2009
Future course implementation starting year (for new programme)	
Number of students attending this programme	16
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	2008
Web address containing programme information	http://www.ftn.uns.ac.rs

Standard 00. Introduction

The study program of graduate academic studies in Postal Traffic and Telecommunications is a continuation of the study programme of undergraduate studies of Postal Traffic and Telecommunications at the Faculty of Technical Sciences at the University of Novi Sad. It was jointly established by two departments: Department of Traffic Engineering and Department of Electrical Engineering.
The traditional division into scientific and educational areas has resulted in a situation in which engineers from different disciplines do not understand each others when working on the same project as well as in the lack of knowledge necessary for the realization of complex systems found in today`s practice. Engineers coming from different backgrounds when discussing a particular problem “do not speak the same language”. Each of the professions is aware only of its point of view. Since postal and telecommunication systems are increasing in number, complexity and level of sophistication, their design requires the knowledge of postal traffic and telecommunications as well as the knowledge related to management, design and programming of postal and telecommunication systems.
For that reason postal traffic and telecommunication in educational sense should be viewed as a study programme which was developed in answer to the problems encountered in everyday practice. The programme should provide the students with the opportunity to substantially understand the fundamental principles of different areas of traffic and telecommunications, acquire the necessary theoretical knowledge as well as to master the practical professional topics related to the realization of modern postal and telecommunication systems, acquire the ability to integrate the necessary knowledge and apply it in a particular situation and to have an introduction to research work during this study programme.

Standard 01. Programme Structure

The name of the study program is Master Academic Studies of Postal traffic and telecommunications . The academic title acquired is the Master's degree in Traffic Engineering. The outcome of the learning process is the knowledge which enables students to use the professional literature, apply the knowledge to the problems encountered in their professional work, as well as to continue their education, in case the students decide to do so. The requirements for admission to this study programme are a Bachelor's degree worth at least 240 ECTS and a successfully passed entrance examination.
Application procedures, grading and registration of candidates are defined in the Regulations of Enrollment at the Faculty level.

Study programme of the Master Academic Studies of Postal traffic and telecommunications lasts for one years with a credit value of 60 ECTS. Students have obligatory and elective courses, professional practice and Diploma thesis. Obligatory courses provide students with the fundamental knowledge in the field of postal traffic and telecommunications, while elective courses enable acquisition of knowledge in the field which suit their personal inclinations. Elective courses are elected from the group of suggested courses, thereby the preconditions for the attendance of the elected course have to be met. The content of each course is prepared with the aim to provide students with the opportunity to deal with specific issues in the field of postal traffic and telecommunications. Each course lasts one semester and is valued credit value of each course presented in accordance with the European Credit Transfer System (ECTS). The course consists of lectures and practice. During the lectures theory is presented using the adequate didactic tools, but students are also presented with the research trends in the specific field. During practice, which accompanies lectures, students work on the specific designing problems or research topics dealing with the field of study, thus coming to direct contact with the matter being taught. Practice may be auditory, laboratory, computer and computing. Practice in basic courses directly related to the postal traffic and telecommunications issues are consultative and are based on the personal contact between the lecturer and the student. Part of the practice could be done outside the Faculty with an objective to improve the educational process. The size of the group is determined depending on the practice characteristics. If individual contact between the professor and the student is necessary for the lecture organization, practice is then organized in small groups, with a significant number of hours. This is especially valid for the basic courses dealing with the issues of postal traffic and telecommunications, or research problems in the field of postal traffic and telecommunications. Student obligations in the lectures may consist of writing the term paper, essays, designing problems, term and graphic work in accordance with the course needs, where each student's activity during the teaching process is monitored and assessed according to the rules adopted at the Faculty level. The number of obtained credits is presented according to the unique methodology and it represents the workload per student. Each course is worth certain number of ECTS credits, and the studies are completed when the student fulfils all obligations predicted by the study programme and collects at least 60 ECTS in the process.

Standard 02. Programme Objectives

The purpose of the study program is the education of students for the profession of Master Engineer in Traffic Engineering in accordance with the needs of society.
The study programme Postal Traffic and Telecommunications is designed to ensure the acquisition of competencies which are socially justified and useful. The Faculty of Technical Sciences has defined the primary aims and goals for higher education of competent personnel in the field of postal traffic and telecommunications. The purpose of the Postal Traffic and Telecommunications study programme is in complete coherence with the goals and aims of the graduate programmes at the Faculty of Technical Sciences.
Realization of the study programme designed in this way ensures the education of engineers with master degree in traffic engineering who have competences equal to those acquired in Europe and world wide.

Standard 03. Programme Goals

The aim of the study programme is to achieve competence and academic skills in the field of Postal traffic and telecommunications. This, among others includes the development of creative skills regarding research problems and critical thinking ability, as well as problem solving, developing skills in team work as well as the mastery of specific practical skills needed to perform profession.
The aim of the studies is to educate professionals who possess the necessary in-depth knowledge in the field of postal traffic and telecommunications which can be applied to the areas of exploitation, organization, automation of postal and telecommunication systems as well as in the enhancement of these systems and the services they provide.
One of the specific objectives, consistent with the goals of education of experts at the Faculty of Technical Sciences is to develop the awareness with students of the need for lifelong learning, development of the society as a whole and environmental protection. The aim of the study programme is also the education of researchers proficient in teamwork, the development of skills for communicating and transferring their own knowledge to the professional and general public.

Standard 04. Graduates` Competencies

Students with Master`s degree in Postal traffic and telecommunications 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.
The qualifications which mark the completion of master academic studies are awarded to the students who:
-have demonstrated the knowledge and understanding in the field of postal traffic and telecommunications which complements the knowledge acquired during undergraduate academic studies and forms a basis for developing critical thinking and application of knowledge;
-are capable of applying their knowledge in solving problems in a new and unfamiliar environment in the wider or multidisciplinary areas within the educational and scientific area of study;
-are capable of integrating knowledge in order to solve complex problems and to form judgement on the basis of available information which include reflection on social and ethical responsibilities associated with applying their knowledge and judgements;
-are able to transfer knowledge conclusion methods in a clear and unambiguous way to both specialist and non-specialist audiences;
-have ability to continue studies in a self-selective way.
With regard to the specific competences of the students who have completed the study programme of master academic studies they acquire a thorough knowledge and understanding of all the disciplines within the module as well as the ability to solve practical problems using scientific methods and procedures. Students who have completed the master programme of Postal traffic and telecommunications are capable of adequately writing about and presenting the results of their work. the study programme emphasizes the intensive use of information and communication technologies.
The students who have completed this level of studies have the competence to follow and apply the new developments in their professional field as well as to cooperate with local community and international environment.
The students are capable of designing, organising, and managing postal and telecommunication systems. Throughout their education the students acquire the ability to independently perform experiments, statistical analysis of data as well as to formulate results and draw adequate conclusions.
Students who have graduated from the Postal traffic and telecommunication study programme acquire the knowledge how to economically use the natural resources of the Republic of Serbia in accordance with the principles of sustainable development.
Special attention is given to developing skills for teamwork and development of professional ethics.

Standard 05. Curriculum

The curriculum of graduate academic studies in Postal Traffic and Telecommunications was designed to meet all the set goals. In the structure of the study programme it has been ensured that elective courses make at least 30% of the required ECTS credits.
Academic master studies deal with concrete problem in the area of postal traffic and telecommunications. In elective courses students can follow their own preferences which have been defined at the undergraduate studies level.
All courses are one-semester courses and are worth the appropriate number of ECTS points where one point equals approximately 30 hours of student activities.
The curriculum is a description of each subject containing the name, type of course, year and semester of study, the number of ECTS credits, the name of the teacher, the course aims and the expected outcomes, competencies, prerequisites for attending the classes, course content, recommended literature, teaching methods, ways of knowledge assessment, and other data.
The study program complies with European standards in terms of conditions for enrolment, duration of study, completion, and modes of study.
An integral part of the curriculum of Postal Traffic and Telecommunications is professional practice and practical work for 45 hours, which is performed in the relevant scientific and research institutions, in organizations which perform innovation activities in organizations for the provision of infrastructural support, innovation activities in enterprises and public institutions.
The students complete their studies by producing a Master thesis, which consists of theoretical and methodological preparation necessary for the in-depth understanding of the field which they graduate in as well as the writing of the thesis itself.
Before the defence of their Master thesis, the students have to take an examination on the theoretical and methodological basis, which, as a rule is taken before a committee for defence. The final grade is based on the assessment of the theoretical – methodological preparation and the evaluation of the submitted work and its defence. The thesis is defended before a committee consisting of at least three teachers, of whom at least one has to be from other departments or faculties.

Table 5.2 Course specification

Course:	Application of Digital Signal Processing in Telecommunications
Course id: S0151	
Number of ECTS: 4	
Teachers:	Delić D. Vlado, Sečujski S. Milan
Course status:	Mandatory

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
3	1	1	0	0

Precondition courses

1. Educational goal:

The educational aim of this course is to provide students with the fundamental knowledge on digital signal processing and its application in telecommunications. The objective is that students become familiar with digital as well as analogue signals and systems for their processing It is necessary to learn about digital signals in frequency domains, digital filters and methods for their design.

2. Educational outcomes (acquired knowledge):

During the lectures the students are introduced to main algorithms for signal processing in discrete time and the most important transformations of discrete signals. The central part of the course is given to the rapid Fourier transformation. Digital filters are introduced via concrete examples, and then the students learn the basic methods for their design using appropriate software tools. Based on the acquired knowledge, the students will be able to analyse the set problem, select the appropriate digital filter class and optimal design method, design and implement a digital filter. In practical classes the students will gain experience with the Matlab DSP Toolbox. The students will know to estimate and calculate the basic parameters of a digital filter. They will be able to identify and qualify potential problems in digital filter implementation and to find solution. Throughout the course there will be examples of applications in telecommunications.

3. Course content/structure:

Practical aspects of selection theorem. Transformations of discrete signals and links between them (ZT, FTD, DFT). Fast FT and fast convolution. Examples of digital FIR and IIR filters and their characteristics. Main methods for digital filter design. Applications in telecommunications.

4. Teaching methods:

Througout the course, lecture classes (3 hours a week) are supported by corresponding auditory and computer practice classes (hour each). The lectures given by subject professor use PowerPoint presentations available to students in pdf format During the auditory practice tutorials, attention is given to solving less complicated tasks on spectral analysis of digital signals and designing digital filters. The whole material is suppoterd by practice classes at the Computer Center at the Faculty of Technical Sciences where students obtain practical experience in the work with software tools for digital signal processing. Preparation for practice classes and homework assignments are carried out through Web portal og the Chair using specially created on-line tasks which do not require special previous knowledge. The obtained theoretical knowledge is tested during the semester in the form of colloquium and practical knowledge is verified through design and defence of short project and homewor

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Test	Yes	30.00	Written part of the exam - tasks and theory	Yes	70.00
			Coloquium exam	No	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Ljiljana Milić i D. Dobrosavljević	"Uvod u digitalnu obradu signala"	ETF, Beograd	1995
2,	Milan Sečujski, Vlado Delić, Nikša Jakovljević, Igor Radić	"Zbirka zadataka iz digitalne obrade signala"	FTN, Novi Sad	2007
3,	Vlado Delić i dr.	"Prezentacije sa predavanja i on-line vežbe preko Web portala Katedre za telekomunikacije i obradu signala"		2003

Table 5.2 Course specification

Course:		Next Generation Telecommunication Networks
Course id:	S0152	
Number of ECTS:	4	
Teacher:		Šećerov E. Emil
Course status:		Mandatory

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses: None

1. Educational goal:

Learning about the function, architecture and services of next generation networks.

2. Educational outcomes (acquired knowledge):

The students are able to analyze and design services, topology and signalization of next generation networks. Students will become familiar with the quality of service of next generation networks.

3. Course content/structure:

-Standards for audio and video signal coding - Transmission of speech and video over IP network, RTP, RTCP protocols - Speech transmission over IP network, VoIP - IP multimedia subsystem: IMS - H323: basics, architecture and signalization - SIP protocol: basics, architecture and signalization - H248/MEGACO architecture; basics, architecture and signalization - Connecting networks with commutation circuit with next generation networks: SIGTRAN protocol - Architecture and signalling protocols of third generation mobile networks: (UMTS, mobile Internet) - Quality of service in third generation networks, - Security in third generation networks - Services and applications of next generation networks

4. Teaching methods:

Lecture and practice classes.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Theoretical part of the exam	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Daniel Collins	Carrier Grade Voice Over IP		2000

Table 5.2 Course specification

Course:		New Technologies and Services in Postal Traffic
Course id:	S0153	
Number of ECTS:	5	
Teachers:		Kujačić D. Momčilo, Šarac D. Dragana
Course status:		Mandatory

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge about new services in postal traffic and technologies which support their development.

2. Educational outcomes (acquired knowledge):

Knowledge about new services employed in successful postal centres and mastering new technologies which support the development of new services.

3. Course content/structure:

New technologies as a generator of growth of traditional postal services and a prerequisite for postal service being able to perform other service in addition to its basic activities. Post net – computer networks. Geo computer systems and their application in locating post offices and determining delivery areas. Centres for electronic commerce. Systems for tracing mail. Franchising in postal service. Expansion of network and increasing the number of services. Hybrid mail. Hybrid mail subsystems. Post express service. Direct mail service. Catalogue sales. Post and forwarding services. Logistics in postal systems. E-business and postal systems. Virtual business concept. B2B model characteristics. B2C model characteristics.

4. Teaching methods:

Lectures and practice classes.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	5.00	Written part of the exam - tasks and theory	Yes	20.00
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	50.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Momčilo Kujačić	Nove tehnologije i usluge u poštanskom saobraćaju	FTN Izdavaštvo	2012
2,	Momčilo Kujačić	Poštanski saobraćaj	FTN Izdavaštvo	2005
3,	časopis	Postal tehnology		2005
4,	Zbornici radova	Simpozijumi o novim tehnol.u pošt. i telekom. saobr. "PosTel"	Saobraćajni fakultet Beograd	2005

Table 5.2 Course specification

Course:		Computer Modelling and Simulation
Course id:	S054	
Number of ECTS:	5	
Teachers:		Čongradac D. Velimir, Erdeljan M. Aleksandar
Course status:		Mandatory

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses: None

1. Educational goal:

The aim is to gain knowledge about theoretical and practical basis of digital system modelling and simulation.

2. Educational outcomes (acquired knowledge):

The acquired knowledge can be used in solving practical engineering problems, and also forms a basis for further study of engineering subjects. .

3. Course content/structure:

Position and role of modelling and simulation, practical applications. Theory of modelling and simulation. Examples of forming models. Mathematical models of time continuous systems. Simulation and simulation languages. Matlab programming environment.: variables, operations with matrices, operations and functions, polynomials, programming solution of ordinary differential equations. Simulation of static and dynamic systems – Simulink. Mathematical and simulation models of time discrete systems.

4. Teaching methods:

The examination is written and oral. The written part is eliminatory. The final grade is formed on the basis of homework assignments, computer practice, written and oral part of the examination.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Complex exercises	Yes	5.00	Oral part of the exam	Yes	30.00
Complex exercises	Yes	5.00	Practical part of the exam - tasks	Yes	40.00
Complex exercises	Yes	5.00			
Project task	Yes	15.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	D. Ivetić	Struktirani pristup u programiranju: inženjering, algoritmi i programski jezici Paskal i C	Fakultet tehničkih nauka	2005
2,	D Obradović	Osnovi računarstva	Fakultet tehničkih nauka	2000
3,	A. Erdeljan, D. Čapko	Štampani materijal koji pokriva predavanja i vežbe		2005
4,	Latinka Čalasan, Menka Petkovska	MATLAB i dodatni moduli Control System Toolbox i SIMULINK	Mikro knjiga, Beograd	1995
5,	Duane Hanselman, Bruce Littlefield	Mastering MATLAB 6 - A Comprehensive Tutorial and Reference	Prantice Hall, ISBN: 0-13-019468-9	2001
6,	C.M.Close, D.K.Frederick, J.C.Newell	Modeling and Analysis of Dynamic Systems	John Wiley & Sons, Inc.	2002

Table 5.2 Course specification

Course:	Professional Internship
Course id: S055	
Number of ECTS: 2	
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:

Gaining direct knowledge of the functioning and organization of companies and institutions dealing with matters within profession for which the student qualifies and possibilities of applying previously acquired knowledge into practice.

2. Educational outcomes (acquired knowledge):

Training students to apply previously acquired theoretical and professional knowledge to solve specific practical engineering problems in the selected companies or Institutions. Introduce students to selected industries companies` or institutions` activities, ways of doing business, management and the place and role of engineers in their organizational structures.

3. Course content/structure:

Formed for each candidate separately, in agreement with the management of the company or institution where professional practice is performed and in accordance with the needs of the profession for which the student qualifies.

4. Teaching methods:

Consultation and writing in journals of professional practice in which a student describes the activities and tasks that he/she performed during the internship.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Presentation	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature				
Ord.	Author	Title	Publisher	Year
1,	organizacija gde se obavlja stručna praksa	interna akta organizacije u kojoj se obavlja stručna praksa		2012

Table 5.2 Course specification

Course:		Models of Postal Network Management
Course id:	S1I583	
Number of ECTS:	5	
Teachers:		Kujačić D. Momčilo, Šarac D. Dragana
Course status:		Mandatory

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses

1. Educational goal:

Acquiring specific sophisticated knowledge about organizing and managing postal and logistics network using modern technologies.

2. Educational outcomes (acquired knowledge):

Students acquire the knowledge about the basic principles in the organization and management of postal distribution and retail network.

3. Course content/structure:

Experience of foreign postal services in the transport and handling of mail. Automatic handling and separation of letters and parcels. Controlling the quality of postal traffic according to international standards. Use of postal address code. Systems for electronic mail tracking.. Defining the elements of quality delivery. Organization and management of delivery areas using geo information systems. Criteria for organizing a delivery area. Concert of separating delivery based on type of service. Special delivery. Organization of retail postal network in rural and urban areas. Optimal organization of rural rectal network. Legal framework. Elements for determining representative commission. Economic effects of the methods applied. Reengineering of urban retail networks. Reengineering model inputs. Analytic phase of the model. (Application of Geo information system, Location analysis, Market Analysis, Service request forecast). Franchise as a tool in model of reengineering urban retail networks.

4. Teaching methods:

Lectures. Practice classes, consultations and visits to selected posta traffic facilities.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	5.00	Written part of the exam - tasks and theory	Yes	20.00
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	50.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Momčilo Kujačić	Poštanski saobraćaj	Fakultet tehničkih nauka	2005
2,	Ivan Bošnjak	Tehnologija poštanskog prometa 2	Fakultet prometnih znanosti, Zagreb	1999
3,	Časopis	Postal tehnology		2005
4,	Zbornici radova	Simpozijumi o novim tehnol.u pošt. i telekom. saobr. "PosTel"	Saobraćajni fakultet, Beograd	2005
5,	Časopis	Savremena pošta	JP PTT Saobraćaja "Srbija"	2005
6,	Šarac D	Modeli upravljanja poštanskom mrežom	U pripremi - postoji u vidu skripte	2013

Table 5.2 Course specification

Course:		Information and Communication Theory
Course id:	EK521	
Number of ECTS:	5	
Teachers:		Petrović S. Vladimir, Sečujski S. Milan, Šenk I. Vojin, Trpovski V. Željen
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
3	2	1	0	0

Precondition courses

1. Educational goal:

Becoming familiar with the theoremes of the information theory and reachable limits of communication.

2. Educational outcomes (acquired knowledge):

Students acquire the information theory elements and are able to apply them in the design of communication systems and devices.

3. Course content/structure:

Source coding (statistical coding), AER lemma, Kraft-McMillan lemma, Shannon's first theorem, damaged data source compression; Protection coding (information channel capacity and calculation methods, cascaded channels, optimal docoding). Performance criteria, channel code capacity, features of a binary symetrical channel, Shannon's second theorem, typical sequence access; Cryptographic coding (the unique point, basic cryptographic algorithms), geometrical approach to the design and analysis of transmitters and receivers (vector channels, multivector channels, decision making, wave channels, Gram-Schmidt's process, signal synthesis, geometrical interpretation, corelational receiver, adaptive filter, irrelevant data in adaptive filtering, error probability, error bounds on the error probablitiy, the transmission speed, signal energy per bit of information, the impact of bandwidth. The limiting relationship between signal and noise (-1.6 dB); multi-user information theory.

4. Teaching methods:

Lectures. Practice. Powerpoint.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Test	Yes	10.00	Oral part of the exam	Yes	70.00
Test	Yes	10.00			
Test	Yes	10.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Thomas M. Cover, Joy A. Thomas	Elements of Information Theory	Wiley-Interscience	1991

Table 5.2 Course specification

Course:		Electronic postal services
Course id:	S1I593	
Number of ECTS:	5	
Teachers:		Kranjac M. Mirjana, Kujačić D. Momčilo, Šarac D. Dragana
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge about electronic postal services and their development.

2. Educational outcomes (acquired knowledge):

Knowledge of electronic services that provide efficient postal administration and mastering the technologies that support the development of these services.

3. Course content/structure:

Public Internet access point in post offices Web information on services and tariffs Postal electronic mailbox, Online direct mail, Postal registered electronic mai,l Electronic stamp, Customized electronic stamps, Electronic postage stamps, Electronic signature, E-telegram, E-cards, e-delivery confirmation, ON-LINE change of address on shipments, Electronic applications for postal service, postal m-services

4. Teaching methods:

Lectures and practice.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Written part of the exam - tasks and theory	Yes	30.00
Term paper	Yes	20.00	Oral part of the exam	Yes	40.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Kujačić M	Nove tehnologije i usluge u poštanskom saobraćaju	FTN Novi Sad	2012
2,	časopis	Postal Technology International		2012
3,	časopis	Union Postal	Universal Postal Union	2012

Table 5.2 Course specification

Course:		E-Business
Course id:	S1I594	
Number of ECTS:	5	
Teachers:		Xu Z. Ming, Lalić P. Bojan
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	1	1	0	0

Precondition courses: None

1. Educational goal:

This course introduces students to principles of e-commerce, models and methods, technologies in e-commerce. Apart from that students will gain experience with current programmes necessary to an engineer in management in the field of e-commerce.

2. Educational outcomes (acquired knowledge):

Active participation in lectures enables students to acquire theoretical and practical knowledge necessary for doing business and taks engineers and managers do in the field of e-commerce. Apart from that students will gain experience with current programmes necessary to an engineer in management in the field of e-commerce.

3. Course content/structure:

Fundamental definitions in the field of e-commerce. Principles and methods of e-business. Business information systems (BIS) as a foundation of e-commerce. Basics of business information systems development. System analysis and design of BIS. Managing business information systems. E-markenting. Methods and procedures in promotions and presentations of products and services. Business models of e-commerce. Internet as an infrastructure.

4. Teaching methods:

Oral presentation, written hand outs for practical classes, laboratory work and visits to modern business systems .

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance	Yes	5.00	Oral part of the exam	Yes	50.00
Exercise attendance	Yes	5.00			
Project	Yes	30.00			
Test	Yes	10.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	B.Lalić	Elektronsko poslovanje	Fakultet tehničkih nauka	2008
2,	K.C.Laydon, C.G. Traver	E-commerce, business, technology, society		2007
3,	Deitel	E-Business and E-Commerce for Managers	Steinbuhler	2001
4,	E. Turban	Electronic Commerce, A managerial perspective		2006
5,	S.Certo, M. Certo	Finding the eBusiness in your Business		2001
6,	D.Chaffey	E-Business and E-Commerce Management		2004
7,	Davis	E-Commerce Basics, Technology foundations and e-business applications		2003
8,	D.V.Tesone	Hospitality Information Systems and E-commerce		2006
9,	F.Lovelock	Global E-commerce		2003
10,	M. Lutovac, D. Tošić	Internet biznis plan		2007
11,	P.Bocij, D Chaffey, A. Greasley	Business Information Systems, technlogy, development and management for e-business		2006

Table 5.2 Course specification

Course:	Information systems for managing Enterprise resource planing
Course id: SI593	
Number of ECTS: 5	
Teacher:	Simić S. Dragan
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	1	1	0	0

Precondition courses: None

1. Educational goal:

Acquisition of basic knowledge about the importance and role of integrated information systems for company's resources management with special considerations on postal services companies.

2. Educational outcomes (acquired knowledge):

Acquiring theoretical and practical knowledge and skills concerning the role of information systems for planning and management of the resources of the entire company, with special attention on airlines postal services.

3. Course content/structure:

ERP - Enterprise Resource Planning in the company. Business information system. Implementation phase of ERP. Commercial software packages for resource management of large companies. Selection of H / S package. The choice of modules. Adjustment and calibration. Introduction to operations and maintenance. The most common modules in the ERP system. Financial management. Service management. Supply chain management. CRM. HR. Sales. Marketing.

4. Teaching methods:

Lectures, exercises, computer exercises and continuous individual work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	5.00	Written part of the exam - tasks and theory	Yes	50.00
Project	Yes	25.00			
Test	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Paul Beynon-Davies	Business Information Systems	Palgrave Macmillan	2009
2,	Kamran H. Meer	Best Practices in ERP Software Applications: Accounting, Supply Chain Planning, Procurement, Inventory	iUniverse	2005
3,	Grant Norris, James R. Hurley, Kenneth M. Hartley, John R. Dunleavy, John D. Balls	E-Business and ERP: Transforming the Enterprise	John Wiley & Sons	2000

Table 5.2 Course specification

Course:	Studijski istraživački rad na teorijskim osnovama - master rada
Course id: SIM01P	
Number of ECTS: 7	
Teachers:	
Course status:	Mandatory

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
0	0	0	7	0

Precondition courses: None

1. Educational goal:

The application of basic theoretical, methodological, scientific, technical and professional knowledge and application of methods to solve specific problems within the selected area. In the second part of this master thesis, students study the problem, and the complexity of its structure and on the basis of the analysis draws conclusions on the possible ways of solving it. Studying literature students are introduced to the methods are designed for solving similar tasks and engineering practice in solving them. The aim of the activities of students in this part of the research is to acquire the necessary experience in solving complex problems and tasks and possibilities for the application of previously acquired knowledge in practice.

2. Educational outcomes (acquired knowledge):

Training students to independently apply previously acquired knowledge in different fields that have been previously studied, in order to review the structure of the given problem and its system analysis in order to draw conclusions on possible directions for its resolution. Through the use of literature alone, students expand their knowledge of selected field and the study of various methods and papers relating to similar problems. In this way, the students develop the ability to conduct analysis and identify problems within the given topic. Practical application of acquired knowledge in different areas of stuedenata develop the ability to look at the place and role of engineers in the chosen field, the need to cooperate with other professions and teamwork.

3. Course content/structure:

Formed in accordance with the individual needs of the working out of a master thesis, its complexity and structure. Students study the literature, graduate and master thesis, projects that deal with similar topics, makes analyzes in order to find solutions specific task which is defined task of master thesis work. Part of teaching the course is conducted through independent study research. Studio work includes active monitoring of the primary themes of knowledge, organization and conduct experiments, numerical simulation and statistical analysis of data, writing and / or disclosure of the conference from the narrow field of science teaching which belongs to the master theme of work.

4. Teaching methods:

Mentor of master thesis of the task compiles and submits it to the student. The student is required to work within the framework of the development of a given topic, which is defined task of master thesis work, using literature from the proposed mentor. During the preparation of of master thesis, a mentor can give students additional guidance, refer to specific literature and further directed him to of master thesis the production of quality work. In the research study, the student consults with the supervisor, if necessary, with other teachers who are dealing with the topics of the field work. Within a given topic, the student, if necessary perform certain measurements, tests, counts, surveys and other research, statistical data, if provided task of master thesis work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	grupa autora	časopisi sa Kobson liste		sve
2,	grupa autora	časopisi, diplomski i master radovi		sve

Table 5.2 Course specification

Course:		Preparation and Defence of Master Thesis			
Course id:	S0I510				
Number of ECTS:	15				
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:

Acquiring knowledge about the mode, structure and form of writing the report after conducting analysis and other activities implemented within the stated topic of the final paper. Producing the final paper, students gain experience in writing papers in which it is necessary to describe the problem, methods and procedures implemented and result reached. In addition, the aim of making and defense of the final paper is to develop student`s ability to prepare the results of independent work in a suitable form for public presentation, and respond to comments and questions about the given topic.

2. Educational outcomes (acquired knowledge):

Training of students for a systematic approach in solving the given problem, carrying out the analysis, applying acquired knowledge as well as accepting knowledge from other fields in order to find solutions for given problem. By self-studying and solving tasks in the given topics, students acquire knowledge about the complexity and difficulty of their profession. Through creating thesis students gain some experience that can be applied in practice in solving problems in the scope of their profession. By preparing the results for public defense, and responding to questions and complaints of committee, a student gains the necessary experience for presenting results of independent or collective work in practice.

3. Course content/structure:

Formed in accordance with individual needs and area covered by a given topic of the final paper. A student in consultation with the supervisor makes the final work in writing in accordance with the standards of the Faculty of Technical Sciences. A student prepares and defends a written final paper publicly, in agreement with the supervisor and in accordance with standards.

4. Teaching methods:

During the elaboration of diploma paper, a student is consulting a supervisor, and if necessary, other teachers who are dealing with a topic area of diploma paper. The student makes the final paper and after the approval by the Commission for assessment and defense, is obliged to deliver bound copies to the Commission. The defense of the final paper is public, and after presentation, a student is required to answer the questions and comments orally.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points

Table 5.2 Course specification

Course:		Geographic information system in traffic
Course id:	S1595	
Number of ECTS:	4	
Teacher:		Kranjac M. Mirjana
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	1	0	0

Precondition courses: None

1. Educational goal:

The main goal is to acquire the basic knowledge about geo information systems (GIS), to gain knowledge about the development and analysis of GIS related applications, especially in relation to traffic and telecommunications. Additional goal is learning about techniques and tools for processing, managing and controlling geographic data, GIS technology, principles on which global positioning satellite systems and inertial navigation systems work, technology for electronic data exchange in postal traffic, radio frequency identification technology, and other applications in traffic. Understanding the advantages of integrating systems for object positioning with geo information systems.

2. Educational outcomes (acquired knowledge):

Knowledge about basic principles of GIS including structure and quality of data. Theoretical basis and practical experience about GIS in traffic and telecommunications, as well as practical knowledge about GPS functioning related to object positioning and errors in measurement and positioning. Another outcome is the knowledge about new technology for acquisition, collecting, storing and processing images and data, integration of GPS and GIS systems, as well as knowledge about analysis and display of spatial data.

3. Course content/structure:

Introduction to GIS. Applications. Sources of GIS data. Data and image acquisition. Analysis of spatial data (methods, examples). Data types and structures. Representation of geo information data and information with main applications. Sensor information and GIS. Visualization of data with maps. GIS concepts. Use of program software. GIS: maps and spatial information. Interpolation techniques with GIS. Cartography. Cartographic concepts. Thematic mapping. Satellite images and their processing. The role of remote sensing and GPS. Positioning, visibility and availability of satellites in GPS systems. Position determination, signal error, and stochastic models in GPS systems. Formulating a problem of evaluating the state of linear (discrete and continuous) stochastic systems. Kalman filter. Fundamentals of theory of determining the state of nonlinear stochastic systems. Extended Kalman filter. Kalman filtering and its application to real GPS/INS problems. Differential GPS. GPS inertial navigation and integration. Application of GPS in traffic and transportation. Basic GIS theory. Integration of GPS and GIS systems. Electronic data exchange. Radio frequency identification. Optical text recognition.

4. Teaching methods:

Lectures, auditory and computer practice.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	5.00	Written part of the exam - tasks and theory	Yes	60.00
Lecture attendance	Yes	5.00			
Project task	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	T.Bernahrdsen	GIS: an introduction	John Wiley and Sons	2002

Table 5.2 Course specification

Course:		Acoustics and Audio Engineering in Traffic
Course id:	S1596	
Number of ECTS:	4	
Teacher:		Delić D. Vlado
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	1	1	0	0

Precondition courses: None

1. Educational goal:

Introduce aspects of acoustics that are essential to understanding the measurement and control of traffic noise, as well as the audio technology used in traffic navigation and radio communication. Describe the nature of sound and present the basic theory of sound generation and propagation of sound waves. Explain what and how people can hear and how they perceive different sound pressure levels and the frequency content of sound, as well as the direction of the sound source. Explain how both the transmission and perception of sound are influenced by enclosed areas such as rooms or car interior. Present the audio signals (speech, music and noise) and audio equipment for recording and playback, as well as transmission of audio signals. Study the standards and regulations on permitted noise levels and introduce the techniques of measurement, monitoring and noise protection.

2. Educational outcomes (acquired knowledge):

Students will learn how sound waves are produced and how they propagate, what a human being can hear and how sound affects humans, as well as how sound is recorded, transmitted and reproduced. They will understand the differences in the behavior of sound both indoors and outdoors. They will be able to evaluate the acoustic environment (in terms of speech intelligibility, quality of listening to music, noise level), and to select and place audio-equipment for recording of speech, music, and noise. Students will learn the standards for measurements and techniques for the suppression of traffic noise, as well as the application of both speech and audio technologies in navigation and digital radio.

3. Course content/structure:

• The physical characteristics of sound (the rules for the production and propagation of sound waves). • Sound perception and its influence on the human being (auditory area; characteristics of speech, music and noise). • Room acoustics (absorption/reverberation and their impact on sound level and intelligibility, acoustical quality of professional rooms). • Electro-acoustic transducers (microphones, loudspeakers and headphones), measurement devices, tools for audio signal analysis and processing. • Recording of audio signals (speech, music, and noise; selection and placement of microphones). • Noise (sources and ways of propagation, noise characteristics, calculating sound pressure level and noise protection methods). • Traffic noise (road, rail, and aircraft noise; noise monitoring and mapping; traffic noise protection). • Instrumentation for noise measurements and analysis (sound level meters, filters, noise spectrum (N-curves), dosimeters, software). • Speech and audio technologies in navigation systems (ASR and TTS, GPS, RDS – digital radio).

4. Teaching methods:

Lectures are conducted using Power Point presentations available to students in .pdf format. Presentations with specially created audio and video clips and animations demonstrate and illustrate key details in the lectures. The first part of the course (acoustics) is followed by auditory exercises. The second part of the course (audio engineering) is followed by exercises either in the Laboratory of Acoustics and Speech Technologies at FTN. A visit to Radio Novi Sad is arranged, where students will learn about the practical audio engineering, music and speech studios, anechoic room and audio-theater complex. The students will write a midterm paper, whose defense is one of the exam prerequisites. Independent student work is supported through the web portal of the Chair of Telecommunications and Signal Processing - www.ktios.net.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Presentation	Yes	10.00	Written part of the exam - tasks and theory	Yes	50.00
Term paper	Yes	20.00	Coloquium exam	No	20.00
Test	Yes	10.00			
Test	Yes	10.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Petar Pravica, Dragan Drinčić	“Elektroakustika”	VISER Beograd	2006
2,	Miomir Mijić	“Audio sistemi”	Akademska misao, Beograd	2011
3,	Vlado Delić	Skripta sa predavanja	www.ktios.net	2012

Table 5.2 Course specification

Course:	Traffic Forecasts
Course id: S1I591	
Number of ECTS: 4	
Teacher:	Basarić B. Valentina
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge in the field of application of new mathematical demand models. Application of computer technology for the purpose of analysis and forecast transportation demand on the national, regional and local-city level, as a function of the current and expected socio-economic and spatial development of areas which are the subject of analysis and forecast in relation to traffic demand.

2. Educational outcomes (acquired knowledge):

Implementation, improvement and development of mathematical and statistical methods for the traffic demand forecasting. Acquisition of skills determining interdependencies between indicators of socio-economic development, land using, traffic demand and traffic supply. Acquiring knowledge in the field of using modern computer programs application for the alignment of transport demand and supply.

3. Course content/structure:

Basic concepts and definitions of traffic demand. Temporal and spatial concentration of demand: causes and consequences. Basic concepts of prediction and forecasting. The importance and role of forecasts and / or prediction of traffic planning. Methods and procedures of forecasting: time series, regression analysis, cross- classification - category analysis. Application of the theory of probability to forecast traffic demand. Statistical evaluations of forecast results. Basic concepts and definitions of traffic supply. Alignment methods of transport demand and supply. Computer programs for testing and simulation of the harmonization effects of transport demand and supply.

4. Teaching methods:

Lectures, practical laboratory and computational exercises. This course enables students to perform independent assignment- seminar paper and examination through partial examinations.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	5.00	Written part of the exam - tasks and theory	Yes	70.00
Lecture attendance	Yes	5.00	Coloquium exam	No	20.00
Term paper	Yes	20.00	Coloquium exam	No	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	M.Maletin	Planiranje saobraćaja i prostora	Građevinski fakultet Beograd	2004
2,	Ratomir Vračarević	Planiranje saobraćaja -skripta	Fakultet tehničkih nauka	2002
3,	D.Banister	Transport planning	Spon Press, London&New York	2002
4,	Michael A.P.T. Peter W.B. William Y	Understanding Traffic System	Ashgate, England-USA	2000

Table 5.2 Course specification

Course:		Postal logistics centers
Course id:	S1I592	
Number of ECTS:	4	
Teacher:		Nikolićić S. Svetlana
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
2	2	0	0	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge on postal centers like specific ones, collective-distributive logistics centers.

2. Educational outcomes (acquired knowledge):

By completing the course student will be able to: define structure of logistics processes according to the requirements of postal deliveries and goods; define the structure of logistics systems in postal logistics center; defines key logistics performances; to properly define technology and technical characteristics of the equipment in the postal - logistics flows; to approach properly on dimensioning and tehnological-physical shaping of postal logistics center.

3. Course content/structure:

Basic types and functions of logistics centers. Functions of postal logistics centers in postal network. Criteria and procedure for election of macro, meso and micro location of postal logistics centers. Analysis of postal deliveries flows and goods through postal logistic center. Structure and performances of logistical processes. Structure of functions and subsystems of postal logistics center. Requirement analysis for dimensioning logistics subsystems. Technological-physical features of postal logistics centres. Analysis on implementation of new postal services from the logistics aspect. The examples of existing logistics centers.

4. Teaching methods:

Lectures, exercises, consultations, debates, public presentation of term papers. Knowledge check: written and oral examination.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	5.00	Written part of the exam - tasks and theory	Yes	40.00
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	30.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Slobodan Zečević	Robni terminali i robno-transportni centri	Saobraćajni fakultet Beograd	2006
2,	Milosav Georgijević	Tehnička logistika	Zadužbina Andrejević	2011
3,	Gordana Radivojević, Momčilo Miljuš, Milorad Vidović	Logistički kontroling i performanse	Saobraćajni fakultet, Beograd	2007

Standard 06. Programme Quality, Contemporaneity and International Compliance

The study programme is coordinated with contemporary international scientific trends and state of the professional field and is comparable with similar programmes at higher education institutions abroad, Postal Traffic and Telecommunications 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. Postal Traffic and Telecommunications study programme is comparable and coordinated with:
1. Faculty of Transport and Traffic Engineering, Zagreb

Standard 07. Student Enrollment

The Faculty of Technical Sciences, in accordance with social demands and its resources, enrols to master academic studies of Postal Traffic and Telecommunications 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 achievement during the previous education and entrance examination as defined by the Book of Rules on Enrolment of Students to Study Programmes. For all applicants, Quality Commission study of master academic studies Postal Transportation and Telecommunications performance evaluation of study programs that were previously done and decide whether appropriate or not to enroll.Candidates who, in the opinion of the Commission, have completed an appropriate program of study are eligible to enroll in masters studies. Quality Commission decides whether the candidates who are eligible to take entrance examination enrollment. If Quality Commission decision on taking the entrance exam, the candidates take the exam, testing knowledge of the program of study.The final ranking of candidates for admission is based on success in previous studies, the duration of the study and achieved success on the entrance exam, as Book of Rules on Enrolment of Students to Study Programmes.

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 minimum 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 assignments 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 asignments 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 15 points of the overall number of points through pre exam assignments during the semester. Additional requirements for taking the examination are defined separately for every course.
Student advancement during the studies is defined by the Rule book on postgraduate academic studies.

Standard 09. Teaching Staff

For the realization of the Postal Traffic and Telecommunications study programme, there is the faculty staff with necessary professional and academic qualifications.
The number of teachers meets the needs of the curriculum and is determined by the number of subjects and number of hours of instruction in these subjects. The total number of teachers is sufficient for the realization of total hours of instruction on the academic program, so that they achieve an average of 180 contact hours per year (lectures, consultations, exercises, practical work ...), or on average 6 hours per week. Of the total number of teachers needed, all 100% are in full-time employees at the Faculty of Technical Sciences.
The number of assistant staff meets the needs of the study program. The total number of associates on the study program is sufficient for the realization of the total number of hours of instruction in the program so that the associates achieve an average of 300 contact hours per year or an average of 10 hours per week.
The scientific and professional qualifications of the teaching staff match the educational scientific field, and level of their responsibilities. Each teacher has at least five references from the specific scientific or professional field he/she teaches at the study program.
The size of a group for lectures is up to 180 students, a group for practice classes has 60 students and a group for laboratory practice has up to 20 students.
None of the teachers has more than 12 classes per week. All data on teachers and associates (CV, appointments, references) have been made available to the general public.

Science, arts and professional qualifications

Name and last name:	Xu Z. Ming
Academic title:	Guest Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Proizvodni sistemi, organizacija i menadžment-strateški menađment

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Proizvodni sistemi, organizacija i menadžment-strateški menađment
PhD thesis	2000		Engineering Management
Magister thesis	1993		Engineering Management
Bachelor's thesis	1982	Glorius Sun School of Buisness & Managament, Donghua University, Shanghai - Shanghai	Engineering Management

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

	ID	Course name	Study programme name, study type
1.	IM1026	E-Business	(I20) Engineering Management, Undergraduate Academic Studies
2.	IM1104	Strategic Management	(I20) Engineering Management, Undergraduate Academic Studies
3.	IM1319	Platforms and systems for knowledge transfer	(I20) Engineering Management, Undergraduate Academic Studies
4.	MBA601	Applied use of IT and Internet in business	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
5.	IM2102	Manufacturing strategy (KAIZEN, LEAN, KANBAN, EFPS)	(I10) Industrial Engineering, Master Academic Studies (M50) Energy Management, Master Academic Studies (I20) Engineering Management, Master Academic Studies
6.	IM2103	New technologies in engineering and management	(I10) Industrial Engineering, Master Academic Studies (I20) Engineering Management, Master Academic Studies
7.	S1I594	E-Business	(S01) Postal Traffic and Telecommunications, Master Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Nikola Zivlak, Marko Ljubičić, Ming Xu, Bojan Lalić, Zvonko Kremljak: Relationship between innovation and internationalization in Chinese companies, TTEM journal – Technics Technologies Education Management, Sarajevo, Bosna and Herzegovina, Vol.7, No.4., 11/12. 2012.
2.	Ming Xu, et al.: Labour Turnover in Apparel Retail Chains in China, International Journal of Industrial Engineering and Management (IJIEM), Volume 3, Number 1, 2012, pp. 9-14.
3.	Ming Xu, et al.: Trend Changing Analysis of the Relationship Between Ownership Structure and the Enterprises' Financial Problems - An Empirical Study of Listed Companies in Manufacturing Industry, Economic Longitude and Latitude,Vol.3, May, 2009
4.	Ming Xu, et al.: The effects of customer contact on conformance quality and productivity in Chinese service firms, International Journal of Quality & Reliability Management, Volume 23 Number 4 and 5, 2006. pp. 367-389
5.	Ming Xu, et al.: The Application of SERVQUAL Scale, Journal of Industry Engineering and Management, December 2001, pp 6-9
6.	Ming Xu, et al.: The Evaluation of Innovation Capability in Banks, Modern Business, Vol.23, August, 2012, pp 49-52
7.	Ming Xu, et al.: A Study on the Effect of Micro-Blogging Comments on Consumer Purchasing Behavior, China Market,Vol.40, 2012, pp 7-9
8.	Ming Xu, et al.: The Framework to Make Assessment to the Development of Economic Region Based on the Outlook of Scientific Development. ShijiQiao (Century Bridge) 3rd 2008, China
9.	Ming Xu, et al.: A Survey of Apparel Consumption of Italian University Students, Journal of Donghua University (Social Science), February, 2007. pp 2225-2237
10.	Ming Xu, et al.: Measurement between R and C: the Basic Rule for the Decision-making of Corporation's Management, East China Economic Management, July, 2006. pp 71-74

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

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

Study Programme Accreditation

MASTER ACADEMIC STUDIES — Postal Traffic and Telecommunications

Science, arts and professional qualifications

Name and last name:	Basarić B. Valentina
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.02.2000
Scientific or art field:	Traffic Systems

Academic carieer	Year	Institution	Field
Academic title election:	2011		Traffic Systems
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Traffic Engineering
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Traffic Systems
Bachelor's thesis	1999	Faculty of Technical Sciences - Novi Sad	Traffic Systems

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

	ID	Course name	Study programme name, study type
1.	S0324	Fundamentals in Traffic Planning	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies
2.	S0329	Traffic Planning Models	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies
3.	S0I594	Traffic Forecasts	(S00) Traffic and Transport Engineering, Master Academic Studies
4.	S0MJ4	Planning of Public transport	(S00) Traffic and Transport Engineering, Master Academic Studies
5.	S1I591	Traffic Forecasts	(S01) Postal Traffic and Telecommunications, Master Academic Studies
6.	SOP2	Transportation Demand Management	(S00) Traffic and Transport Engineering, Master Academic Studies
7.	DSIM1	Traffic Planning	(S00) Traffic Engineering, Doctoral Academic Studies
8.	DSSK3A	Research and simulation of road traffic flow	(S00) Traffic Engineering, Doctoral Academic Studies
9.	DSSK4	Urban planning and development of transport networks	(S00) Traffic Engineering, Doctoral Academic Studies
10.	DSSK6	Maintainable urban transport systems	(S00) Traffic Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Valentina Basarić "Efekti primene zone 30 na bezbednost saobraćaja u gradovima", Simpozijum "Prevencija saobraćajnih nezgoda na putevima 2006", Novi Sad, Institut za ssaobraćaj Fakulteta tehničkih nauka Novi Sad, oktobar 2006, ISBN 86-7892-008-4, UDK:656.01
2.	Ratomir Vračarević, Valentina Basarić "Uticaj naplate parkiranja na vidovnu raspodelu radnih putovanja", Tehnika 3-separat saobraćaj 2007, YU ISSN 0040-2176, UDK:625.025.4.033.9=861
3.	Valentina Basarić "Održiva mobilnost i savremene strategije upravljanja saobraćajem u gradovima", I Savetovanje "Savremene tendencije unapređenja saobraćaja u gradovima"Novi Sad, 18-19 oktobar 2007., ISBN 978-86-7892-083-7, UDK:656.01
4.	Planiranje saobraćaja-praktikum sa zbirkom zadataka
5.	Planiranje saobraćaja-praktikum sa zbirkom zadataka
6.	Ratomir Vračarević, Valentina Basarić "Vidovna raspodela: formalizacija ili strategija", TES 2002, 5.Savetovanje o tehnikama regulisanja saobraćaja, Sombor 2002.
7.	V.Basarić, "Bezbednost dece u saobraćaju inteziviranjem akcija lokalne uprave i sistema obrazovanja" IX simpozijum sa međunarodnim učešćem 2Prevencija saobraćajnih nezgoda na putevima 2008", Novi Sad, 23 i 24 oktobar 2008, ISBN 978-86-7892-149-0
8.	Basarić, V., Jović, J., 2011. Target modal split mode, Transport, Print ISSN:1648-4142, Online ISSN:1648-3480
9.	Model upravljanja raspodelom putovanja na vidove prevoza u funkciji održivog razvoja, Fakultet tehničkih nauka Novi Sad, 2010
10.	Uticaj sistema parkiranja na raspodelu putovanja po vidovima saobraćaja, Fakultet tehničkih nauka Novi Sad, 2006

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

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

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 1	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 refferences (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

Science, arts and professional qualifications

Name and last name:	Delić D. Vlado
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1989
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1997	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	1993	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1989	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	EK411	Digital Filters	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	Z413A	Acoustics and Noise Protection	(Z20) Environmental Engineering, Undergraduate Academic Studies
3.	BM118B	Acoustics and Audio Engineering in Medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EK312	Acoustics and Audio Engineering	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK312L	Acoustics and Audio Engineering in Multimedia	(F10) Engineering Animation, Undergraduate Academic Studies
6.	EK422	Digital Audio Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EK451	Audio and Video Technologies	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EK452	Monitoring and Noise Protection	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	ETI27	Audio Engineering	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
10.	ETI29	Monitoring and Noise Protection	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI35	Digital Sound Processing	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	DE111S	Algorithms for Digital Signal Processing	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE212S	Selected Chapters in Acoustics and Audio Engineering	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	DE512S	Human-Machine Speech Communication	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	S0151	Application of Digital Signal Processing in Telecommunications	(S01) Postal Traffic and Telecommunications, Master Academic Studies
16.	SI037	Telecommunication Infrastructure of E-Business	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
17.	BMIM2A	Assistive Information and Communications Technologies	(BM0) Biomedical Engineering, Master Academic Studies
18.	EK422L	Digital Audio Signal Processing	(F20) Engineering Animation, Master Academic Studies
19.	EK550	Speech Technologies	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	S1596	Acoustics and Audio Engineering in Traffic	(S01) Postal Traffic and Telecommunications, Master Academic Studies
21.	DE111	Algorithms for Digital Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
22.	DE212	Selected Chapters in Acoustics and Audio Engineering	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

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

	ID	Course name	Study programme name, study type
23.	DE512	Human-Machine Speech Communication	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	"Zbirka zadataka iz digitalne obrade signala", V. Delić, M. Sečujski, I. Radić, FTN, 2007, str. 176, (ISBN 978-86-7892-082-0)
2.	“Postupak za smanjenje verovatnoće greške kod produženog telefonskog biranja niza cifara”, V. Delić, V. Šenk; Patent u Srbiji 48734 (P-434/97), 2009
3.	"anReader - govorni softver za slepe i slabovide korisnike računara", M. Sečujski, D. Pekar, R. Obradović, V. Delić, Najbolji informatički proizvod u Srbiji 2004. godine (www.dis.org.yu)
4.	"Advertising Monitor - praćenje reklama na osnovu ASR", V. Delić u grupi autora, Novi proizvod, 1. mesto na takmičenju za najbolju tehnološku inovaciju u Srbiji 2006. god.
5.	"Govorni portal za slepe i slabovide osobe - KONTAKT", V. Delić u grupi autora, Jedinstven proizvod u regionu baziran na dijalogu čovek-mašina, rezultat inovacionog projekta kod Ministarstva nauke (PTR-2078) 2005/2006
6.	”Speech Signal Processing in ASR&TTS Algorithms”, V. Delić, D. Pekar, R. Obradović, M. Sečujski, Facta Universitatis (Niš), Series: Electronics and Energetics, vol. 16, no. 3, (2003), pp. 355-364
7.	“Buka iz klubova i koncertnih prostora – analiza merodavnosti pobudnih muzičkih signala", M. Stojiljković, V. Delić, XX konferencija Buka i Vibracije, Tara, 11.-13.10.2006.
8.	“Discrimination Capability of Prosodic and Spectral Features for Emotional Speech Recognition”, V. Delić, M. Bojanić, M. Gnjatović, M. Sečujski, S.T. Jovičić; Electronics and Electrical Engineering, ISSN 1392-1215, Vol. 18, No. 9, November of 2012, pp. 51-54, DOI:10.5755/j01.eee.18.9.2806
9.	“Influence of the Number of Principal Components used to the Automatic Speaker Recognition Accuracy”, I. Jokić, S. Jokić, Z. Perić, M. Gnjatović, V. Delić; Electronics and Electrical Engineering, ISSN 1392-1215, No. 7(123), September of 2012, pp. 83-86, DOI:10.5755/j01.eee.123.7.2379
10.	“Focus Tree: Modeling Attentional Information in Task-Oriented Human-Machine Interaction”, M. Gnjatović, M. Janev, V. Delić; Applied Intelligence, Springer-Verlag New York, Inc., ISSN 0924-669X, Volume 37, Issue 3, Page 305-320, (2012) DOI: 10.1007/s10489-011-0329-5

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

Quotation total :	52			
Total of SCI(SSCI) list papers :	14			
Current projects :	Domestic :	4	International :	0

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 carieer	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

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 refferences (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

Science, arts and professional qualifications

Name and last name:	Kranjac M. Mirjana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Postal Traffic and Communications

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Postal Traffic and Communications
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Engineering Management
Master's thesis	2010	Faculty of Technical Sciences - Novi Sad	Engineering Management
Magister thesis	1994	University of Belgrade - Beograd	Information-Communication Systems
Bachelor's thesis	1982	Faculty of Technical Sciences - Novi Sad	Electronics and Telecommunications

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

	ID	Course name	Study programme name, study type
1.	S1I52P	Multimedia communications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	S1595	Geographic information system in traffic	(S01) Postal Traffic and Telecommunications, Master Academic Studies
3.	S1I593	Electronic postal services	(S01) Postal Traffic and Telecommunications, Master Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Lazić, D., Drajić, D., Krstajić, P., Obradović, M. : Design of block codes for pholyphase signals, IEEE ISIT, Canada, 1983.
2.	Ljikar, M., Svirčević, S., Obradović-Sikimić, M., Đetvai, A., Martinović, V. Review of reliability and availability of telephone system for Higher hierarchical level (CVHN), RELECTRONIC '95, Scentific Society for telecommunications, Budapest, 1995, pp. 219-223
3.	Kranjac, M., Ljikar, M., Martinović, V., Krčo, S. : The concept of the telephone service quality from the view of the user, Relin Com '98, Budapest, 1998
4.	Kranjac, M. : Reviewal of i2010 and related documents in Serbia, ICT'2008, Roma, 2008.
5.	Ljikar, M., Obradović, M. : Measuring of parameters which characterize repeated calls in telephone traffic, Proceedings of IEEE International conference on telecommunications ICT '98, Porto Carras, Greece, June 21-25, 1998, Vol. IV, pp. 212-215
6.	Ljikar, M., Kovačević, S., Svirčević, S., Kranjac, M. : Effectiveness of telecommunication system as a measure of service quality, Relin Com '98, Budapest, 1998
7.	Kranjac, M. : Building of HFC network Salajka, experience of common work between PTT „Srbija“ and Telekom „Srbija“, South-East European Broadband Conference - SEEBB 2006, Beograd, 2006
8.	Kranjac, M., Isakov, S. : Prikaz strategije širokopojasnih telekomunikacionih mreža AP Vojvodine za period od 2007. do 2010, INFOTEH 2008, Jahorina, 2008, ISBN-99938-624-2-8
9.	Kranjac, M.: Uticaj pratećih dijagnoza na parametre bolničkog morbiditeta
10.	Kranjac, M.: Modeli za realizaciju projekata uz podršku fondova Evropske unije na području AP Vojvodine

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

Science, arts and professional qualifications

Name and last name:	Kujačić D. Momčilo
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	21.09.2005
Scientific or art field:	Postal Traffic and Communications

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Postal Traffic and Communications
PhD thesis	2001	Faculty of Transport and Traffic Engineering - Beograd	Traffic Systems
Magister thesis	1999	Faculty of Transport and Traffic Engineering - Beograd	Traffic Systems
Bachelor's thesis	1978	Faculty of Transport and Traffic Engineering - Beograd	Traffic Systems

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

	ID	Course name	Study programme name, study type
1.	S01322	Postal Traffic	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	S01327	Postal Services and Networks	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	S01330	Strategic Planning in Postal Traffic and Telecommunications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	S01381	Direct marketing	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
5.	S01471	Change management	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
6.	S0I323	Technology of postal traffic	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies
7.	S0153	New Technologies and Services in Postal Traffic	(S01) Postal Traffic and Telecommunications, Master Academic Studies
8.	S1I583	Models of Postal Network Management	(S01) Postal Traffic and Telecommunications, Master Academic Studies
9.	S1I593	Electronic postal services	(S01) Postal Traffic and Telecommunications, Master Academic Studies
10.	DSSP1	Selected chapters from the field of public postal network management	(S00) Traffic Engineering, Doctoral Academic Studies
11.	DSSP2	Selected chapters from the field of postal traffic organization	(S00) Traffic Engineering, Doctoral Academic Studies
12.	DSSP3	Selected chapters from the field of postal services market research	(S00) Traffic Engineering, Doctoral Academic Studies
13.	DSSP4	Selected chapters from the field of process management in postal traffic	(S00) Traffic Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Blagojević M., Kujačić M., Šarac D.: Activity-based management of costs and revenue of universal postal service operator, Metalurgia international, 2013, No 3, ISSN 1582-2214
2.	Jovanović B., Kujačić M., Šarac D., Atanasković P.: Fuzzy logic approach to predicting waiting time, Metalurgia international, 2013, No 4, ISSN 1582-2214,
3.	Kujačić M., Šarac D., Marković D., Jovanović B.: Providing universal postal service in developing countries, African Journal of Business Management, 2011, Vol. 5, No 8, pp. 1158-1165, ISSN 1993-8233
4.	Bojović N., Kujačić M., Macura D.: Organizational design of a post office using analytic network process (Article), Scientific Research and Essays, 2010, Vol. 5, No 10, pp. 1194-1212, ISSN 1992-2248
5.	Blagojevic M., Marković D., Kujačić M., Dobrodolac M.: Applying activity based costing model on cost accounting of provider of universal postal services in developing countries (Article), African Journal of Business Management, 2010, Vol. 4, No 8, pp. 1605-1613, ISSN 1993-8233
6.	Kujačić M., Bojović N.: Organizational Desgn of Postal Corporation Structure Using Fuzzy Multicriteria decision Making , Computational & Mathematical Organization Theory, Volume 9, Number 1, may 2003, Kluwer Academic Publishers, Boston/U.S.A. 2003, pp 5-18.
7.	Kujačić M., Bojović N.: Organizational modeling, Postal technology international, 2007, pp. 62-63, ISSN 1472-5274
8.	Kujačić M., Šarac D., Jovanović B.: Access to the postal network of the public operator, SEETSI, Budva, FMSK Berane, 2012.
9.	Kujačić M., Šarac D., Jovanović B.: Regionalni pristup finansiranju univerzalne poštanske usluge, Saobraćajni fakultet Sarajevo, 1. SEETSI, Sarajevo, 2010.

Representative refferences (minimum 5, not more than 10)	
10.	Kujačić M., Jekić M.: Značaj koridora 4B za razvoj poštanskog saobraćaja u regionu, međunarodna konferencija: Strateški razvoj saobraćajnog koridora Bukurešt-Beograd-Bar-Bari (4B).

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	6			
Current projects :	Domestic :	4	International :	0

Science, arts and professional qualifications

Name and last name:	Lalić P. Bojan
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	17.06.2002
Scientific or art field:	Production Systems, Organization and Management

Academic carieer	Year	Institution	Field
Academic title election:	2011		Production Systems, Organization and Management
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Engineering Management
Magister thesis	2004	Faculty of Technical Sciences - Novi Sad	Engineering Management
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Mechanical Engineering

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

	ID	Course name	Study programme name, study type
1.	EOS39	Projektni menadžment	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
2.	II1017	Production System Design	(I10) Industrial Engineering, Undergraduate Academic Studies
3.	II1019	Project Management	(I10) Industrial Engineering, Undergraduate Academic Studies
4.	IM1019	Commercial Processes	(I20) Engineering Management, Undergraduate Academic Studies
5.	IM1026	E-Business	(I20) Engineering Management, Undergraduate Academic Studies
6.	IM1027	Production systems	(I20) Engineering Management, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
7.	IM1046	Structural and Development Projects	(I20) Engineering Management, Undergraduate Academic Studies
8.	IM1104	Strategic Management	(I20) Engineering Management, Undergraduate Academic Studies
9.	IM1106	Business Process Simulation	(I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
10.	IM1319	Platforms and systems for knowledge transfer	(I20) Engineering Management, Undergraduate Academic Studies
11.	IM2123	Operations management	(M50) Energy Management, Master Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
12.	IS001	Effective management	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
13.	MBA304	Business Strategies	(IB0) Engineering Management - MBA, Specialised Professional Studies
14.	MBA413	Knowledge Systems and Project Management	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
15.	MBA601	Applied use of IT and Internet in business	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
16.	PLM05	Management of PLM Projects	(I1U) Industrial Engineering - Product Lifecycle Management and Development, 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.	SZP003	Selected Chapters in Applied Management	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
18.	RPR005	Project Cycle Management	(RPR) Regional Development Planning and Management, Master Academic Studies
19.	IM2101	Intelligent Enterprising and Effective Management	(M50) Energy Management, Master Academic Studies (I20) Engineering Management, Master Academic Studies
20.	IM2123	Operations management	(M50) Energy Management, Master Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
21.	IM2124	Production and Service Systems	(H00) Mechatronics, Master Academic Studies (M50) Energy Management, Master Academic Studies
22.	IM2307	Strategic Project Management	(M50) Energy Management, Master Academic Studies (I20) Engineering Management, Master Academic Studies (Z20) Environmental Engineering, Master Academic Studies
23.	IM2314	Program and Portfolio management	(I20) Engineering Management, Master Academic Studies
24.	IM2316	Theory of Constraints	(I10) Industrial Engineering, Master Academic Studies (I20) Engineering Management, Master Academic Studies
25.	IM2319	Project evaluation	(OM1) Mathematics in Engineering, Master Academic Studies (I20) Engineering Management, Master Academic Studies
26.	IM2922	eHRM	(I20) Engineering Management, Master Academic Studies
27.	IMDS71	Selected topics of project management	(I22) Engineering Management, Specialised Academic Studies
28.	S1I594	E-Business	(S01) Postal Traffic and Telecommunications, Master Academic Studies
29.	UP002	Applied Project Cycle Management	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
30.	IMDR71	Selected topics of project management	(I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
31.	ZRD27A	Operations management in the security and occupational safety	(Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Lalić, B., Ćosić I., Anišić, Z.: SIMULATION BASED DESIGN AND RECONFIGURATION OF PRODUCTION SYSTEMS, International journal of Simulation Modelling, IJSIMM, issn 1726-4529, Volume 4, Number 4, pp. 173-183, Vienna, Austria, December 2005.
2.	R. Maksimovic, B.Lalić; Flexibility and Complexity of Effective Enterprises, Strojniski Vesnik, 2008.
3.	Lalić D., Marjanović U., Lalić B.: The influence of social networks on communication satisfaction within the organizations. In: M.M. Cruz-Cunha, P. Goncalves, N. Lopes, E.M. Miranda and G.D. Putnik, ed. Handbook of Research on Business Social Networking: Organizational, Managerial, and Technological Dimensions., New York, Business Science Reference (IGI Global), 2011, str. 545-566, ISBN 978-1-61350-168-9
4.	Lalić B., Marjanović U.: Organizational Readiness/Preparedness. In: M.M. Cruz-Cunha and J. Varajao, ed. E-business issues, challenges and opportunities for SMEs: driving competitiveness., New York, Business Science Reference (IGI Global), 2011, str. 101-116, ISBN 978-1-61692-880-3
5.	Simeunović N., Ćosić I., Radaković N., Lalić B.: The General Work Procedure Model for the Service Product, Beč, DAAAM International Scientific Book, 2009, str. 281-288, ISBN 987-3-901509-71-1, UDK: ISSN 1726-9687
6.	Lalić B., Palčič I.: Analytical Hierarchy Process as a Tool for Selecting and Evaluating Projects, International journal of Simulation Modelling-IJSIMM, 2009, Vol. 8, No 1, pp. 16-26, ISSN 1726-4529
7.	Lalić B., Ćosić I., Anišić Z.: SIMULATION BASED DESIGN AND RECONFIGURATION OF PRODUCTION SYSTEMS , International journal of Simulation Modelling-IJSIMM, 2005, Vol. 4, No 4, pp. 173-183, ISSN 1726-4529
8.	Jovanovic M., Moreno Perez J., Lalić B., Todorovic V., Jovanović M.: Use of cost analysis, estimation and risk management in making project management decisions in construction, Projektna mreza Slovenije - Project Management Review, 2010, Vol. 8, No 3, pp. 4-9, ISSN 1580-0229
9.	Lalić B., Ćosić I., Poli M.: Project Strategy Matching Project Structure to Project Type to Achieve Better Success, International Journal of Industrial Engineering and Management - IJIEM, 2010, Vol. 1, No 1, pp. 29-40, ISSN 2217-2661

Representative refferences (minimum 5, not more than 10)	
10.	Poli M., Mithiborwala H., Maksimović R., Lalić B.: PROJECT STRATEGY: SELECTING THE BEST PROJECT STRUCTURE, 9. PICMET Conference, Portland: Portland International Center for Management of Engineering and Technology, 2-6 Avgust, 2009, pp. 1276-1281, ISBN 978-1-890843-20/5

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	4			
Total of SCI(SSCI) list papers :	2			
Current projects :	Domestic :	2	International :	2

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 carieer	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 (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.	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	(ES0) Power Software Engineering, Undergraduate Academic Studies
5.	ESI011	Software security and safety in power engineering	(ES0) Power Software Engineering, Undergraduate Academic Studies
6.	ESI016	Smart Grid Programming	(ES0) Power Software Engineering, Undergraduate Academic Studies
7.	ESI017	Mobile computing in power systems	(ES0) 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	(ES0) Power Software Engineering, Master Academic Studies

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 refferences (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

Science, arts and professional qualifications

Name and last name:	Nikoličić S. Svetlana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.02.1991
Scientific or art field:	Integral Transport and Logistics

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Integral Transport and Logistics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Integral Transport and Logistics
Magister thesis	2001	Faculty of Technical Sciences - Novi Sad	Integral Transport and Logistics
Bachelor's thesis	1988	Faculty of Transport and Traffic Engineering - Beograd	Integral Transport and Logistics

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

	ID	Course name	Study programme name, study type
1.	S0221	Company Logistics	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies
2.	SO211	Introduction to Logistics	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	S0I597	Shaping Logistics Processes in Supply Chains	(S00) Traffic and Transport Engineering, Master Academic Studies
4.	LIM01	Fundamentals of Logistics	(LIM) Logistic Engineering and Management, Master Academic Studies
5.	LIM07	Intermodal Transport Technologies	(LIM) Logistic Engineering and Management, Master Academic Studies
6.	LIM08	Company Logistics	(LIM) Logistic Engineering and Management, Master Academic Studies
7.	LIM11	Supply Chain Design and Management	(LIM) Logistic Engineering and Management, Master Academic Studies
8.	LIM22	Logistic Controlling and Benchmarking	(LIM) Logistic Engineering and Management, Master Academic Studies
9.	LIM23	Logistic Centers	(LIM) Logistic Engineering and Management, Master Academic Studies
10.	LIM24	Urban Logistics	(LIM) Logistic Engineering and Management, Master Academic Studies
11.	S0ML4	Logistics centers	(S00) Traffic and Transport Engineering, Master Academic Studies
12.	S1I592	Postal logistics centers	(S01) Postal Traffic and Telecommunications, Master Academic Studies
13.	DSSL1	Supply chain management	(S00) Traffic Engineering, Doctoral Academic Studies
14.	DSSL2	Selected topics from inventory management	(S00) Traffic Engineering, Doctoral Academic Studies
15.	DSSL5	Sustainable Logistics	(S00) Traffic Engineering, Doctoral Academic Studies
16.	DSSL6	Logistics outsourcing	(S00) Traffic Engineering, Doctoral Academic Studies
17.	ZRD232	Logistics in the Security Services and Health at Work	(Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Svetlana Nikoličić, Primena RFID-tehnologija u logistici, Racionalizacija transporta i manipulisanja, 4/04, str. 7-11, YU ISSM 0350-4492
2. Nikoličić S., Škrinjar D., Stankovski S.: Šta nude RFID tehnologije u logistici, 7. Međunarodni naučno-stručni skup o dostignućima elektro i mašinske industrije - DEMI, Banja Luka: Mašinski fakultet, 27-28 Maj, 2005, pp. 645-651
3. Nikoličić S., Maslarić M., Stojanović Đ.: Managing Logistic Processes in Retail, Strategic management - Inteniational Joumal of Strategic Management and Decision Support Szstems in Strategic Management, 2008, No 3, pp. 49-53, ISSN 0354-8414, UDK: 005.5:399.372
4. Nikoličić S., Ostojić T.: Cross-docking kao način racionalizacije distribucije, Poslovna logistika, 2006, No 3, pp. 42-45, ISSN 1452-4767
5. Stojanović Đ., Maslarić M., Nikoličić S.: The Relationship Between Collaborative Management And Transport Sourcing In Supply Chains, in Developing Sustainable Collaborative Supply Chains , 12. International Symposium on Logistics, Budimpešta: Centre for Concurrent Enterprise, University of Nottingham, Business School, 8-10 Jul, 2007, pp. 579-584, ISBN 978 0853582182

Representative refferences (minimum 5, not more than 10)

6.	Stojanović Đ., Maslarić M., Nikoličić S.: Using the European Intermodal Transport E-marketplace - The Serbian Perspective , "Strategijski menadžment" Ekonomski fakultet, Subotica, 2008, Vol. 1, No 1, pp. 27-33, ISSN 0354-8414., UDK: 005.51; 658.62
7.	Stojanović Đ., Nikoličić S., Miličić M.: Transport Fleet Sizing by Using Make and Buy Decision-Making, Economic annals, 2011, pp. 77-102, ISSN 0013-3264, UDK: 3.33
8.	Maslarić M., Nikoličić S., Stanković S.: Automatski sistem nabavke u maloprodaji, Poslovna logistika, 2006, No 6, pp. 34-37, ISSN 1452-4767
9.	Maslarić M., Stojanović Đ., Nikoličić S.: Serbian intermodal transport system, Scientific Bulletin of the "Politehnica" University of Timisoara, Romania, Transactions on Mechanics, 2008, Vol. 53, No S4, ISSN 1224-6077
10.	Maslarić M., Stojanović Đ., Nikoličić S.: Logistics industry in Serbia, Scientific Bulletin of the "Politehnica" University of Timisoara, Romania, Transactions on Mechanics, 2008, Vol. 53, No S4, pp. 21-24, ISSN 1224-6077

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

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

Science, arts and professional qualifications

Name and last name:	Petrović S. Vladimir
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	2001	University of Manchester - Padej	Telecommunications and Signal Processing
Bachelor's thesis	-		Telecommunications and Signal Processing
Magister thesis	-		Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	EK300	Digital Modulations	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK412	Shape Recognition	(BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	BMI121	Image processing and Computer Vision in Medical Imaging	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EK463	Pattern Recognition	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK464	Communication Systems Design	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK520	Medical Image Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8.	H1420	Fundamentals in Mechanical Vision	(H00) Mechatronics, Master Academic Studies
9.	DE311	Selected Chapters in Pattern Recognition	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Petrović V., Babalola K., Cootes T., Twining C., Taylor C.: Computing Accurate Correspondences across Groups of Images, IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, Vol. 32, No 11, pp. 1994-2005, ISSN 0162-8828
2.	Petrović V., Cootes T.: Objectively Adaptive Image Fusion, INFORM FUSION, 2007, Vol. 8, No 2, pp. 168-176, ISSN 1566-2535
3.	Petrović V.: Subjective tests for image fusion evaluation and objective metric validation, INFORM FUSION, 2007, Vol. 8, No 2, pp. 208-216, ISSN 1566-2535
4.	Petrović V., Xydeas C.: Sensor noise effects on signal-level image fusion performance, IEEE Transactions on Image Processing, 2004, Vol. 13, No 2, pp. 228-237, ISSN 1057-7149
5.	Petrović V., Xydeas C.: Sensor noise effects on signal-level image fusion performance, INFORM FUSION, 2003, Vol. 4, pp. 167-183, ISSN 1566-2535
6.	Petrović V., Xydeas C.: Objective Evaluation of Signal-level Image Fusion Performance, OPT ENG, 2005, Vol. 44, No 8, ISSN 0091-3286
7.	V Petrović, T Cootes, C Twining, C Taylor, “Simultaneous Registration, Segmentation and Modelling of Structure in Groups of Images”, International Symposium on Biomedical Imaging: From Nano to Macro, ISBI2007, pp.1-4; Print ISBN: 1-4244-0672-2; DOI: 10.1109/ISBI.2007.356773 Arlington,USA, 12-15 April 2007
8.	V Petrović, T Cootes, A Mills, C Taylor, „Simultaneous Segmentation of Groups of Medical Images”, Medical Image Understanding and Analysis, MIUA2007, pp. 1-5; ISBN 1 901725 33 2; editors: Reyer Zwiggelaar, Frédéric Labrosse; University of Wales, Aberystwyth,GB;17-18.07. 2007
9.	V Petrović, T Cootes, R Pavlović, "Dynamic Image Fusion Performance Evaluation", Proceedings of 10th International Conference on Information Fusion 2007, pp.1-7; Print ISBN: 978-0-662-45804-3; DOI: 10.1109/ICIF.2007.4408120; Quebec, 9-12 July 2007
10.	V Petrović, T Cootes, C Twining, A Mills, C Taylor, „Automated Analysis of Deformable Structure in Groups of Images”, 18th British Machine Vision ConferenceBMVC2007, organised by the British Machine Vision Association;; Conference Chairs: Abhir Bhalerao and Nasir Rajpoot; Warwick, GB September 10-13, 2007

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

Quotation total :	1359			
Total of SCI(SSCI) list papers :	7			
Current projects :	Domestic :	2	International :	1

Science, arts and professional qualifications

Name and last name:	Sečujski S. Milan
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.06.2000
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	2002	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Bachelor's thesis	1999	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	EK314	Digital Signal Processing	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK411	Digital Filters	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EK421	Digital Image Processing	(F10) Engineering Animation, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	Z413A	Acoustics and Noise Protection	(Z20) Environmental Engineering, Undergraduate Academic Studies
5.	BM118B	Acoustics and Audio Engineering in Medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	E137	Basics of Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EK312	Acoustics and Audio Engineering	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EK312L	Acoustics and Audio Engineering in Multimedia	(F10) Engineering Animation, Undergraduate Academic Studies
9.	EK422	Digital Audio Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	ETI27	Audio Engineering	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI35	Digital Sound Processing	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EK522	Computer Vision (Digital Image Processing 2)	(F20) Engineering Animation, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	S0151	Application of Digital Signal Processing in Telecommunications	(S01) Postal Traffic and Telecommunications, Master Academic Studies
15.	SI036	Computer-Telephony Integration	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	SI037	Telecommunication Infrastructure of E-Business	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
17.	BMIM2A	Assistive Information and Communications Technologies	(BM0) Biomedical Engineering, Master Academic Studies
18.	EK422L	Digital Audio Signal Processing	(F20) Engineering Animation, Master Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)

1.	Milan Sečujski, Radovan Obradović, Darko Pekar, Ljubomir Jovanov, Vlado Delić: ”AlfaNum System for Speech Synthesis in Serbian Language”, Lecture Notes in Artificial Intelligence – Subseries of Lecture Notes in Computer Science, 2002, pp. 237- 244, ISSN 0302-9743.
2.	Bojović Ž., Perić Z., Delić V., Šećerov E., Sečujski M., Šenk V.: “Comparative Analysis of the Performance of Different Codecs in a live VoIP network using SIP protocol”, Electronics and electrical engineering, 2012, Vol. 117, No 1, pp. 37-42, ISSN 1392-1215
3.	Popović B., Janev M., Pekar D., Jakovljević N., Gnjatović M., Sečujski M., Delić V.: A Novel Split-and-Merge Algorithm for Hierarchical Clustering of Gaussian Mixture Models, DOI:10.1007/s10489-011-0333-9, Applied Intelligence, 2012, Vol. 37, No 3 (2012), pp. 377-389, ISSN 0924-669X
4.	Delić V., Bojanić M., Gnjatović M., Sečujski M., Jovičić S.: Discrimination capability of prosodic and spectral features for emotional speech recognition DOI: http://dx.doi.org/10.5755/j01.eee.18.9.2806, Electronics and electrical engineering, 2012, Vol. 18, No 9, pp. 51-54, ISSN 1392-1215
5.	Delić V., Sečujski M., Jakovljević N., Janev M., Obradović R., Pekar D.: “Speech Technologies for Serbian and Kindred South Slavic Languages”, 9th Chapter in the book Advances in Speech Recognition, Noam R. Shabtai (Ed.) Available from: http://www.intechopen.com/articles/show/title/speech-technologies-for-serbian-and-kindred-south-slavic-languages, SCIYO, 2010, str. 141-164, ISBN 978-953-307-097-1
6.	Pekar D., Mišković D., Knežević D., Vujnović Sedlar N., Sečujski M., Delić V.: "Applications of Speech Technologies in Western Balkan Countries", 7th Chapter in the book Advances in Speech Recognition, Noam R. Shabtai (Ed.) Available from http://www.intechopen.com/articles/show/title/applications-of-speech-technologies-in-western-balkan-countries, SCIYO, 2010, str. 105-122, ISBN 978-953-307-097-1
7.	Sečujski M.: “Development of language resources for the Serbian language required for part-of-speech tagging”, Chapter in book: „Speech and Language: Interdisciplinary Research III“, Eds.: S. T. Jovičić, M. Sovilj, Beograd, LAAC and IEPPS, 2009, str. 125-139, UDK: ISBN 978-86-81879-27-6
8.	Milan Sečujski: A Software Tool for Automatic Part-of Speech Tagging in Serbian Language, Primenjena lingvistika, 2008, No. 9, pp. 97- 103, UDK: 004.934 : 004.4, ISSN 1451-7124.
9.	Vlado Delić, Darko Pekar, Radovan Obradović, Milan Sečujski: ”Speech Signal Processing in ASR&TTS Algorithms”, Facta Universitatis (Niš), Series: Electronics and Energetics, 2003, Vol. 16, No. 3, pp. 355- 364, ISSN 0353-3670.
10.	Jakovljević N., Sečujski M., Delić V.: Vocal Tract Length normalization strategy based on maximum likelihood criterion, 8. EUROCON, Sankt Peterburg: IEEE, 18-23 Maj, 2009, pp. 417-420, ISBN 978-1-4244-3861-7

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

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

Science, arts and professional qualifications

Name and last name:	Simić S. Dragan
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.03.2009
Scientific or art field:	Integral Transport and Logistics

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Integral Transport and Logistics
PhD thesis	2004	Faculty of Sciences - Novi Sad	Informatics and Computing
Magister thesis	2001	Faculty of Technical Sciences - Novi Sad	Informatics and Computing
Bachelor's thesis	1987	Faculty of Technical Sciences - Novi Sad	Electronics and Telecommunications

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

	ID	Course name	Study programme name, study type
1.	S01321	Information technology basics	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	S024N	Information technologies in transport	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies
3.	S0I598	E-Logistics	(S00) Traffic and Transport Engineering, Master Academic Studies
4.	BMIM4E	Data analysis in clinical research	(BM0) Biomedical Engineering, Master Academic Studies
5.	S0M22	PROJECT MANAGEMENT	(S00) Traffic and Transport Engineering, Master Academic Studies
6.	SI593	Information systems for managing Enterprise resource planing	(S01) Postal Traffic and Telecommunications, Master Academic Studies
7.	DSA00	Logistics of Heterogeneous Intensive Processes	(S00) Traffic Engineering, Doctoral Academic Studies
8.	DSIM9	E-logistics	(S00) Traffic Engineering, Doctoral Academic Studies
9.	DSN1	Logistics Systems	(OM1) Mathematics in Engineering, Doctoral Academic Studies
10.	DSSL2	Selected topics from inventory management	(S00) Traffic Engineering, Doctoral Academic Studies
11.	DSSL3	Warehause and storage	(S00) Traffic Engineering, Doctoral Academic Studies
12.	DSSL4	Logistics information systems	(S00) Traffic Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Dragan Simić, Ilija Kovačević, Svetlana Simić, "Insolvency prediction for assessing corporate financial health". Logic Journal of the IGPL, Vol. 20, Num 3, pp. 536-549 (2012) ISSN 1367-0751
2.	Svetlana Simić, Dragan Simić, Milan Cvijanović. "Clinical and socio-demographic characteristics of tension type headache in working population". HealthMED – Vol. 6, Num. 4, 2012. pp. 1341-1347. ISSN: 1840-2991
3.	Simić Svetlana, Simić Dragan: "Relationship between sociodemographic characteristics and migraine in working women". HealthMED, Vol. 4, Num. 1 (2010) pp. 21-28
4.	Dragan Simić, Svetlana Simić, ”An approach to efficient business intelligent system for financial prediction”, In: Mu-Yen Chen (ed.) ”Soft Computing¬” Vol. 11, Num 12, October 2007, pp. 1185-1192, Springer-Verlag, Berlin Heidelberg (2007). ISSN 1432-7643
5.	Dragan Simić, Zoran Budimac, Vladimir Kurbalija, Mirjana Ivanović, Case-Based Reasoning for Financial Prediction, In: Moonis Ali, Floriana Esposito (eds.) ”Innovations in Applied Artificial Intelligence”, LNAI vol. 3533, pp. 839-841. Springer-Verlag, Berlin Heidelberg (2005). ISSN 0302-9743
6.	Dragan Simić, Svetlana Simić, ”Hybrid Artificial Intelligence Approaches on Vehicle Routing Problem in Logistics Distribution”,"Hybrid Artificial Intelligent Systems", LNAI, vol. 7208, pp. 208-220. Springer-Verlag Berlin Heidelberg (2012), DOI: 10.1007/978-3-642-28942-2_19, ISSN 0302-9743
7.	Dragan Simić, Dragana Milutinović, Svetlana Simić, Vesna Suknjaja:”Hybrid Patient Classification System in Nursing Logistics Activities”. "Hybrid Artificial Intelligent Systems", LNAI vol. 6679, pp. 421-428. Springer-Verlag, Berlin Heidelberg (2011). ISSN 0302-9743
8.	Dragan Simić, Svetlana Simić, Ilija Tanackov, "An Approach of Soft Computing Applications in Clinical Neurology", "Hybrid Artificial Intelligent Systems", LNAI vol. 6679, pp. 429-436. Springer-Verlag, Berlin Heidelberg (2011). ISSN 0302-9743
9.	Dragan Simić, Svetlana Simić, "A Review: Approach of Fuzzy Models Application in Logistics", "ADVANCES IN INTELLIGENT AND SOFT COMPUTING", vol. 95, Computer Recognition Systems 4, pp. 717-726, ISSN 1867-5662, ISBN 978-3-642-20319-0, Springer-Verlag Berlin Heidelberg, 2011
10.	Ilija Tanackov, Dragan Simić, Sinisa Sremac, Jovan Tepić, Suncica Kocić-Tanackov: "Markovian Ants in a Queuing System", "Hybrid Artificial Intelligent Systems", LNAI vol. 6076, pp. 32-39. Springer-Verlag, Berlin Heidelberg (2010). ISSN 0302-9743

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

Science, arts and professional qualifications

Name and last name:	Stefanović D. Čedomir
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	22.06.2004
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2012		Telecommunications and Signal Processing
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	EK300	Digital Modulations	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	SK300	Principles of Digital Communications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	BM119B	Wireless sensor networks	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	BMI102	Communication Systems	(BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	EK320	Principles of digital communications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK453	SCADA Systems Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EK459	Wireless sensor networks	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	ETI11	Communication systems	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
9.	ETI33	Wireless sensor networks	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
10.	S1328P	Principles of digital modulations	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
11.	DE110S	Stochastic Processes in Telecommunications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	DE111S	Algorithms for Digital Signal Processing	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE512S	Human-Machine Speech Communication	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	S0152	Next Generation Telecommunication Networks	(S01) Postal Traffic and Telecommunications, Master Academic Studies
15.	SI027	Advanced IP Communications	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies

Representative refferences (minimum 5, not more than 10)

1.	Stefanović Č., Vukobratović D., Stanković V., Fantacci R.: Packet-centric approach for distributed sparse-graph coding in wireless ad-hoc networks, Ad Hoc Networks, 2012, ISSN 1570-8705
2.	Stefanović Č., Bajić D.: On the Search for a Sequence from a Predefined Set of Sequences in Random and Framed Data Streams, IEEE Transactions on Communications, 2012, Vol. 60, No 1, pp. 189-197, ISSN 0090-6778
3.	Stefanović Č., Vukobratović D., Chiti F., Niccolai L., Crnojević V., Fantacci R.: Urban Infrastructure-to-Vehicle Traffic Data Dissemination Using UEP Rateless Codes, IEEE Journal on Selected Areas in Communications, 2011, Vol. 29, No 1, pp. 94-102, ISSN 0733-8716, UDK: 10.1109/JSAC.2011.110110
4.	Vukobratović D., Stefanović Č., Chiti F., Crnojević V., Fantacci R.: Rateless Packet Approach for Data Gathering in Wireless Sensor Networks, IEEE Journal on Selected Areas in Communications, 2010, Vol. 28, No 7, pp. 1169-1179, ISSN 0733-8716, UDK: 10.1109/JSAC.2010.100921
5.	Stefanović Č., Vukobratović D., Crnojević V., Stanković V.: A Random Linear Coding Scheme for Perimeter Data Gathering, 8. International Conference on Wireless On-demand Network Systems and Services - WONS, Bardonekija: IEEE, 26-28 Januar, 2011, pp. 142-146, ISBN 978-1-61284-188-5/11

Representative refferences (minimum 5, not more than 10)

6.	Stefanović Č., Bajić D.: Acquisition Times of Contiguous and Distributed Marker Sequences: A Cross-Bifix Analysis, Lecture Notes in Computer Science, LNCS, 2010, pp. 55-66, 6. Sequences and Their Applications - SETA, Paris: Springer, 13-17 Septembar, 2010, pp. 55-66, ISBN 978-3-642-15873-5
7.	Bajić D., Stefanović Č.: Statistical Analysis of Search for Set of Sequences in Random and Framed Data, Lecture Notes in Computer Science, LNCS, 2010, pp. 320-332, 6. Sequences and Their Applications - SETA, Paris: Springer, 13-17 Septembar, 2010, pp. 320-332, ISBN 978-3-642-15873-5
8.	Vukobratović D., Stefanović Č., Stankovic V.: Fireworks: A Random Linear Coding Scheme for Distributed Storage in Wireless Sensor Networks, 2. IEEE Information Theory Workshop ITW, Dablin: IEEE, 30-3 Avgust, 2010, pp. 1-5, ISBN 978-1-4244-8262-, UDK: 10.1109/CIG.2010.5592800
9.	Stefanović Č., Crnojević V., Vukobratović D., Niccolai L., Chiti F., Fantacci R.: Contaminated Area Monitoring via Distributed Rateless Coding with Constrained Data Gathering, 6. ACM International Wireless Communications and Mobile Computing Conf. IWCMC, Caen: ACM, 5-8 Jul, 2010, pp. 671-675, ISBN 978-1-4503-0062-9/10
10.	Stefanović Č., Vukobratović D., Karabenč T., Rovčanin M., Crnojević V.: On Energy Efficiency of Rateless Packet Scheme for Distributed Data Storage in Wireless Sensor Networks, 7. IEEE International Conference on Wireless On-Demand Systems and Services WONS, Kranjska Gora: IEEE, 3-5 Februar, 2010, pp. 61-65, ISBN 978-1-4244-6060-1

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

Quotation total :	57			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	2	International :	2

Science, arts and professional qualifications

Name and last name:	Šarac D. Dragana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.08.2011
Scientific or art field:	Integral Transport and Logistics

Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Integral Transport and Logistics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Postal Traffic and Communications
Magister thesis	1999	Faculty of Transport and Traffic Engineering - Beograd	Postal Traffic and Communications
Bachelor's thesis	1992	Faculty of Economics - Subotica	Economic Science

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

	ID	Course name	Study programme name, study type
1.	S01433	Financial Operations in Postal Traffic	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	S01361	Business decision making	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	S01381	Direct marketing	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	S01471	Change management	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
5.	S020N	Economics of traffic	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
6.	S0153	New Technologies and Services in Postal Traffic	(S01) Postal Traffic and Telecommunications, Master Academic Studies
7.	S1I583	Models of Postal Network Management	(S01) Postal Traffic and Telecommunications, Master Academic Studies
8.	S1I593	Electronic postal services	(S01) Postal Traffic and Telecommunications, Master Academic Studies
9.	DSSP1	Selected chapters from the field of public postal network management	(S00) Traffic Engineering, Doctoral Academic Studies
10.	DSSP2	Selected chapters from the field of postal traffic organization	(S00) Traffic Engineering, Doctoral Academic Studies
11.	DSSP3	Selected chapters from the field of postal services market research	(S00) Traffic Engineering, Doctoral Academic Studies
12.	DSSP4	Selected chapters from the field of process management in postal traffic	(S00) Traffic Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Blagojević M., Kujačić M., Šarac D.: Activity-based management of costs and revenue of universal postal service operator, Metalurgia international, 2013, No 3, ISSN 1582-2214, in press
2.	Jovanović B., Kujačić M., Šarac D., Atanasković P.: Fuzzy logic approach to predicting waiting time, Metalurgia international, 2013, No 3, ISSN 1582-2214, in press
3.	Kujačić M., Šarac D., Marković D., Jovanović B.: Providing universal postal service in developing countries, African Journal of Business Management, 2011, Vol. 5, No 8, pp. 1158-1165, ISSN 1993-8233
4.	Šarac D., Kujačić M., Jovanović B.: Planning the Resources for Ensuring Provision of Universal Postal Service, 15. International Scientific Conference on Industrial Systems - IS, Novi Sad: FTN Novi Sad, 14-16 Septembar, 2011, pp. 29-37, ISBN 978-86-7892-341-8
5.	Šarac D., Kujačić M.: Organization of the postal network and optimization of resurces at the level of municipalities in Serbia, 12. International symposium SymOrg, Zlatibor, 9-12 Jun, 2010, pp. 66-67
6.	Šarac D., Kujačić M., Jovanović B.: Upravljanje poštanskom mrežom u ruralnim područjima Republike Srbije, Tehnika, 2010, pp. 6-11, ISSN 1450-9911
7.	Kujačić M., Šarac D., Blagojević M.: Upravljanje troškovima u poštanskom saobraćaju primenom ABC (Activity based costing) metode, Tehnika - menadžment 4/2011., Tehnika, 2011, ISSN 1450-9911
8.	Šarac D., Bajić I.: Konkurentnost poštanskih operatora sa stanovišta efikasnosti, 28. PosTel, Beograd, 14-15 Decembar, 2010, pp. 57-66, ISBN 978-86-7395-274-1
9.	Šarac D., Ožegović S., Kujačić M.: The synergy effects of strategic partnerships in providing the universal postal service, 13. International symposium SymOrg, Zlatibor, 5-9 Jun, 2012
10.	Ožegović S., Šarac D., Dumnić S.: The importance of customer segmentation and categorization in key account management in postal services, SEETSI, Bar, oktobar 2012

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	1	International :	0

Study Programme Accreditation

MASTER ACADEMIC STUDIES — Postal Traffic and Telecommunications

Science, arts and professional qualifications

Name and last name:	Šećerov E. Emil
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1987
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009		Telecommunications and Signal Processing
PhD thesis	1998	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1993	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1987	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.	EK458	Telecommunication networks	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	S1329P	Introduction to Communication Networks	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	S1437P	Telekomunikacione mreže i saobraćaj	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	DE111S	Algorithms for Digital Signal Processing	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
5.	EK532	Telecommunication System Software	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
6.	EK535	Computer Telephone Integration	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	S0152	Next Generation Telecommunication Networks	(S01) Postal Traffic and Telecommunications, Master Academic Studies
8.	DE111	Algorithms for Digital Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Kovačević V., Popović M., Šećerov E., “Requirements for Operating Systems included in Virtual Machine System“, System Science Journal, Vol 17, No. 1, 1991, pp 61-65.
2. Kovačević V., Popović M., Šećerov E., “Requirements for Operating Systems included in Virtual Machine System“, International Conference on System Science Abstract of Papewrs, Wroclaw, 1989, pp. 108.
3. Šećerov E., Teslić N., Popović M., “Efficient kernel for real-time systems operating in non-deterministic enviroment”, Procedeengs of the 12th International Conference on Systems Science, Volume 3, Wroclaw, Poland, 1995, pp 104-111.
4. Šećerov E., Popović M., Svirčević S., “Middle Level of Control for Call Processing Protocol in Telephone Exchanges”, Procedeengs of the 12th International Conference on Systems Science, Volume 3, Wroclaw, Poland, 1995, pp 112-119.
5. Šećerov E., Popović M., Kovačević V., “Heuristic Method for Dimensining Processing Elements in Strored Program Telephone Exchange”, Relectronic, 1995, 9th Symposium on Quality and Reliability in Electronics, Budapest, 1995, pp 263-268.
6. Kovačević V., Popović M., Šećerov E., Manojlović Z., Škrbić M., “Software Concept apllied in subscriber digital concentrator ACK 2000 for Russian Telephone Network”, ICT ’98 International Conference on Telecommunications, Vol. IV, 1998, Porto Carras, pp 212-215.
7. Bender M. , Šećerov E. , Šenk V., Popov S.: "Application Gateway between Open and Legacy Systems", Eurocon 2005, The International Conference on “Computer as a tool”, IEEE Region 8, November 2005, Belgrade, pp 1072-1076.
8. Popović M., Kovačević V., Šećerov E., “Merenje apsolutnog vremena u VMS“, XIII Simpozijum o informacionim tehnologijama, Sarajevo-Jahorina, 1989, str. 114-1 – 114-4.
9. Šećerov E., Petković M., Jurca Ž., Djordjević S., “Pristup definisanju uslova za uključivanje OS u VMS“, XXXIII Jugoslovenska konferencija ETAN, Knjiga VIII, Novi Sad, 1989, str. 1999-2005.
10. Petković M., Popović M., Šeđerov E., “Segmentiranje magnetnog medijuma sa direktnim pristupom kap podrška sistemu virtuelnih mašina“, XXXIII Jugoslovenska konferencija ETAN, Knjiga VIII, Novi Sad, 1989, str. 207-213.

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

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

Science, arts and professional qualifications

Name and last name:	Šenk I. Vojin
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.01.1987
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2003	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1992	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Magister thesis	1989	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1981	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	EK310	Introduction to Information Theory	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK462	Entrepreneurship in ICT	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EK464	Communication Systems Design	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	DE310S	Encoding and Signal Transmission Techniques	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
5.	DE510S	Algorithms of Signal Detection and Estimation	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	EK533	Detection and Estimation	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8.	EK534	Cryptography System for Data Protection	(OM1) Mathematics in Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	EK536	Coding Techniques	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	RPR004	Entrepreneurship, Innovation, Knowledge Regions - Role of Universities	(RPR) Regional Development Planning and Management, Master Academic Studies
11.	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
12.	DE310	Encoding and Signal Transmission Techniques	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE510	Algorithms of Signal Detection and Estimation	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Vukobratović D., Šenk V.: Design and Evaluation of Irregular LDPC Codes Using ACE Spectrum, IEEE Transactions on Communications, 2009, Vol. 57, No 8,, pp. 2272-2279, ISSN 0090-6778, UDK: 10.1109/TCOMM.2009.08.070548
2. Sejdinović D., Vukobratović D., Doufexi A., Šenk V., Piechocki R.: Expanding Window Fountain Codes for Unequal Error Protection, IEEE Transactions on Communications, 2009, Vol. 57, No 9, pp. 2510-2516, UDK: 10.1109/TCOMM.2009.09.070616
3. Vukobratović D., Šenk V.: Generalized ACE Constrained Progressive Edge-Growth LDPC Code Design , IEEE Communications Letters, 2008, Vol. 12, No 1, pp. 32-34, ISSN 1089-7798, UDK: 10.1109/LCOMM.2008.071457

Representative refferences (minimum 5, not more than 10)

4.	V. Crnojević, V. Šenk, Ž. Trpovski, “Advanced Impulse Detection Based on Pixel-Wise MAD”, IEEE Signal Processing Letters, vol.11, no. 7, 2004, pp. 589-593.
5.	D. Bajić, V. Šenk, M. Despotović, “Subsets of the STM-1 frame-alignment signal: a monitoring analysis”, IEE Proc. Commun., vol. 149, no. 5, Oct. 2002. pp. 242-248.
6.	Miroslav Despotović, Vojin Šenk, Bartolomeu F. Uchôa Filho,”DISTANCE SPECTRA OF CONVOLUTIONAL CODES OVER PARTIAL-RESPONSE CHANNELS”, IEEE Transactions on Communications, vol. 49, no.7, pp. 1121-1124, July 2001.
7.	Kovačević M., Šenk V.: On Possible Dependence Structures of a Set of Random Variables, Acta Mathematica Hungarica, 2012, Vol. 135, No 3, pp. 286-296
8.	Bojović Ž., Perić Z., Delić V., Šećerov E., Sečujski M., Šenk V.: “Comparative Analysis of the Performance of Different Codecs in a live VoIP network using SIP protocol”, Electronics and electrical engineering, 2012, Vol. 117, No 1, pp. 37-42, ISSN 1392-1215
9.	Bojović Ž., Šećerov E., Dobromirov D., Šenk V.: Maximizing the Profit of Telecom Telcos by a Novel Traffic Scheduling Policy , Electronics and electrical engineering, 2011, Vol. 7, No 113, pp. 67-73, ISSN 1392-1215
10.	Bojović ž., Šenk V., Dobromirov D., Bojović P.: Intervendor working of VOIP networks , Journal of the Institute of Telecommunications Professionals, 2011, Vol. 5, No 3, pp. 26-32, ISSN 1755-9278

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

Quotation total :	141			
Total of SCI(SSCI) list papers :	18			
Current projects :	Domestic :	3	International :	3

Science, arts and professional qualifications

Name and last name:	Trpovski V. Željen
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.02.1985
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1998	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	1991	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1981	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	EK310	Introduction to Information Theory	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK435	Optical Communications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	EK201	Signals and Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EK451	Audio and Video Technologies	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	ETI08	Telecommunication systems and signals	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
6.	S1215P	Analysis of Telecommunication signals	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
7.	S1220P	Analysis of Telecommunication Systems	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
8.	DE110S	Stochastic Processes in Telecommunications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE412S	Digital image processing algorithms	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	E1SO01	Modern technologies in electrical engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	DE110	Stochastic Processes in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
13.	DE412	Digital Image Processing Algorithms	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Ispitivanje statističkih osobina digitalnog prenosa u UKT FM radio difuziji primenom sistema RDS
2.	Uniformne i neuniformne filtar banke i njihova primena u kompresiji signala slike
3.	Ž.Trpovski, "Reliability Testing Method for RDS Based on the PI Code Statistics", IEEE Trans. on Consumer Electronics, Vol.37, No.4, November 1991., pp. 884-891.
4.	Ž.Trpovski, "Contribution to window design for modulated lapped transforms", Electronics Letters, Vo.33, No. 24, November 1997, pp.2013-2014.
5.	Vesna Zeljković, A. Dorado, Ž. Trpovski, E. Izquierdo, "Classification of Building Images in Video Sequences", IEE Electronics Letters, Vol. 40, No. 3, 5th February 2004, pp. 169-170.

Representative refferences (minimum 5, not more than 10)

6.	V. Crnojević, V. Šenk, Ž. Trpovski, "Advanced Impulse Detection Based on Pixel-Wise MAD", IEEE Signal Processing Letters, Vol.11, No. 7, July 2004, pp.589-592.
7.	M.Temerinac, A.Kozarev, Z.Trpovski, B.Šimšić, An Efficient Image Compression Algorithm Based on Filter Bank Analysis and Fractal Theory, Proc. of EUSIPCO-92, Sixth European Signal Processing Conference, Brussels, Vol.III, pp.1373-1376.
8.	J.Knezevic, V.Katic, Z.Trpovski, D.Graovac: "Modulated Lapped Transforms Filter Bank Technique Application For AC/DC Converter Power Quality Analysis", Power Quality Conference - PCIM-PQ 2000, Nuremberg (Germany), June 2000, published on CD-ROM.
9.	T.Lončar-Turukalo, V.Crnojević, Ž.Trpovski, Image Compression by Decomposition into Bit Planes, 5th International Conference on Telecommunications in Modern Satelite, Cable and Broadcasting Services, TELSIKS 2001, Niš.
10.	V.Zeljković, Ž.Trpovski, V.Šenk, Improved Illumination Independent Moving Object Detection in Real World Video Sequences, 4th International Conference on Video-Image Processing and Multimedia Communications, Zagreb, Croatia, July 2003.

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

Quotation total :	14			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Vukobratović V. Dejan
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.11.2003
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	2008	University of Novi Sad - Novi Sad	Telecommunications and Signal Processing
Magister thesis	2005	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

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

	ID	Course name	Study programme name, study type
1.	BM119B	Wireless sensor networks	(BM0) Biomedical Engineering, Undergraduate Academic Studies
2.	BMI102	Communication Systems	(BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	EK200	Development Tools for Communications and Signal Processing 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EK203	Modelling and Simulation of Communication Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK321	IP technology	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	ETI21	Communication Protocols	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
7.	ETI23	Wireless Communications	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	ETI31	Video Technology	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
9.	S1329P	Introduction to Communication Networks	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
10.	DE414S	Modern Coding Theory	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	DE514S	Multimedia Processing and Communications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	S0152	Next Generation Telecommunication Networks	(S01) Postal Traffic and Telecommunications, Master Academic Studies
13.	SI015	Integrated Services Digital Network (ISDN)	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	SI016	Advanced ISDN Networks	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
15.	SI027	Advanced IP Communications	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	BMIM2D	Information theory in biosystems	(BM0) Biomedical Engineering, Master Academic Studies
17.	DE414	Modern Coding Theory	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
18.	DE514	Multimedia Processing and Communications	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Vukobratović D., Stanković V., Sejdinović D., Fagoonee-Stankovic L., Xiong Z.: Scalable Video Multicast Using Expanding Window Fountain Codes, IEEE Transactions on Multimedia, 2009, Vol. 11, No 6, pp. 1094-1104, ISSN 1520-9210, UDK: 10.1109/TMM.2009.2026087
2. Stefanović Č., Vukobratović D., Stanković V., Fantacci R.: Packet-centric approach for distributed sparse-graph coding in wireless ad-hoc networks, Ad Hoc Networks, 2012, ISSN 1570-8705

Representative refferences (minimum 5, not more than 10)

3.	Stefanović Č., Vukobratović D., Chiti F., Niccolai L., Crnojević V., Fantacci R.: Urban Infrastructure-to-Vehicle Traffic Data Dissemination Using UEP Rateless Codes, IEEE Journal on Selected Areas in Communications, 2011, Vol. 29, No 1, pp. 94-102, ISSN 0733-8716, UDK: 10.1109/JSAC.2011.110110
4.	Vukobratović D., Stefanović Č., Chiti F., Crnojević V., Fantacci R.: Rateless Packet Approach for Data Gathering in Wireless Sensor Networks, IEEE Journal on Selected Areas in Communications, 2010, Vol. 28, No 7, pp. 1169-1179, ISSN 0733-8716, UDK: 10.1109/JSAC.2010.100921
5.	Sejdinović D., Vukobratović D., Doufexi A., Šenk V., Piechocki R.: Expanding Window Fountain Codes for Unequal Error Protection, IEEE Transactions on Communications, 2009, Vol. 57, No 9, pp. 2510-2516, UDK: 10.1109/TCOMM.2009.09.070616
6.	Vukobratović D., Šenk V.: Design and Evaluation of Irregular LDPC Codes Using ACE Spectrum, IEEE Transactions on Communications, 2009, Vol. 57, No 8,, pp. 2272-2279, ISSN 0090-6778, UDK: 10.1109/TCOMM.2009.08.070548
7.	Dejan Vukobratovic, Vojin Senk: “Generalized ACE Constrained Progressive-Edge-Growth LDPC Code Design”, IEEE Communications Letters, Vol.12, No.1, pp. 32-34, January 2008.
8.	Stefanović Č., Vukobratović D., Stanković V., Fantacci R.: Packet-centric approach for distributed sparse-graph coding in wireless ad-hoc networks, Ad Hoc Networks, 2012, ISSN 1570-8705
9.	Vukobratović D., Vladimir S.: Unequal Error Protection Random Linear Coding Strategies for Erasure Channels, IEEE Transactions on Communications, 2012, Vol. 60, No 5, pp. 1243-1252
10.	Vukobratović D., Clavier L., Matthias W., Werner T., Andreas C., Kimmo K.: Adaptive Coding, Modulation and Signal Processing - in Pervasive Mobile and Ambient Wireless Communications, Heidelberg, Springer, 2012

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

Quotation total :	0			
Total of SCI(SSCI) list papers :	9			
Current projects :	Domestic :	0	International :	2

Standard 10. Organizational and Material Resources

In order to perform the study program the appropriate human, spatial, technical and technological, library and other resources have been provided that comply with the character of the study programme and the planned number of students. Instruction in the programme Postal Traffic and Telecommunications is carried out in two shifts ensuring 2m2 of space per student.
Classes are held in lecture halls, classrooms and specialised laboratories. The library houses more than 100 library units relevant to the performance of Postal Traffic and Telecommunications study programme. All the courses of the study programme are covered with adequate course literature, course books, and additional material which is available in time and in insufficient quantities for the regular teaching process. At the same time, adequate information and support has been provided.
The Faculty has a library and a reading room and ensures a place for every student in the lecture hall, classroom and laboratory.

Standard 11. Quality Control

The quality control of the study programme is performed regularly and systematically through self-evaluation and external quality control. A long standing tradition of student survey should be emphasised here.
The quality control process is conducted through:
-end of the term students survey for each course
-survey of the graduating students at the graduation regarding the quality of the study programme and the logistic support. In addition, the conditions for studying (classroom tidiness and neatness, etc…) are also evaluated.
-survey of the students at the end of the school year. At this point the students evaluate logistics support.
-survey of the student when enrolling a new school year. Here the students evaluate the study program at the year which they have previously completed.
-survey of the teaching and non-teaching staff on the quality of the study programme and its logistic support. Here the work of the Dean`s office, registrar`s office, library, and other services at the Faculty is evaluated. In addition, the conditions for studying (classroom tidiness and neatness, etc…) are also evaluated.
The quality of the study programme is monitored by a committee formed by the heads of all chairs involved in the study programme and one student.

Standard 12. Distance Education

Distance learning is not provided for.