



UNIVERSITY OF NOVI SAD

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

## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering



STUDY PROGRAMME ACCREDITATION MATERIAL:

# BIOMEDICAL ENGINEERING

MASTER ACADEMIC STUDIES

Novi Sad

2012.

Prevod sa srpskog jezika:

Jelisaveta Šafranj

Ivana Mirović

Marina Katić

Vesna Bodganović

Dragana Gak

Ličen Branislava



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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

Programme name	Biomedical Engineering
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	Interdisciplinary
Scientific, professional or art field	Biomedical Engineering: Technical Sciences; Medical Sciences
Type of studies	Master Academic Studies
Study scope, expressed in ECTS	60
Academic degree, abbreviation	Master in Biomedical Engineering, M.Biom.Eng.
Study length	1
Programme implementation starting year	
Future course implementation starting year (for new programme)	2013
Number of students attending this programme	0
Planned number of students to be enrolled in this programme	32
Programme approval date (state the approval issuer)	14.11.2012 - Science Education Council 29.11.2012 - University of Novi Sad Senate
Programme language	Serbian, English
Programme accreditation year	
Web address containing programme information	<a href="http://www.ftn.uns.ac.rs">http://www.ftn.uns.ac.rs</a>



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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

### Standard 00. Introduction

The study programme of the Graduate Academic Studies – Master in Biomedical Engineering is a continuation of the undergraduate academic studies of Biomedical Engineering at the Faculty of Technical Sciences, University of Novi Sad. The study programme is realized based on contemporary scientific cognitions in the field of Biomedical engineering and Bologna recommendations.

Graduate Academic Studies – Master last one year during which students develop their Master Thesis. The academic degree obtained by students who successfully finish the programme is Master in Biomedical Engineering.

In order to ensure the high quality of studies, students at the master academic studies are required to publish at least one scientific or professional paper at a national or international conference in the field of interest for the final-master thesis. Planning, writing and publication of the paper is a good preparation for the students who want to continue their scientific work at the doctoral studies.

Study curriculums and programmes within this study programme enable students to acquire the necessary scientific and professional knowledge in the field of biomedical engineering and ensure their success in science-research work. The emphasis of the study programme is placed on working in smaller groups in contemporary equipped experimental laboratories and computer rooms appropriate for successful science-research work in the field of biomedical engineering.



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Biomedical Engineering

### Standard 01. Programme Structure

The name of the master academic study programme is Biomedical Engineering. Admission requirements are the completion of the undergraduate studies worth at least 240 ECTS and successfully passed entrance examination. The entrance examination i.e. Test of knowledge for the studies of Computing and Control Engineering (worth max 60 points) is considered successfully passed if the candidate has obtained at least 14 points.

Students have the obligatory and elective courses. The curriculum is formed with the intention to offer a considerable number of elective courses to students at the master academic studies. Elective courses are selected from a list of offered courses, but students can, with the agreement of the head of the study programme, choose any course taught at the Faculty of Technical Sciences or the University of Novi Sad, if they fulfill the required prerequisites in order to take the chosen course.

Courses are carried out in the form of lectures and practice. During the teaching process the emphasis is placed on the student's independent work and research work as well as on their encouraged individual participation in the course realization. At lectures, while using the appropriate modern didactic-methodological methods, students become familiar in the course subject matter and are offered explanations that help them understand it more easily. At practice classes, complementing the lectures, students solve specific engineering problems and are given examples which further illustrate the course matter. The practice classes can be auditory, computer or laboratory practice. At this level of studies, teachers insist on work in smaller groups so that they are able to pay more attention to each student. Student obligations may comprise of research papers, homework assignments, as well as smaller professional project assignments and publication of scientific papers. Every activity of the student during the course process is evaluated and graded in accordance with the rules established by the Faculty of Technical Sciences. Every course is worth a certain number of ECTS credits, and the whole study programme is completed when the student fulfills all the requirements assigned by the study programme and obtains at least 60 ECTS.





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### Standard 02. Programme Objectives

The goal of the study programme is to educate students for the profession of an engineer of biomedical engineering-master in accordance with the society's needs. The study programme Biomedical Engineering is designed to provide the competitions that are socially justified and useful. The objective of the study programme is fully in accordance with the main objectives and goals of the Faculty of Technical Sciences and is in line with the high educational standards proposed for qualified master engineers. This study programme is designed to offer the engineers of biomedical engineering-masters the knowledge that is in accordance with the highest European and world educational standards.



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### Standard 03. Programme Goals

The objective of the study programme is to produce qualified engineers-masters who are highly competent and possess the necessary knowledge and skills needed in further education at the doctoral studies and are able to keep step with the fast technological development in the field of biomedical engineering. The study programme, additionally, encourages the development of creativity in the problem solving process and the ability of critical thinking, the development of team work skills and the acquisition of specific knowledge and skills. One of the specific objectives, which is in accordance with the objectives of professional education at the Faculty of Technical Sciences, is the development of students' awareness of the necessity for permanent education, professional development and advancement in the fast-advancing field of biomedical engineering. Another objective of the study programme is to provide education for experts who will be able to quickly adjust to team work as well as to present (in written form or orally) the scientific results to the professional and general public, especially through scientific and professional papers.



## Study Programme Accreditation

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Biomedical Engineering

### Standard 04. Graduates` Competencies

After completing the study programme, students will be competent for the development, engineering, design and application of modern complex systems and their parts in the field of biomedical engineering. These competences include the possibility to continue education depending on inclinations and specific competences. An important segment is also the development of the ability of critical thinking, problem analysis, solution synthesis, prediction of the behavior of the chosen solution with the clear understanding of advantages and disadvantages of the chosen solution. Students who successfully complete the study programme will be able to independently run experiments and measuring procedures in the field of biomedical engineering, to do statistical data processing, and to formulate and present adequate results and conclusions. Special emphasis is placed on the professional ethical development.

After completing the master academic studies at this study programme, students will have the following competences besides others:

- Ability of critical thinking and knowledge application in the field of biomedical engineering
- Ability to solve problems in the new or unknown environment within the scientific-professional field
- Ability to integrate knowledge, solve complex problems, make conclusions based on the available information containing reasoning about social and ethical responsibility
- Ability to transfer knowledge in a clear, unambiguous manner and to report the knowledge to the professional and general scientific public
- Ability to successfully continue education at doctoral studies.

Besides the above stated, the studies insist on the intensive use of information-communication technologies and available modern research equipment. Thus, master students at this level of studies will be competent for tracking and application of novelties in the profession, as well as for successful and equal cooperation with colleagues in the specific professional field from educational, scientific, research or economic organizations in the country and the environment.



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### Standard 05. Curriculum

The curriculum of graduate academic Master studies in Biomedical Engineering is designed to fulfill all the defined objectives. In order to fulfill students' personal interests, curriculum for this study program contains considerable number of elective courses. Students concrete their knowledge and skills during master academic studies. Through elective courses they are able to pursue their interests in the areas profiled during their undergraduate studies. Finishing master academic studies student attains minimum 60 ECTS (which, added to undergraduate academic studies, provides minimum 300 ECTS). Each course lasts one term and is worth a certain number of ECTS credits where one credit is equivalent to approximately 30 hours of work.

The curriculum defines each course in terms of its name, type of course, year and semester of studies, number of ECTS credits, name of the teacher, objectives of the course and expected outcomes, knowledge and competences, prerequisites for attending the course, content of the course, recommended literature, methods of teaching, types of evaluation and other. Professional practice and practical work of 45 hours forms a constituent part of the curriculum and is carried out in suitable scientific and research institutions, innovation centers, organizations which provide infrastructure support for innovative activities, industrial and public institutions.

A student's studies are completed with Master Thesis which consists of study and research work, theoretical and methodological framework necessary for the in depth understanding of the area in which the Master thesis is done and the production of the thesis itself. The final grade of the master thesis is formed on the basis of the grade on the theoretical and methodological bases and the grade on the production and defense of the thesis. Master thesis is defended before a committee of at least three professors of whom at least one has to be from another department or faculty.

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

Table 5.2 Course specification

Course:		<b>Clinical medicine for engineers</b>				
Course id:	BMIM6					
Number of ECTS:	6					
Teachers:	Kovačević R. Pavle, Mitić M. Igor					
Course status:	Mandatory					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
6	0	0	0	0		
Precondition courses		None				
1. Educational goal:						
Students should gain knowledge about several different disciplines of clinical medicine and the basic engineering tools used in clinical medicine.						
2. Educational outcomes (acquired knowledge):						
Students learn about importance of medical equipment and models used in order to make decisions about treatment of injuries and diseases in clinical disciplines.						
3. Course content/structure:						
Diseases. The clinical picture of disease. The influence of drugs on organic systems. Cardiology, activity of the heart and blood vessels, volume depletion. Fundamentals of engineering diagnostics: x-ray, ultrasound, biopsy, imaging. Fundamentals of engineering therapy: orthopedic, osteosynthesis, artificial joints, prosthetic devices, vascular procedures, by-pass surgery, prosthetic valves, neurotherapy, catheterization, drainage areas of the body under pressure, radiation therapy of cancer, dialysis and plasmapheresis. Basic principles of making decisions in clinical medicine (examples from surgery, gynecology and obstetrics). Cardiovascular pathology with special emphasis on hemodynamics and therapeutic principles in cardiac surgery. Implants in cardiac surgery (mechanical, biological). Extracorporeal circulation. Types of pumps: pulsatile roller and centrifugal pumps, functioning, advantages and disadvantages, complications. Oxygenator construction. Assisted mechanical circulation. Robotic surgery. Endovascular surgery. Types and methods of application stents in large blood vessels. Balloon catheter technology. Biological and engineering rules in stent construction.						
4. Teaching methods:						
Lectures. One part of classes are held in clinical environment.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Homework		Yes	5.00	Theoretical part of the exam	Yes	70.00
Lecture attendance		Yes	5.00			
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	D. Pejin	Interna medicina UNS-MF		UNS MF	2007	
2,	Ch. Wiener	Principles of internal medicine		McGrawHill	2008	
3,	K. Hillman, G. Bishop	Clinical Intensive Care and Acute Medicine		Cambridge UP	2004	
4,	P. Devitt	Clinical Problems in General Medicine and Surgery		Churchill Livingstone	2003	
5,	A.C. Guyton, J.E. Hall	Medicinska fiziologija		Savremena administracija, Beograd	1999	

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Table 5.2 Course specification

Course:		<b>Professional Practice</b>				
Course id:	BMIMSP					
Number of ECTS:	3					
Teachers:						
Course status:		Mandatory				
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	0	3		
Precondition courses		None				
1. Educational goal: Extending practical knowledge in the area of biomedical engineering.						
2. Educational outcomes (acquired knowledge): The acquired knowledge can be utilized in solving practical engineering and biomedical problems.						
3. Course content/structure: Solving concrete bioengineering problems in practice.						
4. Teaching methods: Teaching is carried out in medical sector or scientific and educational institutions in the form of independent work.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam		Points
Project		Yes	50.00	Theoretical part of the exam		50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	grupa autora	Odgovarajući materijali neophodni za rešavanje konkretnih problema			-	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Applications of lasers in medicine</h2>				
Course id:	BMIM1A					
Number of ECTS:	7					
Teachers:	Slankamenac P. Miloš, Živanov B. Miloš					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
<p>Acquiring knowledge in the field of laser application in medicine: radiation sources and their applications, the impact of radiation on humans, the development of laser technology, principles of lasers, types of lasers, the characteristics of the laser radiation, laser surgery, the advantages and disadvantages of laser surgery (surgery), the use of lasers in dentistry, the use of lasers in ophthalmology, the use of lasers in dermatology, other laser application in modern medicine.</p>						
2. Educational outcomes (acquired knowledge):						
<p>- Ability of knowledge of radiation sources and their applications - Ability of knowledge the impact of radiation on humans - Ability of knowledge of the principles of the laser and its features - Ability of knowledge of the principles of laser surgery - Ability of knowledge of the principles of lasers in dentistry - Ability of knowledge of the principles of lasers in ophthalmology - Ability of knowledge of the principles of lasers in dermatology</p>						
3. Course content/structure:						
<ul style="list-style-type: none"> <li>- Radiation sources and their applications</li> <li>- Effect of radiation on humans</li> <li>- The development of laser technology</li> <li>- Principles of laser operation</li> <li>- Types of lasers</li> <li>- The characteristics of laser radiation</li> <li>- Laser surgery</li> <li>- Advantages and disadvantages of laser surgery (surgery)</li> <li>- The use of lasers in dentistry</li> <li>- The use of lasers in ophthalmology</li> <li>- The use of lasers in dermatology</li> </ul>						
4. Teaching methods:						
Lectures, laboratory (L) practice, consultations.						
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
Laboratory exercise defence		Yes	10.00			
Lecture attendance		Yes	5.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Puđa Nikola	Upotreba lasera u savremenoj medicini			2005	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Assistive Information and Communications Technologies</h2>				
Course id:	BMIM2A					
Number of ECTS:	7					
Teachers:	Delić D. Vlado, Sečujski S. Milan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
<p>The objective of this course is to expand students' knowledge of information and communication technologies in the view of their use for both persons with disabilities and the elderly. These technologies include various types of aids and interfaces for communication of human with his environment, specialised in terms of a specific type of disability. In the course, students will gain knowledge of the technical aspects of different solutions, as well as the particularities of certain types of disabilities, whose knowledge is necessary for the design of assistive applications of information and communication technologies.</p>						
2. Educational outcomes (acquired knowledge):						
<p>Knowing the difference between certain categories of persons with disabilities, and understanding their needs and abilities when the new information and communication technologies are in question. The possibilities and best practices on how new technologies can help to overcome the handicap and improve daily activities to both the people with disabilities and the elderly or injured people. Students in this course will acquire basic knowledge necessary for the design of assistive systems that rely on information and communication technologies, both from a technical point of view and from the point of view of specific needs and capabilities of their end users.</p>						
3. Course content/structure:						
<ul style="list-style-type: none"> <li>•Retrospective of assistive technology.</li> <li>•Assistive technology for people with various types of disabilities (visually impaired, hearing-impaired persons, persons with speech impairment or delay in speech development, persons with impaired physical abilities).</li> <li>•Human-computer interfaces for different categories of persons with disabilities.</li> <li>•Aids and services for persons with disabilities developed on the basis of speech technologies.</li> <li>•Systems for remote monitoring and medical surveillance of patients.</li> <li>•Robots as assistive technology.</li> <li>•Perspectives of development of assistive technology.</li> </ul>						
4. Teaching methods:						
<p>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 is followed by auditory exercises. The second part of the course is followed by exercises either in the Laboratory of Acoustics and Speech Technologies or in the Laboratory of Mechatronics, Robotics and Automation at FTN. Several visits are arranged during the concluding part of the course – in the laboratories and studios at the School „Milan Petrović“ for the children with disabilities and the Defectology Faculty, where students will learn about assistive technologies and specialised (sensor) rooms and laboratories. 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 - <a href="http://www.ktios.net">www.ktios.net</a>.</p>						
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
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Vlado Delić	Skripta sa predavanja		www.ktios.net	2012	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Biophysiological systems modelling</h2>				
Course id:	BMIM3A					
Number of ECTS:	7					
Teacher:	Bojanić M. Dubravka					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
Students learn about theoretical and practical bases of biophysical systems modeling.						
2. Educational outcomes (acquired knowledge):						
Engineering approaches in design of complex systems for biomedical applications. Limitations of engineering models. Understanding the complexity of living systems and the difference between living systems and man-made systems.						
3. Course content/structure:						
The physical and mathematical models of physical and chemical processes and phenomena in the human body. Dynamic models. Stochastic models. Methods for process identification. Monte-Carlo method. Nonanalytical modeling methods (black-box). Non-parametric modeling methods. Stochastic modeling methods. Modelling of cardiovascular system. Metabolic functions modelling. Modeling of the glucose-insulin dynamical system. Thermoregulatory models. Microscopic and macroscopic models of muscles. Hodgkin-Huxley model of nerve fiber. Models for nerve conduction. Musculo-skeletal system models.						
4. Teaching methods:						
Lectures. Laboratory practice. Computer practice. Consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Theoretical part of the exam	Yes	50.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Vincent C. Rideout	Mathematical and Computer Modeling of Physiological Systems		Prentice-Hall	1991	
2,	John Enderle, Jozeph Bronzino	Introduction to Biomedical Engineering		Academic Press	2012	
3,	Michael C.K. Khoo	Physiological Control Systems: Analysis, Simulation and Estimation		John Wiley & Sons, inc., Hoboken, New Jersey	2000	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">EMI and EMC in medicine equipment</h2>			
Course id:	BMIM1B				
Number of ECTS:	7				
Teachers:	Damnjanović S. Mirjana, Nađ F. Laslo				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	2	2	0	0	
Precondition courses		None			
1. Educational goal:					
Acquiring theoretical and practical knowledge in the field of electromagnetic interference (EMI) and electromagnetic compatibility (EMC) in medicine equipment.					
2. Educational outcomes (acquired knowledge):					
<ul style="list-style-type: none"> <li>- Acquiring knowledge of EMI sources and coupling paths in medicine equipment</li> <li>- The ability of choosing and implementation of EMI protection components in medicine equipment</li> <li>- Ability to design in medicine equipment immune to EMI</li> </ul>					
3. Course content/structure:					
Sources and methods of propagation of electromagnetic interference (low-frequency electric and magnetic fields, atmospheric discharge, radio transmitters, the inclusion of transitional processes in the device, electrostatic discharge). Practical examples of application of standards related to electromagnetic interference (EMI) and electromagnetic compatibility (EMC). The concept of EMI / EMC protection in medicine equipment. ESD (Electrostatic Discharge) protection. Components for protection (resistors, capacitors, inductors). EMC measurement techniques. Filters for Power Supplies. Shielding. Grounding. Principles of designing devices and systems immune to EMI. Printed circuit board design immune to EMI.					
4. Teaching methods:					
Lectures. Laboratory Practice. Consultation.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Lecture attendance		Yes	5.00	Written part of the exam - tasks and theory	Mandatory
Project		Yes	45.00	Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	W. Kimmel, D. Gerke	Electromagnetic Compatibility in Medical Equipment: A Guide for Designers and Installers		IEEE Press	1995
2,	T. Williams	EMC for Product Designers, 4th ed.		Elsevier, Newnes	2007
3,	C. Paul	Introduction to Electromagnetic Compatibility		Wiley	2006

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Table 5.2 Course specification

Course:		<b>Biomedical statistics</b>				
Course id:	BMIM2B					
Number of ECTS:	7					
Teachers:	Bajić D. Dragana, Lončar-Turukalo G. Tatjana					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
The goal of this course is to provide students with the technical knowledge required for process modeling and analysis. Students will perceive interaction theories, models, and analysis of the experimental environment. Will recognize how, when and why to apply statistical analysis techniques to understand complex biomedical systems.						
2. Educational outcomes (acquired knowledge):						
Students will know when and how to apply certain statistical tools, and will be able to use alternative approaches to the characterization of individual systems						
3. Course content/structure:						
Conditions for the application of deterministic and probabilistic descriptions of biomedical phenomena.						
<ul style="list-style-type: none"> <li>- distribution parameter assessment</li> <li>- Hypothesis testing. confidence interval. Regression and correlation.</li> <li>- Group comparisons.</li> <li>- Biomedical Studies.</li> <li>- Clinical Studies.</li> <li>- Epidemiological statistics.</li> <li>- Multivariate analysis.</li> <li>- Vital statistics.</li> <li>- Causes of errors - sample selection and size, the interpretation of results.</li> </ul>						
4. Teaching methods:						
Lectures, lab exercises , Auditory exercises						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise defence		Yes	30.00	Written part of the exam - tasks and theory	Yes	70.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	L.E. Daly and Geoffrey McGilvray	Interpretation and Uses of Medical Statistics		Blackwell Science	1995	

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Table 5.2 Course specification

Course:		<b>Soft Sensors</b>				
Course id:	BMIM3B					
Number of ECTS:	7					
Teacher:	Jorgovanović Đ. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal: Students learn about theoretical and practical bases of soft sensors.						
2. Educational outcomes (acquired knowledge): - knowledge in the field of soft sensors design; - knowledge about the applications of machine learning techniques for modelling the nonlinear processes in human body.						
3. Course content/structure: Soft sensors as a low cost alternative to expensive hardware devices. Soft sensors in parallel with hardware sensors allowing the realization of more reliable processes. The applications of machine learning techniques (neural networks, fuzzy logic etc.) for modelling the nonlinear processes in human body. Soft sensor design. Data selection. Choice of the model structure (static, dynamic, model order selection). Model validation. Strategies to Improve Soft Sensor Performance.						
4. Teaching methods: Lectures. Computer practice. Laboratory practice. Consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Theoretical part of the exam	Yes	50.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Fortuna, L., Graziani, S., Rizzo, A., Xibilia, M.G.	Soft Sensors for Monitoring and Control of Industrial Processes		Springer	2007	

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Table 5.2 Course specification

Course:		<b>Bioinformatics Algorithms</b>				
Course id:	BMIM1C					
Number of ECTS:	7					
Teacher:	Dautović B. Staniša					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
Introduction to bioinformatics and computational biology. Introduction to the basic graph and combinatorial concepts and algorithms necessary for understanding problems in bioinformatics and computational biology.						
2. Educational outcomes (acquired knowledge):						
Students learn about algorithms for solving problems in bioinformatics and computational biology. Familiarity with basic software tools for solving problems in the areas of bioinformatics and computational biology.						
3. Course content/structure:						
Basic concepts of graph theory and computational complexity theory. Basic algorithms: Exhaustive search, Greedy algorithms, Dynamic programming, Divide-and-conquer algorithms. Graph algorithms. Combinatorial pattern matching algorithms. Randomized, approximative, parameterized, heuristic and meta-heuristics algorithms. Parallel and distributed algorithms. Algorithms for solving problems in bioinformatics and computational biology: Exact/inexact string matching; Suffix trees; Edit distance; Longest common substring, shortest common superstring; DNA mapping and sequencing; Global and local sequence alignment; Block alignment; Motif finding; Repeat finding; Gene prediction; Genome rearrangements; Protein sequencing and identification; Multiple string comparison; DNA arrays and microarrays; Evolutionary trees and phylogeny; Hierarchical and k-means clustering; Gene expression analysis; Complex graph/networks layout.						
4. Teaching methods:						
Lectures. Computer Exercises.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise defence		Yes	40.00	Oral part of the exam	Yes	30.00
Project		Yes	30.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Neil C. Jones, Pavel A. Pevzner	An Introduction to Bioinformatic Algorithms		MIT Press	2004	
2,	D. Gusfield	Algorithms on Strings, Trees, and Sequences		Cambridge University Press	1997	

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Table 5.2 Course specification

Course:		<b>Multivariable analysis and complexity of physiological processes</b>			
Course id:	BMIM2C				
Number of ECTS:	7				
Teachers:	Bajić D. Dragana, Lončar-Turukalo G. Tatjana				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	2	2	0	0	
Precondition courses		None			
1. Educational goal:					
Introduction to the methods of nonlinear analysis of physiological systems and methods that can be used for diagnostic purposes. Combining variables of mutually coupled systems in order to improve the prediction and modeling.					
2. Educational outcomes (acquired knowledge):					
Introduction to the analysis of the system coupled on several levels; methods of prediction in time series. Analysis methods of nonlinear dynamical systems. The method of surrogate data					
3. Course content/structure:					
Integration of information in multivariable, multi-system., Multiresolution multimodal framework. Analysis of mutually coupled systems, such as the autonomic nervous system, respiratory system and cardiovascular system - Application of non-linear deterministic approaches to the analysis of biomedical signals to a more suitable description of complex physiological phenomena. Nonlinear dynamical systems, chaos and fractals - Modification of the standard algorithms from the field of nonlinear dynamics for biomedical applications (adaptation for short recordings in the presence of noise): correlation dimension, Lyapunov exponent, Hurst exponent, Poincare plot, detrended fluctuations analysis, entropy estimate (approximate, Sampling entropy, phase and multiresolution entropy), Recurrent Plot. - The method of surrogate data: types of surrogate data, testing the hypothesis using surrogate data, examples					
4. Teaching methods:					
Lectures, lab excersices					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Project		Yes	30.00	Theoretical part of the exam	Mandatory
				Yes	Points
					70.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	U.R. Acharya, J.S. Suri, J.A:E. Spaan , S:M Krishnan	Advances in Cardiac Signal Processing		Springer	2007
2,	Peter Brockwell Rischar Davis	Introduction to Tme Series and Forecasting		Springer	2002
3,	Michael Small	Applied Nonlinear Time Series Anlysis		World scientific	2005

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Functional Electrical Therapy</h2>				
Course id:	BMIM3C					
Number of ECTS:	7					
Teachers:	Bojanić M. Dubravka, Jorgovanović Đ. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
Students learn about modern technologies and development trends in the field of functional electrical therapy.						
2. Educational outcomes (acquired knowledge):						
Students acquired basic theoretical and practical knowledge in the field of electrotherapy, functional electrical therapy (FET), electrical stimulators for FET, new types of stimulation pulses for FET. Students learn about muscle fatigue, methods for muscle fatigue analysis, multi-field electrodes, muscle fatigue treatment methods, electrotherapy of upper and lower extremities and tests for the evaluation of upper/lower extremity functionality and tests that determine the clinical efficacy of functional electrical therapy. Students learn about vision systems used in FET.						
3. Course content/structure:						
Engineering approach to functional electrical therapy. The use of electrical energy as a medical treatment. Direct current electrotherapy. High frequency current electrotherapy. Techniques for designing new types of current generators for use in electrotherapy. Methods and algorithms for muscle fatigue analysis during electrotherapy. The application of multi-field electrodes and different types of current pulses in muscle fatigue treatment. Functional electrotherapy of upper and lower extremities. Functional tests of grasping function. Coordination tests. The application of vision systems in functional electrotherapy.						
4. Teaching methods:						
Lectures. Auditory practice. Laboratory practice. Consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Theoretical part of the exam	Yes	50.00
Test		Yes	10.00			
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	L. Benton, L. Baker, B. Bowman, R. Waters	Functional Electrical Stimulation – A Practical Clinical Guide		Rancho Los Amigos, Downy, CA	1981	
2,	Popović D, Sinkjær T.	Control of movement for physically disabled		Springer-Verlag, London	2000	
3,	Dejan Popović, Mirjana Popović, Milica Janković	Biomedicinska merenja i instrumentacija		Akademski misao, Beograd	2010	

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Table 5.2 Course specification

Course:		<b>Application of MEMS and NEMS in biomedicine</b>				
Course id:	BMIM1D					
Number of ECTS:	7					
Teacher:	Živanov D. Ljiljana					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
Acquiring basic knowledge in the field of microelectromechanical systems and their application in biomedicine engineering.						
2. Educational outcomes (acquired knowledge):						
- ability to understand different technological processes of MEMS and NEMS which are used in biomedicine engineering- ability to design a simple integrated sensor or actuator in MEMS and NEMS technology - Ability to simulate components and circuits in MEMS and NEMS used in biomedicine engineering by 3D electromagnetic simulators						
3. Course content/structure:						
Introduction. Overview of MEMS and NEMS technological process which are used in biomedicine engineering. Surface micromachining, volume micromachining, LIGA process and nano-print lithography in biomedicine engineering. Application of MEMS and NEMS technologies for realization of passive components. Integrated sensors and actuators in MEMS and NEMS technologies. Realization of MEMS and NEMS microvalves. Application of MEMS and NEMS technologies for realization of 3D microstructures in biomedicine engineering. Software tools for modelling and simulation of MEMS and NEMS components and circuits. Examples of mostly used MEMS i NEMS components in biomedicine engineering.						
4. Teaching methods:						
Lectures. Auditory exercises. Laboratory exercises. Consultations. Experimental projects.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Homework		Yes	5.00	Written part of the exam - tasks and theory	Yes	50.00
Laboratory exercise defence		Yes	20.00			
Lecture attendance		Yes	5.00			
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Lj. Živanov	MEMS tehnologije		Skripta, Fakultet tehničkih nauka	2009	
2,	Sergey E. Lyshevski	MEMS and NEMS: Systems, Devices, and Structures		CRC press	2002	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Information theory in biosystems</h2>				
Course id:	BMIM2D					
Number of ECTS:	7					
Teachers:	Bajić D. Dragana, Vukobratović V. Dejan, Lončar-Turukalo G. Tatjana					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
<p>Understanding the basic concepts of information theory (statistical coding, -compression , protective coding theory and sequence synchronization ) and their application in biological systems. The structure of DNA and RNA and understanding the encoding of information in living organisms and their modifications due to aging and pathology</p>						
2. Educational outcomes (acquired knowledge):						
<p>Introduction to the basic principles of information theory and their applications in coding information related to protein synthesis in cells. Introduction to the process of translation and trascription. Using publiclz available databases and the use of available software. Microarray technique</p>						
3. Course content/structure:						
<p>Basic concepts of information theory, the concept of information, a measure of the amount of information, discrete sources with and without memory, statistical coding, protection coding, synchronization sequences, Markov models, Hidden Markov Models</p> <ul style="list-style-type: none"> <li>- Repetition: a basic biological concepts and nucleic acids DNA RNA gene, protein structure, and translation and transcription processes</li> <li>- Use available databases and annotations: structure and types: sequence databases, microarreys, protein interactions and structural base.</li> <li>- The alignment of DNA or protein sequences to determine the function of detected sequence , a quantitative measures of similarity. Alignment in pairs, patterns, profiles and multiple alignment</li> <li>- Analysis of gene expression: a microarrays technique</li> <li>- Methods of clustering and statistical analysis of the expression levels</li> </ul>						
4. Teaching methods:						
Lectures, lab excercises						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Written part of the exam - tasks and theory	Yes	70.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Marketa Zvelebil and Jeremy O. Baum	Understanding Bioinformatics		Garland Sience, Taylor and Francis group	2008	
2,	G. Parmigiani, E. Garrett, R.A. Iriziarry, S. L. Zeger	The Analysis of Gene Expression Data		Springer	2003	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Development of integrated biomedical systems</h2>				
Course id:	BMIM3D					
Number of ECTS:	7					
Teachers:	Erdeljan M. Aleksandar, Čapko Lj. Darko					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
The goal of the course is to acquire the necessary knowledge about integration software subsystems within the biomedical system, as well as a practical realization of integration.						
2. Educational outcomes (acquired knowledge):						
Mastering the knowledge, skills and abilities necessary for understanding the activities required for the implementation of integrated biomedical systems and solve practical engineering problems.						
3. Course content/structure:						
Introduction: The purpose of the integration, methods, openness. Integrated applications as part of a distributed system: basic characteristics. The architecture of a distributed system, basics of service-oriented architecture, services. Integrating of applications via service. Communication system, low-level protocols (Bluetooth, USB, CAN Bus, Wi-Fi, ZigBee, etc), a software bus, service-oriented infrastructure, web services. Processes and threads: process synchronization, distributed transactions, and time synchronization. Consistency and replication of data. Fault tolerance. Security. The analysis of requires for the integration of biomedical systems. Principles and design of services. Design and implementation of solutions. Examples: therapeutic systems integration, systems integration with neural prostheses, etc..						
4. Teaching methods:						
Lectures. Computer practice. Consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam		
		Mandatory	Points			
Project	Yes	30.00	Theoretical part of the exam		Yes	30.00
Test	Yes	10.00				
Test	Yes	10.00				
Test	Yes	10.00				
Test	Yes	10.00				
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Andrew S. Tenenbaum, Maarten Van Steen	Distributed Systems, Principles and Paradigms		Pearson Education, inc.	2002	
2,	A.Erdeljan, D.Čapko	Štampani materijal koji pokriva predavanje i vežbe - u pripremi		FTN	2012	

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Table 5.2 Course specification

Course:		<b>Study-Research Work on the Master Thesis Theoretical Framework</b>				
Course id:	BMISIR					
Number of ECTS:	9					
Teachers:						
Course status:		Mandatory				
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	9	0		
Precondition courses		None				
1. Educational goal:						
<p>The application of basic, theoretical, methodological, scientific-professional and professional-applicative knowledge and methods in solving specific problems within the chosen field. Within this part of the work on the master thesis, the student studies the problem, its structure and complexity draws conclusions on possible solutions based on the carried out analysis. By studying the literature the student becomes familiar with the methods used in solving similar problems and the engineering practice of these solutions. The goal of the student's activity within this part of research is to acquire the sufficient experience by solving complex problems and tasks and the ability to apply the acquired knowledge in the engineering practice.</p>						
2. Educational outcomes (acquired knowledge):						
<p>Students are able to independently apply the previously acquired knowledge in the fields that they had previously studied, and understand the structure of the chosen problem. Students conduct a systematic analysis of the problem and draw conclusion about the possible solutions. By the independent use of professional literature, students widen their knowledge in the chosen field and study different methods and scientific papers related to the topic. In that way, students develop the ability to do analysis and identify problems within the given topic. The practical application of the acquired knowledge in different fields enables the student to develop the ability to understand the position and role of an engineer in the chosen field, and the necessity of cooperation with other professionals and team work.</p>						
3. Course content/structure:						
<p>The course structure is formed individually according to the needs of a specific master thesis, its complexity and structure. The student studies professional literature, graduation and master thesis of students who have previously done work on a similar topic, does analysis in order to find solutions to a specific problem defined by the thesis. A part of the course is done through individual study-research work. The study involves the active study of the primary literature and discoveries on the topic, the organization and realization of experiments, numerical simulation, statistical processing of data, writing and/or presenting a scientific essay at a conference in the specific scientific field of the master thesis.</p>						
4. Teaching methods:						
<p>The mentor of the master thesis defines and writes the task for the thesis and hands it to the student. The student is obliged to write the thesis within the given topic which is defined by the master thesis task by using professional literature suggested by the mentor. While working on the thesis, the mentor can give additional instructions to the student, direct them to specific literature and advise him in order to enhance the quality of the master thesis. Within the study-research work, the student consults with the mentor, and, if necessary, with other professors teaching the subjects related to the master thesis topic. Within the given topic, the student conducts measurements, research, counting, surveys, statistical processing of data, if defined by the task of the master thesis.</p>						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	grupa autora	časopisi i diplomski-master radovi			-	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Preparation and Defence of Master Thesis</h2>					
Course id:	BMIZMR						
Number of ECTS:	8						
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	8			
Precondition courses		None					
<p>1. Educational goal:</p> <p>The objective of the preparation and defense of the master thesis is that student shows independent and creative approach in the application of the practical and theoretical knowledge in the field of biomedical engineering. Student will be able to follow the literature and do research work.</p>							
<p>2. Educational outcomes (acquired knowledge):</p> <p>By completing and defending a master thesis the students who have graduated from this programme should be competent to solve real life practical problems as well as to continue education if they choose to do so. A student with a master's degree acquires knowledge in the field of biomedical engineering and is able to solve concrete problems using scientific methods and procedures. The students are able to suitably write and present the results of their work. The students completing this level of studies have the competence for studying and applying the new developments in the professional field as well as cooperation with local social and international environment.</p>							
<p>3. Course content/structure:</p> <p>Biomedical engineering. Signals, systems and control in biomedical systems. Biomechanics. Applied computer engineering. Medical electronics. Medical application of robotics.</p>							
<p>4. Teaching methods:</p> <p>Mentor of the master defines a topic with the tasks to develop a master thesis. A candidate works independently in consultation with the supervisor on the problem given. After the completion of the paper and the supervisors approval the candidate defences the thesis before a committee of at least three members of which at least one must be from a different faculty.</p>							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Writing the master thesis		Yes	50.00	Master thesis defence		Yes	50.00

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Transport phenomena and Living systems</h2>				
Course id:	BMIM4A					
Number of ECTS:	6					
Teachers:	Simić S. Srbojlob, Spasić T. Dragan, Dragutinović D. Gordan, Zuković M. Miodrag, Žigić M. Miodrag, Grahovac M. Nenad					
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 <span style="float: right;">None</span>						
<p>1. Educational goal:</p> <p>Comprehension and application of basic principles of thermal mechanics and fluid mechanics in analysis and solving of problems of biotransport, which include living organisms, homeostasis, trauma, diagnostic and therapeutic procedures on an organic level with complex constituent properties.</p>						
<p>2. Educational outcomes (acquired knowledge):</p> <p>Development of models that encompass the phenomenon of transport for use in fields of quantitative physiology and biomedical engineering.</p>						
<p>3. Course content/structure:</p> <p>Fundamental concepts and unique aspects of transport in biosystems. Modelling and solving of problems of biotransport. Principles of diffusion. Rheology of biofluids. Macroscopic aspects of biofluid transport. Monodimensional flow. Heat transfer in biosystems. Macroscopic aspect of heat transfer in multiple system interactions. Steady monodimensional systems. Fundamentals of mass transfer. Phase equilibrium. Mass transfer between phases. A macroscopic approach – Compartmental Analysis. Chemical reactions and bioreactors. Pharmacokinetics.</p>						
<p>4. Teaching methods:</p> <p>Auditory lectures. A part consists of computer and lab classes.</p>						
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	50.00
Lecture attendance		Yes	5.00			
Term paper		Yes	20.00			
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	R. Roselli and K. Diller	Biotransport: Principles and Applications		Springer	2011	
2,	K. R. Sharma	Transport Phenomena in Biomedical Engineering - Artificial Organ Design and Development and Tissue Engineering		McGrawHill	2010	

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Table 5.2 Course specification

Course:		<b>Virtual measurement instrumentation in biomedicine</b>				
Course id:	BMIM5A					
Number of ECTS:	7					
Teachers:	Tomić J. Josif, Sovilj M. Platon					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
Acquiring knowledge in the field of virtual measurement instrumentation in biomedicine.						
2. Educational outcomes (acquired knowledge):						
<p>Working principles and application of virtual measurement instrumentation in biomedicine. Ability to work in a multidisciplinary team environment with biomedical engineers and doctors on the problem solving related to utilization of virtual measurement instrumentation in biomedicine. Ability to perform an effective literature search and to utilize other types of information sources in the field of measurement instrumentation in biomedicine, ability to present results of the research. Knowledge and comprehension of the virtual measurement instrumentation elements and application in biomedicine.</p>						
3. Course content/structure:						
<p>Introduction to virtual measurement instrumentation. History and architecture of virtual measurement instrumentation. Sensor modules. Sensor interface. Modules for processing: Analytical processing and artificial intelligence techniques. Databases interfaces. Interfaces in medical information systems. Display and control objects: terminal user interfaces, graphical user interface, multimodal presentation, virtual and augmented reality. Functional integration of virtual measurement instrumentation. Distributed virtual measurement instrumentation. Medical information system network. Internet, mobile networks, integration of distributed systems. Hardware platforms and operating systems for virtual measurement instrumentation. Development environments: programming languages, and graphical programming tools. Application of virtual instrumentation in biomedical measurements and supervision. Application of virtual instrumentation in training and education in biomedicine. Application of virtual measuring instrumentation in testing of medical devices and systems.</p>						
4. Teaching methods:						
Lectures, laboratory practice, consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise defence		Yes	50.00	Written part of the exam - tasks and theory	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	J. D. Bronzino	The biomedical engineering handbook		CRC Press, IEEE Press	2000	
2,	J. B. Olsansen, E. Rosow	Virtual Bio-Instrumentation: Biomedical, Clinical, and Healthcare Applications in LabVIEW		Prentice Hall PTR	2001	
3,	S. Sumathi, P. Surekha	LabVIEW Based Advanced Instrumentation Systems		Springer	2007	
4,	P. Sovilj	Eksterno testiranje površinskih kalemova uređaja za magnetsku rezonancu		Fakultet tehničkih nauka u Novom Sadu	2006	
5,	J. Tomić, M. Milovanović	Virtualna instrumentacija primenom LabVIEW programa		Grid-FTN Novi Sad	2010	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Technologies of shaping biomedical materials</h2>				
Course id:	BMIM4B					
Number of ECTS:	6					
Teachers:	Plančak E. Miroslav, Vilotić Ž. Dragiša					
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		None				
1. Educational goal:						
The goal of course is to introduce students with potential application of the forming technology in medical and dentistry field, introduction to the biocomposite materials.						
2. Educational outcomes (acquired knowledge):						
Education of students and their training regarding the use of forming technology manufacturing medical and dental devices, restorations, implants etc.						
3. Course content/structure:						
1. Biocompatible metals, requirements and limitations. 2. Theoretical basis of plastic deformation 3. Formability of metal materials 4. Methods for the analysis of metal forming processes 5. Methods of theoretical analysis 6. Methods for modeling and numerical simulation of metal forming processes 7. Methods of experimental research in metal forming 8. Methods of forming biocompatible metal 9. Methods for cold forming of biocompatible metals 10. Methods for warm forming of biocompatible metals 11. Precision forming of metals 12. Microforming of biocompatible metals 13. The application of metallic powder in biomedical engineering 14. Methods of sintering biocompatible metal powder 15. Biocompatible polymers 16. Theoretical basis of shaping of polymer 17. Polymer rheology 18. Methods of theoretical analyses of polymer shaping 19. Methods of numerical simulations of polymer shaping 20. Experimental methods of polymer shaping 21. Polymer processing methods, classification and basic characters 22. Continuous methods of polymer shaping 23. Cyclic methods of polymer shaping.						
4. Teaching methods:						
Lectures, laboratory exercises, computer exercises, company visits, consultations						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	30.00	Final exam - part one	Yes	35.00
				Final exam - part two	Yes	35.00
Literature						
Ord.	Author	Title		Publisher		Year
1,	Plančak M. Vilotić D.	Tehnologija plastičnog deformisanja		FTN, Novi Sad		2012
2,	Vlotić D. Plančak M.	Mašine za obradu deformisanjem		FTN, Novi Sad		2010
3,	Plančak M., Vilotić D.	Alati za tehnologije plastičnog deformisanja metala		FTN, Novi Sad		2011
4,	Čatić I., Johannaber F.	Injekcijsko prešanje polimera i ostalih materijala		Biblioteka polimerstvo, Zagreb		2004
5,	Strong A. Bernt	Plastics – Materials and Processing, Prentice Hall, 2010. Plastics – Materials and Processing, Prentice Hall, 2010. Plastics – Materials and Processing		Prentice Hall		2010

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Design and development of medical devices and systems</h2>				
Course id:	BMIM5B					
Number of ECTS:	7					
Teachers:	Pejić V. Dragan, Sovilj M. Platon					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal:						
Acquiring knowledge in the field of design and development of medical instruments and measurement systems.						
2. Educational outcomes (acquired knowledge):						
Understanding basic principles in design and development of medical instruments and systems. Ability to perform an effective literature search and to utilize other types of information sources in the field of design and development of medical instruments and systems. Ability to present results of the research. Ability to work in a multidisciplinary team environment with biomedical engineers and doctors on the problem solving related to design, development and manufacturing of medical instruments and systems. Ability to perform every step of design and development of medical instruments and systems.						
3. Course content/structure:						
Design, development and manufacturing of medical instruments. Compliance with standard ISO13485. The medical devices life cycle: concept, design and development, manufacturing, service and maintenance, disposition. Medical device design and development stages: specification and design, prototype manufacturing, "zero" series production, verification and validation. Role of internal audits, corrective/preventive measures and management reconsideration during medical devices life cycle. Medical devices design and development project and technical documentation: planning, requirements specification, product specification, medical devices design and development phases revision, matrix and bench testing as output from the design and development verification, clinical testing as output from the design and development verification, correspondence between output design and manufacturing requirements, configuration management documentation for medical devices and systems. Risk analysis as a part of design and development verification. Software validation as a part of design and development validation. Six-sigma principles in development of medical devices. Transfer functions and score cards. Fundamentals of experimental design. Robust parameter design for medical devices. Tolerances design for medical devices. EU directives identification and harmonization of standards for medical devices and application in design and development. . Concept of medical device. CE mark earning algorithms. EU directive and national legislation. . Product, technical file and quality assurance. Product classification and route choices. Identification of essential requirements, testing and harmonized standards. Practicum and student projects in the field of design and development of medical devices and systems.						
4. Teaching methods:						
Lectures, auditory exercises, laboratory exercises, consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Written part of the exam - tasks and theory	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	ISO TC 210	ISO 13485:2003 Medical devices -- Quality management systems -- Requirements for regulatory purposes		International Organization for Standardization	2003	
2,	ISO TC 210	ISO 14971:2007 Medical devices -- Application of risk management to medical devices		International Organization for Standardization	2007	
3,	B. El-Haik, K. S. Mekki	Medical Device Design for Six Sigma: A Road Map for Safety and Effectiveness		Wiley-Interscience	2011	
4,	R. C. Fries	Reliable Design of Medical Devices		CRC Press	1997	
5,	R. C. Fries	Handbook of Medical Device Design		CRC Press	2001	
6,	P. Sovilj	Etaloniranje elektrokardiografa		Fakultet tehničkih nauka u Novom Sadu	2011	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Fluid filtration and separation</h2>			
Course id:	BMIM4C				
Number of ECTS:	6				
Teachers:	Šešlija D. Dragan, Dudić P. Slobodan				
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		None			
1. Educational goal:					
<p>The goal of course is to obtain knowledge about the contaminants, the required level of purity of various fluids used in hospitals and biotechnology, devices and methods for their separation and filtration and clean room design for manufacture of biotech products.</p>					
2. Educational outcomes (acquired knowledge):					
<p>Course outcomes is knowledge related to filtration and separation. The acquired engineering knowledge are related to troubleshooting elimination of pollutants from different types of fluid and systemic approach to enhancing fluid purity and separation of certain elements of the fluid. In addition, the outcomes of the subject are the knowledge of clean room technology and clean technology</p>					
3. Course content/structure:					
<p>Basics of filtration (concept and types of contaminants, the principles of filtration, filtration mechanisms). Types of filtration used in biotechnology (microfiltration, ultrafiltration and reverse osmosis). Separation and filtration. Filtration of different types of fluids (filtration of compressed air, oil filtration, water filtration). Filtration and separation Non-Newtonian fluids (separation of blood components, blood dialysis for kidney patients). Apparatus for filtration and separation (filter media, filters for compressed air, water filters, automated filtering devices, dialyzers for kidney patients - structure and function, the devices for the separation of blood). Selection and sizing of filters and separators. Clean rooms (concept and purpose of clean rooms, type of production in clean rooms, cleanroom contamination sources, the concentration of pollutants in the air of clean rooms, devices for checking the concentration of pollutants - particle counters, class clean room, crucial elements of contamination, regulations related to the clean room).</p>					
4. Teaching methods:					
<p>Teaching is done through lectures and laboratory exercises. Laboratory exercises provide the use of equipment to measure moisture, to measure the level of oil and oil vapor, and to determine the number of particles of pollutants as well as testing of filter media. It is anticipated visit of clean room in one of the pharmaceutical factory. Two tests would be carried out to determine students preparedness for the project assignment. Independent preparation and defense of the project task is a key part of the verification capabilities of solving engineering tasks prescribed course followed by an oral exam.</p>					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Laboratory exercise attendance		Yes	5.00	Oral part of the exam	
Lecture attendance		Yes	5.00		
Project		Yes	30.00		
Test		Yes	10.00		
Literature					
Ord.	Author	Title		Publisher	Year
1,	Ken Sutherland	Filters and Filtration Handbook		Elsevier	2008
2,	Golubović, Z., Šešlija, D.	Challenges Of Preparing Sterile Compressed Air		Proceedings of the PAMM – Conference	2007
3,	Mitrović, Č., Golubović, Z., Šešlija, D.	Filtracija fluida i separacija štetnih materija kod vazduhoplova		Istraživanja i projektovanja za privredu	2005
4,	Mitrović, Č., Golubović, Z., Šešlija, D.	Implementacija, značaj i efekti filtracije u privredi		Istraživanja i projektovanja za privredu	2006

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Table 5.2 Course specification

Course:		<b>Brain Computer Interface</b>				
Course id:	BMIM5C					
Number of ECTS:	7					
Teachers:	Sovilj M. Platon, Jorgovanović Đ. Nikola					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	2	2	0	0		
Precondition courses		None				
1. Educational goal: Acquisition of basic knowledge in the field of Brain Computer Interface System.						
2. Educational outcomes (acquired knowledge): understanding applications and principles of Brain Computer Interface systems; the ability to work in interdisciplinary teams of biomedical engineers, doctors and psychologists for understanding and solving problems related to the application of Brain Computer Interface systems; the ability to search the literature and other forms of information in the field of Brain Computer Interface systems and ability of presentation of research results; good knowledge and understanding of the application of electrical and computer engineering in Brain Computer Interface systems.						
3. Course content/structure: Origin of Brain Computer Interface (BCI) systems. Differences Brain Computer Interface systems and neural prostheses. Brain Computer Interface systems researches with animals. Brain Computer Interface systems researches with people. Invasive Brain Computer Interface systems. Improvement of visual features using Brain Computer Interface System. Improvement of movements using Brain Computer Interface System. Partly invasive Brain Computer Interface systems based electrocorticography (ECOG). Noninvasive Brain Computer Interface systems based on electroencephalography (EEG). Noninvasive Brain Computer Interface systems based on magnetoencephalography (MEG). Noninvasive Brain Computer Interface systems based devices with functional magnetic-resonance imaging. Researches of Brain Computer Interface systems based on receiver ELF / SLF / ULF frequencies. Commercial Brain Computer Interface systems for people with disabilities. Commercial Brain Computer Interface systems for entertainment and recreation.						
4. Teaching methods: Lectures, auditory exercises, laboratory exercises, consultations.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise defence		Yes	50.00	Written part of the exam - tasks and theory	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	G. Schalk , J. Mellinger	A Practical Guide to Brain-Computer Interfacing with BCI2000		Springer	2010	
2,	B. Graimann, B. Allison, G. Pfurtscheller	Brain-Computer Interfaces: Revolutionizing Human-Computer Interaction		Springer	2011	
3,	J. Wolpaw , E. Winter Wolpaw	Brain-Computer Interfaces: Principles and Practice		Oxford University Press	2012	
4,	J. Principe, J. C. Sanchez, J. Enderle	Brain-Machine Interface Engineering		Morgan & Claypool Publishers	2006	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Magnetic-Resonance Devices in Biomedicine</h2>			
Course id:	BMIM5D				
Number of ECTS:	7				
Teachers:	Sovilj M. Platon, Vujičić V. Vladimir				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	2	2	0	0	
Precondition courses		None			
1. Educational goal:					
Acquiring knowledge in the field of design magnetic resonance devices in biomedicine.					
2. Educational outcomes (acquired knowledge):					
Understanding of working principles and application of nuclear magnetic resonance devices. Ability to perform an effective literature search and to utilize other types of information sources in the field of magnetic resonance devices and systems. Ability to present results of the research. Ability to work in a multidisciplinary team environment with biomedical engineers and doctors on the problem solving related to nuclear magnetic resonance devices. Knowledge and comprehension of the application of the Electrical and Computer Engineering in the field of magnetic resonance systems and devices.					
3. Course content/structure:					
Application of nuclear magnetic resonance in biomedicine. Functional imaging with magnetic resonance devices. Nuclear magnetic resonance angiography. Nuclear magnetic resonance spectroscopy in biomedicine. Physical principles of nuclear magnetic resonance. Methods for spin alignment in nuclear magnetic resonance devices. Pulse sequences in magnetic resonance devices. The basic components of nuclear magnetic resonance devices. Description of magnetic system in nuclear magnetic resonance devices. Application of superconductors for creating magnetic fields. Gradient coils. Radiofrequency coils. Gradient impulse programmer. Gradient amplifier. Radiofrequency detector and radiofrequency digitizers. Radiofrequency source, impulse programmer, radiofrequency amplifier. Imaging coils: types, structure and application examples. Transmit/receive coils. Surface, volume and inter coils. Power supply unit in nuclear magnetic resonance devices. Test systems and calibration in nuclear magnetic resonance devices. Phantom, test object. Contrast agents for nuclear magnetic resonance devices. Biological effects of magnetic field exposure and safety aspects.					
4. Teaching methods:					
Lectures, auditory practice, laboratory practice, consultations.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Laboratory exercise defence		Yes	50.00	Written part of the exam - tasks and theory	
				Mandatory	Points
				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	C. P. Slichter	Principles of magnetic resonance		Springer-Verlag	1990
2,	K. Kamienska; W. Schilf; C. J. Jameson; A. C. De Dios; S. Kuroki	Nuclear Magnetic Resonance		Royal Society of Chemistry	2012
3,	G. D. Baura	Medical device technologies : a systems based overview using engineering standards		Elsevier/Academic Press	2012
4,	P. Sovilj	Eksterno testiranje površinskih kalemova uređaja za magnetsku rezonancu		Fakultet tehničkih nauka u Novom Sadu	2006
5,	J.D. Bronzino	Biomedical Engineering Handbook		CRC Press LLC	2000
6,	V. Baltić	Nuklearna magnetna rezonancija u onkologiji		Znamenje	2002

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Table 5.2 Course specification

Course:		<b>Design of prosthetic devices</b>				
Course id:	PP2112					
Number of ECTS:	6					
Teachers:	Zeljko V. Milan, Tabaković N. Slobodan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	2	0	0		
Precondition courses		None				
1. Educational goal:						
Acquisition of basic theoretical and practical knowledge in the field of designing prosthetic devices in the skeletal prosthetics.						
2. Educational outcomes (acquired knowledge):						
Introduction to the geometrical structure and design methods of prosthetic devices. Input into the design process. Design methods. The characteristics and structure of software systems. Computer analysis of the results. Procedures for Design Automation prosthetic devices.						
3. Course content/structure:						
Fundamentals and basic concepts in the design of skeletal prosthetics. The structure and characteristics of prosthetic devices. Fundamentals of Geometry lower extremity prosthesis. Fundamentals of Geometry upper extremity prostheses. Other skeletal prostheses. Methods of product. The structure of software systems for development and design of product. Computer analyzes of prosthetic devices in operation by using CAE software and virtual reality.						
4. Teaching methods:						
Teaching is performed in the form of interactive lectures, computer exercises and through consultation. In lectures, theoretical characteristic of the material is illustrated with examples. Through computer exercises apply their knowledge to solve a specific task. In addition to lectures and exercises are regularly held and consultation. Exam score is based on: the presence of lectures and exercises, and successfully solved tasks (two tasks), the success of the written and the verbal part of the exam.						
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	30.00
Graphic paper		Yes	20.00		Oral part of the exam	Yes
Lecture attendance		Yes	5.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Bronzino, J.	The Biomedical Engineering HandBook, Second Edition		CRC Press	2000	
2,	Leondes, C.	Biomechanical Systems: Techniques and Applications, Volume I: Computer Techniques and Computational Methods in Biomech		CRC Press	2000	
3,	Moratal, D.	Finite Element Analysis - From Biomedical Applications to Industrial Developments		InTeO	2012	

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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Data analysis in clinical research</h2>				
Course id:	BMIM4E					
Number of ECTS:	6					
Teacher:	Simić S. Dragan					
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		None				
1. Educational goal:						
Acquisition of basic knowledge about the importance and role of data analysis in the clinical and medical research.						
2. Educational outcomes (acquired knowledge):						
Acquiring theoretical and practical knowledge and skills in data collection and analysis in clinical and medical research.						
3. Course content/structure:						
Importance and role of data analysis. The importance, the role and method of data collection. Application of various techniques and applications for data collection in medical research. The application of different technologies, techniques, methods and applications for data analysis in medical research. Data mining as the main technology for data analysis. Application of specific data mining techniques in finding hidden rules, laws and relationships in clinical medical data. Search techniques and data analysis aiming to identify the required samples and the correlation contained in large databases. Increasing the usability of the data analyzed medical research in the multidisciplinary field						
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
Term paper		Yes	20.00	Written part of the exam - tasks and theory	Yes	70.00
Test		Yes	10.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Max Bramer	Principles of Data Mining		Springer	2007	
2,	Ferdinand van der Heijden, Robert Duin, Dick de Ridder, David M. J. Tax	Classification, Parameter Estimation and State Estimation		Wiley-Blackwell	2004	
3,	Jamie MacLennan, ZhaoHui Tang, Bogdan Crivat	Data Mining with Microsoft SQL Server 2008		John Wiley & Sons	2008	
4,	Xindong Wu, Vipin Kumar	The Top Ten Algorithms in Data Mining		Chapman and Hall/CRC	2009	

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Table 5.2 Course specification

Course:		<b>Distributed measurement and acquisition systems in biomedicine</b>			
Course id:	BMIM5E				
Number of ECTS:	7				
Teacher:	Sovilj M. Platon				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
3	2	2	0	0	
Precondition courses		None			
1. Educational goal:					
Acquiring knowledge in the field of distributed measurement-acquisition systems in biomedicine.					
2. Educational outcomes (acquired knowledge):					
<p>Understanding of application, structure and technology of the distributed measurement-acquisition systems in biomedicine. Ability to work in a multidisciplinary team environment with biomedical engineers and doctors on the problem solving related to distributed measurement-acquisition systems in biomedicine.</p> <p>Ability to present results of the research. Ability to work in a multidisciplinary team environment with biomedical engineers and doctors on the problem solving related to distributed measurement-acquisition systems in biomedicine. A good knowledge of distributed measurement-acquisition systems modules in biomedicine. Designing knowledge and skills in the field of distributed measurement-acquisition systems in biomedicine.</p>					
3. Course content/structure:					
<p>Structure of distributed measurement-acquisition systems in biomedicine. Types of acquisition modules in distributed measurement-acquisition systems in biomedicine: intelligent sensors, dedicated embedded measurement-acquisition systems and computer based measurement-acquisition systems. Acquisition modules expansion with integrated web servers and web applications. Role and server implementation in distributed measurement-acquisition systems in biomedicine. Client application in distributed measurement-acquisition systems in biomedicine. Stand-alone client applications and web client applications. Client devices: general purpose computers, dedicated embedded systems and general purpose mobile devices. Cloud service integration in distributed measurement-acquisition systems in biomedicine. Clinical systems for data acquisition. Integration of distributed measurement-acquisition systems with health services. Examples of digital clinic laboratories in distributed systems. Programming and deployment acquisition modules. Server module deployment. Programming and client module deployment. Acquisition embedded web servers implemented into C programming language. Examples of DotNET, JAVA, PHP and Phyton acquisition embedded web applications. Practicum and examples of intermediate level server in distributed measurement-acquisition systems in biomedicine. Practicum and examples of client modules in distributed measurement-acquisition systems in biomedicine. Subsystems for automatic calibration, testing and metrological support in distributed measurement-acquisition systems in biomedicine.</p>					
4. Teaching methods:					
Lectures, auditory practice, laboratory practice, consultations.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Computer exercise defence		Yes	50.00	Written part of the exam - tasks and theory	
				Yes	50.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	F. Davoli	Remote Instrumentation Services on the E-Infrastructure: Applications and Tools		Springer	2011
2,	A. A. Ardaman	Distributed Data Acquisition System for Laboratory Applications		University of Florida	1986
3,	A. Lazakidou	Handbook Of Research On Distributed Medical Informatics And E-Health		Idea Group Inc.	2009
4,	A. Lymberis	Wearable EHealth Systems For Personalised Health Management		IOS Press	2004

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Table 5.2 Course specification

Course:		<b>Biotribology</b>				
Course id:	BMIM4F					
Number of ECTS:	6					
Teacher:	Sovilj N. Bogdan					
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		None				
1. Educational goal:						
To master the basic concepts in the field of biotribology. To get appropriate knowledge necessary for the biotribological design and analysis of various medical implants.						
2. Educational outcomes (acquired knowledge):						
The ability of critical evaluation of research in the field of biotribology. The possibility of biotribological design of artificial joint for a variety of potential materials.						
3. Course content/structure:						
Tribology and biotribology. Introduction to biotribology. Overview of biotribology in various biological systems. Principles of biotribology. Properties of connective tissues related to biotribology of the locomotive system. Tribology of natural joint. Biomaterials and biomaterial selection criterion. Friction, wear and lubrication of orthopedic implants. Artificial joints. Wear of dentures. Wear of artificial heart valves. Friction of skin. Ocular tribology.						
4. Teaching methods:						
Lectures are realized interactively through lectures, auditory, laboratory and computer practical classes. In lectures theoretical part is presented with characteristic examples for better understanding of subject content. Practical work is performed by computer application. Apart from lectures and practical classes, consultations are held regularly.						
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
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	B. Ivković	Tribologija		Univerzitet u Kragujevcu	1995	
2,	P. Davim	Biotribology		University of Aveiro	2010	
3,	M. Furey, B. Burkhardt	Biotribology: Friction, wear, and lubrication of natural synovial joint		Lubrication Science, Vol. 9. Issue 3	1997	
4,	J. A. Williams	Engineering tribology		Oxford University Press	2000	

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Table 5.2 Course specification

Course:		<b>Biomaterials</b>				
Course id:	BMIM4G					
Number of ECTS:	6					
Teacher:	Baloš S. Sebastian					
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		None				
1. Educational goal: Obtaining knowledge in the field of biomaterials.						
2. Educational outcomes (acquired knowledge): Knowledge obtained is applied in selection of biomaterials on the basis of their properties.						
3. Course content/structure: Lectures comprise of metallic, polymer, ceramic and composite biomaterial study, in terms of fabrication, characteristics, applications and methods of characterisation. Laboratory excersizes deal with biomaterial structure, mechanical properties and biomaterial selection.						
4. Teaching methods: Lectures are interactive, along with auditorial and laboratory exercise. Lectures comprise of the theoretical part accompanied by appropriate engineering examples that allow more effective understanding. Auditorial and laboratory exercises profound lecture knowledge, using laboratory equipment. Consultations are regularly held. Grades are based on lecture and exercise attendance and classic exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Presentation		Yes	10.00	Theoretical part of the exam	Yes	70.00
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Grupa autora	Biomaterijali		Institut tehnickih nauka SANU	2010	
2,	Johnson, Mwaikambo, Tucker	Biopolymers		Shrewsbury	2003	





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## Study Programme Accreditation

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### 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. Biomedical Engineering 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.

Biomedical Engineering study programme is comparable and coordinated with:

1. <http://www.bu.edu/bme/>
2. <http://seas.yale.edu/departments/biomedical-engineering>
3. <http://bioengineering.stanford.edu/>
4. <http://www.ibme.ox.ac.uk/>
5. <http://www.biomed.polimi.it/BioIntro/>

Faculty members, assistants and students are actively involved in projects.

**Study Programme Accreditation**

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**Standard 07. Student Enrollment**

Faculty of Technical Sciences announces competition for admission of candidates to the study programme of Graduate Academic Studies in Biomedical Engineering in accordance with the social needs, available resources and approved number of students in the accreditation procedure. The number of students to be enrolled and the method of financing their studies (budget or self-financed) is defined each year by the special Decision of the Teaching Academic Council of the Faculty of Technical Sciences.

Candidates, who completed adequate undergraduate four-year academic studies worth at least 240 ECTS credits, which is defined by the Regulations of the Student Enrolment to the Study Programmes, may apply to the admission competition.

The Committee for the Study Programme Quality of the Graduate Academic Studies in Biomedical Engineering evaluates the previously completed study programmes of all applied candidates and makes the decision whether or not they are adequate for the enrolment.

Candidates who completed the adequate study programme, according to the Committee's opinion, acquire the right to enroll the Graduate Academic Studies. The Committee for Quality makes the decision whether the candidates, who have the right to enroll, have to take the entrance examination. If the Committee for Quality makes the decision on taking the entrance examination, then the candidates take the entrance examination: Testing the knowledge in the field of the study programme.

The final ranking list for enrolment of the candidates is formed based on the success during previous education, on the duration of the studies and achieved success at the entrance examination, as defined by the Regulations of the Student Enrolment to the Study Programmes.

In accordance to the Regulations of the Student Enrolment to the Study Programmes, the Committee has the right to approve the enrolment of candidates who did not complete the adequate undergraduate academic studies lasting four years and worth at least 240 ECTS credits, only if there are free places left after all candidates, who fulfill the set conditions by the Competition (adequate undergraduate academic studies, passed entrance examination), had enrolled. Candidates who did not complete the adequate study programme of undergraduate academic studies, according to the professional opinion of the Committee, may be allowed to enroll if the entrance examination is passed. In this case, the Committee determines the difference in examinations that need to be passed from the undergraduate academic studies for each of these candidates individually. The sum of the ECTS courses which are determined by this difference must not exceed 30 (thirty).

The members of the Committee for Quality are the managers of the given study programme and the heads of the departments of the study programmes these courses belong to, or professors assigned by the heads of the departments in accordance to the Regulations of the Student Enrolment to the Study Programmes.

**Study Programme Accreditation**

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**Standard 08. Student Evaluation and Progress**

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

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

Students obtain points from a course through their work during classes, completion of the pre exam duties and taking the examination. The minimal number of points a student can obtain by fulfilling the course prerequisites during classes is 30, the maximum 70. Each course at the study programme has a clear and transparent mode of obtaining points. The ways of obtaining points during the classes includes the number of points obtained on the basis of each individual activity during the classes or completing pre exam duties and by passing the course examination.

The final success of students at a course is presented with a grade from 5 (fail) to 10 (excellent). The student's grade is based on the overall number of points obtained by fulfilling pre exam duties (attendance at lectures, attendance at auditory, computer or laboratory practice, semestral papers, homework papers, scientific-professional projects, colloquiums, scientific papers, etc.) and taking the examination, and in accordance with the quality of acquired knowledge and skills.

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



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### Standard 09. Teaching Staff

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

The total number of teachers is adequate for the total number of classes at the study programme, and is proportional to the number of courses and number of hours on these courses. Quality and number of assistants is also adequate for the needs of the study programme. Total number of assistants on this study programme is sufficient to cover total number of hours for practice in this study program. Each teacher has at least five references in the scientific or professional field taught at the study programme. All information regarding the teaching staff and assistants (CV, appointments, references) are available to public within the board of scientific workers on the website of the Provincial Secretariat for Science and Technological Development.

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### Science, arts and professional qualifications

Name and last name:	Bajić D. Dragana		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 22.09.2000		
Scientific or art field:	Telecommunications and Signal Processing		
Academic career	Year	Institution	Field
Academic title election:	2006	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1995	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Magister thesis	1989	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1984	School of Electrical Engineering - Beograd	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.	EK313	Computer Communication	( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	BMI105	Statistical basics, processing and modelling of biomedical signals	( BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	BMI123	Advanced biomedical signal analysis	( BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EK202	Communication networks - introduction	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK458	Telecommunication networks	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK460	Biomedical signal processing	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	ETI21	Communication Protocols	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	DE110S	Stochastic Processes in Telecommunications	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE411S	Signal processing in medical research	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	EK530	Nonlinear Biomedical Signal Processing	( OM1) Mathematics in Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	EK531	Multuser Detection	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	SI029	Biomedical signal processing	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
13.	BMIM2B	Biomedical statistics	( BM0) Biomedical Engineering, Master Academic Studies
14.	BMIM2C	Multivariable analysis and complexity of physiological processes	( BM0) Biomedical Engineering, Master Academic Studies
15.	BMIM2D	Information theory in biosystems	( BM0) Biomedical Engineering, Master Academic Studies
16.	EK550	Speech Technologies	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	DE110	Stochastic Processes in Telecommunications	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	DE411	Signal Processing in Medical Research	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)



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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

1.	Dragana Bajić: Search, Sequences, Synchronization and States: a different approach, Novi Sad, FTN, recenzenti: dr Werner Teich, University of Ulm, dr Tricia Willinks, CRC Otawa Canada, 2006. 242str., ISBN 86-7892-024-6.
2.	Reichman A., Tacada J., Bajić D., et al: Body Communications, in: Roberto Verdone; Alberto Zanella, (Eds.): Pervasive Mobile and Ambient Wireless Communications, Springer, 2012, Hardcover, pp 609-660, ISBN 978-1-4471-2314-9
3.	Bajić D.: Sequence synchronization technique, in: L. Correia (Ed) Towards Mobile Broadband Multimedia Networks,, Academic Press Elsevier Ltd, Oxford U.K, 2006,pp. 77-79, ISBN 13: 978-0-12-369422-
4.	Bajić D., Drajić D.: Statistical Analysis of Digital Signals and Systems, in: Bane Vasić, Erozan Kurtas (ED): Coding and Signal Processing for Magnetic Recording Systems, , CRC Press LLC, New York, 2005,pp. 7-7, ISBN 0-8493-1524-7
5.	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
6.	Lončar-Turukalo T., Japundžić-Žigon N., Bajić D.: Temporal Sequence Parameters in Isodistributional Surrogate Data: Model and Exact Expressions, IEEE Transactions on Biomedical Engineering, 2011, Vol. 58, No 1, pp. 16-24, ISSN 0018-9294
7.	D. Drajić, D. Bajić: "Communication System Performances – Achieving the Ultimate Information-Theoretic Limits?", IEEE Communications Magazine, Vol. 40, No. 6, May 2002. pp 124-129 ISSN 0163-6804.
8.	D. Bajić: "New simple method for solving the first passage time problem", Electronics Letters, 1991, Vol. 27. No. 16, pp 1419-1421. ISSN 0013-5194.
9.	D. Bajić, D. Drajić: "Time-varying Viterbi decoding for correlated data", Electronics Letters, 1993, Vol. 29. No. 4, pp 335-337. ISSN 0013-5194.
10.	D. Bajić, D. Drajić: "Information theory approach to frame synchronisation problem", Electronics Letters, 1994, Vol. 30. No. 20, pp 1667-1668. ISSN 0013-5194.

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

Quotation total :	156		
Total of SCI(SSCI) list papers :	14		
Current projects :	Domestic :	1	International : 3

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### Science, arts and professional qualifications

Name and last name:	Baloš S. Sebastian		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.04.2001		
Scientific or art field:	Material Science and Engineering Materials		
Academic career	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Material Science and Engineering Materials
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Material Science and Engineering Materials
Magister thesis	2009	Faculty of Technical Sciences - Novi Sad	Material Science and Engineering Materials
Bachelor's thesis	2000	Faculty of Technical Sciences - Novi Sad	Material Science and Engineering Materials

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

	ID	Course name	Study programme name, study type
1.	P206	Welding Technology	( P00) Production Engineering, Undergraduate Academic Studies
2.	P2406	Composite Materials	( P00) Production Engineering, Undergraduate Academic Studies
3.	P2409	Modern Joining Technologies - 1	( P00) Production Engineering, Undergraduate Academic Studies
4.	P2409A	Modern Joining Technologies - 2	( P00) Production Engineering, Undergraduate Academic Studies
5.	P4406	Joining Technology of Modern Materials	( P00) Production Engineering, Undergraduate Academic Studies
6.	II1001	Engineering materials	( I10) Industrial Engineering, Undergraduate Academic Studies
7.	M2062	Mechanical engineering technologies 2	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
8.	M3203	Technology of machinery	( M30) Energy and Process Engineering, Undergraduate Academic Studies
9.	ZC003	Electromechanical materials	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
10.	P2501	Process Design in Welding Technology	( PM0) Production Engineering, Master Academic Studies
11.	BMIM4G	Biomaterials	( BM0) Biomedical Engineering, Master Academic Studies
12.	PPI106	Joining technologies in precision engineering	( PM0) Production Engineering, Master Academic Studies
13.	PTS01	Technology of sintering	( PM0) Production Engineering, Master Academic Studies
14.	DP001	Design and Research Methods in Production Engineering	( M00) Mechanical Engineering, Doctoral Academic Studies
15.	SAP002	Engineering Materials	( M00) Mechanical Engineering, Doctoral Academic Studies
16.	DP023	Joining technologies - selected topics	( M00) Mechanical Engineering, Doctoral Academic Studies
17.	DP024	Welding technology - selected topics	( M00) Mechanical Engineering, Doctoral Academic Studies
18.	DP025	Materials Corrosion and Protection	( M00) Mechanical Engineering, Doctoral Academic Studies

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

1.	Baloš S., Šidjanin (Sidjanin) L.: Metallographic study of non-homogenous armour impacted by armour-piercing incendiary ammunition, <i>Materials and Design</i> , 2011, Vol. 32, pp. 4022-4029, ISSN 0261-3069
2.	Baloš S., Arlan B., Alan P.: Roman mystery iron blades from Serbia , <i>Materials Characterization</i> , 2009, Vol. 60, No 4, pp. 271-276, ISSN 1044-5803
3.	Baloš S., Šidjanin (Sidjanin) L.: Microdeformation of soft particles in metal matrix composites, <i>Journal of Materials Processing Technology</i> , 2009, pp. 482-487, ISSN 0924-0136
4.	Baloš S., Arlan B., Alan P.: Roman mystery iron blades from Serbia, <i>Microscopy and microanalysis</i> , 2007, Vol. 13, No Supplement S02, pp. 1100-1101, ISSN 1431-9276
5.	Baloš S., Grabulov V., Šidjanin (Sidjanin) L., Pantić M.: Wire fence as applique armor, <i>Materials and Design</i> , 2010, Vol. 31, pp. 1293-1301, ISSN 0261-3069



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Representative references (minimum 5, not more than 10)

6.	Baloš S., Grabulov V., Šiđanin (Sidjanin) L., Pantić M., Radisavljević I.: Geometry, mechanical properties and mounting of perforated plates for ballistic application, <i>Materials and Design</i> , 2010, Vol. 31, pp. 2916-2924, ISSN 0261-3069
7.	Vrač D., Šiđanin (Sidjanin) L., Kovač P., Baloš S.: The influence of honing process parameters on surface quality, productivity, cutting angle and coefficients of friction, <i>Industrial Lubrication and Tribology</i> , 2012, Vol. 64, No 2, pp. 77-83, ISSN 0036-8792
8.	Lazarević Z., Jovalekić Č., Sekulić D., Slankamenac M., Romčević M., Milutinović A., Baloš S., Romčević N.: Characterization of Nanostructured Spinel NiFe <sub>2</sub> O <sub>4</sub> Obtained by Soft Mechanochemical Synthesis, <i>Science of Sintering</i> , 2012, Vol. 44, No 3
9.	Vrač D., Šiđanin (Sidjanin) L., Baloš S.: Mechanical finishing honing: cutting regimes and surface texture, <i>Industrial Lubrication and Tribology</i> , 2011, Vol. 63, No 6, pp. 427-432, ISSN 0036-8792
10.	Baloš S., Balos T., Šiđanin (Sidjanin) L., Marković D., Pilić B., Pavličević J.: Study of PMMA biopolymer properties treated by microwave energy, <i>Materiale Plastice</i> , 2011, Vol. 48, No 02, pp. 127-131, ISSN 0025-5289

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

Quotation total :	15			
Total of SCI(SSCI) list papers :	13			
Current projects :	Domestic :	2	International :	0



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### Science, arts and professional qualifications

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



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

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

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

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

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

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

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Science, arts and professional qualifications

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

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

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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

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

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

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

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

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



Science, arts and professional qualifications

Name and last name:	Damnjanović S. Mirjana		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.09.1994		
Scientific or art field:	Electronics		
Academic carieer	Year	Institution	Field
Academic title election:	2011		Electronics
PhD thesis	2006	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2002	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	1994	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.	H206	Introduction to Electronics	( H00) Mechatronics, Undergraduate Academic Studies
2.	H209	Digital Electronics	( H00) Mechatronics, Undergraduate Academic Studies
3.	BMI99	Electronics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	E138A	Digital Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM407A	Computer aided design of digital integrated circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	DE302S	Design and Characterization of Components for EMI Protection	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE502S	Micro-sensors and MEMS	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	EM423	EMI and EMC in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	BMIM1B	EMI and EMC in medicine equipment	( BM0) Biomedical Engineering, Master Academic Studies
10.	DE402S	Chosen areas of analogue, digital and RF integrated circuits design	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EM510A	Advanced computer aided design of microelectronic circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	DE302	Design and Characterization of Components for EMI Protection	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE502	Micro-sensors and MEMS	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
14.	DE402	Chosen areas of analogue, digital and RF integrated circuits design	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Raghavendra R., Bellew P., Mcloughlin N., Stojanović G., Damnjanović M., Desnica V., Živanov Lj.: Characterization of Novel Varistor Inductor Integrated Passive Devices , IEEE Electron Devices Letters, 2004, Vol. 25, No 12, pp. 778-780, ISSN 0741-3106, UDK: 10.1109/LED.2004.838321
2.	Meničanin A., Damnjanović M., Živanov Lj., Aleksić O.: Improved Model of T-Type LC EMI Chip Filters Using New Microstrip Test Fixture , IEEE Transactions on Magnetics, 2011, Vol. 47, No 10, pp. 3975-3978, ISSN 0018-9464, UDK: 10.1109/TMAG.2011.2150738
3.	Damnjanović M., Živanov Lj., Stojanović G., Meničanin A.: Influence of Conductive Layer Geometry on Maximal Impedance Frequency Shift of Zig-zag Ferrite EMI Suppressor, IEEE Transactions on Magnetics, 2010, Vol. 46, No 6, pp. 1303-1306, ISSN 0018-9464
4.	Meničanin A., Damnjanović M., Živanov Lj.: Parameters Extraction of Ferrite EMI Suppressors for PCB Applications Using Microstrip Test Fixture, IEEE Transactions on Magnetics, 2010, Vol. 46, No 6, pp. 1370-1373, ISSN 0018-9464
5.	Stojanović G., Damnjanović M., Živanov Lj.: Temperature dependence of electrical parameters of SMD ferrite components for EMI suppression , Microelectronics Reliability, 2008, Vol. 48, No 7, pp. 1027-1032, ISSN 0026-2714, UDK: 10.1016/j.microrel.2008.03.020
6.	Damnjanović M., Živanov Lj., Nađ L., Đurić S., Biberdžić B.: A Novel Approach to Extending the Linearity Range of Displacement Inductive Sensor , IEEE Transactions on Magnetics, 2008, Vol. 44, No 11, pp. 4123-4126, ISSN 0018-9464
7.	Stojanović G., Damnjanović M., Desnica V., Živanov Lj., Raghavendra R., Bellew P., Mcloughlin N.: High performance zig-zag and meander inductors embedded in ferrite material , Journal of Magnetism and Magnetic Materials, 2006, Vol. 297, No 2, pp. 76-83, ISSN 0304-8853, UDK: 10.1016/j.jmmm.2005.02.058



UNIVERSITY OF NOVI SAD

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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

Representative references (minimum 5, not more than 10)

8.	Damjanović M., Stojanović G., Desnica V., Živanov Lj., Ramesh R., Pat B., Neil M.: Analysis, design and characterization of ferrite EMI suppressors, IEEE Transactions on Magnetics, 2006, Vol. 42, No 2, pp. 270-277, ISSN 0018-9464, UDK: 10.1109/TMAG.2005.860485
9.	Damjanović M., Živanov Lj., Đurić S., Marić A., Meničanin A., Radosavljević G., Blaž N.: Characterization and modelling of miniature ferrite transformer for high frequency applications, Microelectronics International, 2012, Vol. 29, No 2, pp. 83-89, ISSN 1356-5362
10.	Đurić S., Nađ L., Damjanović M., Đurić N., Živanov Lj.: A novel application of planar-type meander sensors, Microelectronics International, 2011, Vol. 28, No 1, pp. 41-49, ISSN 1356-5362
Summary data for teacher's scientific or art and professional activity:	
Quotation total :	77
Total of SCI(SSCI) list papers :	15
Current projects :	Domestic : 2 International : 2

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Dautović B. Staniša		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.01.1993		
Scientific or art field:	Theoretical Electrotechnics		
Academic career	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
Magister thesis	1997	Faculty of Sciences - Novi Sad	Mathematics
Bachelor's thesis	1991	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics

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

	ID	Course name	Study programme name, study type
1.	E128F	Electrical Circuit Theory	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E128A	Electrical Circuit Theory	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM408A	RF and microwave electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM420A	Modelling and simulation of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM458	System Level Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	DE200S	Algorithms and Complexity-an Advanced Course	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE300S	Randomised Approximation Algorithms	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE516S	Algoritmi za multiprocesorske sisteme	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	EM503	Algorithm Heuristics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	BMIM1C	Bioinformatics Algorithms	( BM0) Biomedical Engineering, Master Academic Studies
11.	EM405A	Formalne metode projektovanja i verifikacije hardvera	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	EM415A	Algorithms for VLSI Physical Design Automation	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EM518A	Advanced simulation techniques of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	DE200	Algorithms and Complexity-an Advanced Course	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
15.	DE300	Randomised Approximation Algorithms	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE516	Algoritmi za multiprocesorske sisteme	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

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

1.	DAUTOVIĆ,S., NOVAK,L., A Comment on "Boolean Functions Classification via Fixed Polarity Reed-Muller Form". IEEE Trans. on Computers, Vol. 55, No. 8, (2006), 1067-1069.
2.	SEŠIĆ,A., DAUTOVIĆ,S., MALBAŠA,V., Dynamic Power Management of a System with a Two-Priority Request Queue Using Probabilistic Model Checking. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 27(2). Feb 2008.
3.	Tosic,M., Cirilovic,M., Ikovic,O., Kesler,D., Dautovic,S. Boscovic,D., Impact of Different Content Placement and Delivery Strategies on Content Delivery Capacity of the Wireless Mesh Networks, in Xiang-Yang Li, Symeon Papavassiliou, Stefan Rührup (Eds.): Ad-hoc, Mobile, and Wireless Networks - 11th International Conference, ADHOC-NOW 2012, Belgrade, Serbia, July 9-11, 2012. Proceedings. Lecture Notes in Computer Science 7363 Springer 2012, ISBN 978-3-642-31637-1 pp. 302-315
4.	Kesler D., Dautović S., Struharik R.: Design and Verification of Dynamically Reconfigurable Architecture, 10. SISY - International Symposium on Intelligent systems and Informatics, Subotica, 20-22 September, 2012
5.	Dautović S., Vranjković V., Vukobratović B.: Boolean Function Minimization for Memristive Logic Circuits, 16. International Symposium on Power Electronics – Ee, Novi Sad, 26-28 Oktobar, 2011, ISBN 978-86-7892-355-5



Representative references (minimum 5, not more than 10)			
6.	Struharik R., Vranjković V., Teodorović P., Dautović S.: A Survey of Nanoelectronic Computing Architectures, 16. International Symposium on Power Electronics – Ee, Novi Sad, 26-28 Oktobar, 2011, ISBN 978-86-7892-355-5		
7.	Bošković D., Faramak V., Tošić M., Dautović S.: Pervasive wireless CDN for greening video streaming to mobile devices, 34. MIPRO - International convention on information and communication technology, electronics and microelectronics - Savjetovanje o mikrorračunalima u telekomunikacijama, Opatija, 23-27 Maj, 2011		
8.	Vukobratović B., Dautović S.: Probabilistic Model Checking of Resistive Electrical Circuits, 16. Telekomunikacioni forum TELFOR, Beograd, 25-27 Novembar, 2008		
9.	DAUTOVIĆ,S., NOVAK,L., Evolutionary Design of Combinational Circuits using Boolean Function Signatures. WSEAS Trans. on Circuits and Systems, Issue 11, Volume 5, (2006), 1677-1681.		
10.	Dautović S., Acketa D., Mudrinski V.: Non-isomorphic 4-(48,5,lambda) designs from PSL(2,47) Naziv časopisa: Univ.Beograd.Publ.Elektrotehn.Fak. , Univ.Beograd.Publ.Elektrotehn.Fak., 1999, No 10, pp. 41-46		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		10	
Total of SCI(SSCI) list papers :		2	
Current projects :		Domestic :	1
		International :	2



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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### 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		
<b>Academic career</b>	<b>Year</b>	<b>Institution</b>	<b>Field</b>
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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

## 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 references (minimum 5, not more than 10)			
1.	"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		
2.	"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		
3.	"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		
4.	"A Novel Split-and-Merge Algorithm for Hierarchical Clustering of Gaussian Mixture Models", B. Popović, M. Janev, D. Pekar, N. Jakovljević, M. Gnjatović, M. Sečujski, V. Delić; Applied Intelligence, Springer-Verlag N. York, Inc., ISSN 0924-669X, Volume 37, Number 3, Page 377-389, (2012) DOI: 10.1007/s10489-011-0333-9		
5.	"Automatska konverzija tekstualnih informacija u govor", M. Sečujski, V. Delić; - kumulativna naučnotehnička informacija - Monografska serija ISSN 1820-3418, Naučnotehničke informacije, ISBN 978-86-81123-25-6, Vol. XLVI, No. 4, Vojnotehnički institut, Beograd, 2011, 56 strana		
6.	"Stereo Presentation and Binaural Localization in a Memory Game for the Visually Impaired", V. Delić, N. Vujnović Sedlar; 2nd COST 2102 International Training School, Dublin, Ireland, 23 27.03.2009, Revised Selected Papers in Development of Multimodal Interfaces: Active Listening and Synchrony, Lecture Notes in Artificial Intelligence, LNAI; A. Esposito et al. (Eds.) , Springer, Heidelberg, ISBN 978-3-642-12396-2, LNCS 5967, ISSN: 0302-9743, April 2010, pp. 354-363, DOI: 10.1007/978-3-642-12397-9		
7.	"Efficient ECG Modeling using Polynomial Functions", S. Jokić, V. Delić, Z. Perić, S. Krčo, D. Sakač; Electronics and Electrical Engineering, ISSN 1392-1215, No. 4(110), April of 2011, pp. 121-124		
8.	"Pattern Evaluation Tests of Software-Based Acoustic Measuring Systems", M. Stojiljković, V. Delić; 6th Forum Acusticum 2011, 27. June - 1 July, Aalborg, Denmark, European Acoustic Association, pp. 391 396, (Acta Acustica United with Acustica – Addendum, Vol. 97, No. 3, May/June 2011, ISBN: 978-84-694-1520-7, ISSN 1610-1928, European Acoustic Association		
9.	"Zbirka zadataka iz digitalnih telekomunikacija", V. Milošević, V. Delić, FTN&Stylos, 1996, p.189 i FTN, 2005, p.282		
10.	"Zbirka zadataka iz digitalne obrade signala", V. Delić, M. Sečujski, I. Radić, FTN, 2007, str. 176, (ISBN 978-86-7892-082-0)		
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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

Science, arts and professional qualifications



Name and last name:	Dragutinović D. Gordan		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 06.04.1980		
Scientific or art field:	Thermodynamics and Heat Transfer		
Academic career	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Thermodynamics and Heat Transfer
PhD thesis	1987	Faculty of Technical Sciences - Novi Sad	Thermal Energetics and Thermotechnics
Magister thesis	1983	Faculty of Mechanical Engineering - Beograd	Thermal Energetics and Thermotechnics
Bachelor's thesis	1977	Faculty of Technical Sciences - Novi Sad	Thermal Energetics and Thermotechnics

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

	ID	Course name	Study programme name, study type
1.	M203	Fundamentals of Thermodynamics	( Z01) Safety at Work, Undergraduate Academic Studies ( ZC0) Clean Energy Technologies, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
2.	M203L	Fundamentals in Thermodynamics	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
3.	M210	Thermodynamics	( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
4.	M215	Fundamentals of Heat Transfer	( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
5.	M3303	Fundamentals of Process Engineering	( M30) Energy and Process Engineering, Undergraduate Academic Studies
6.	URZP31	Fundamentals of Thermodynamics with Heat Transfer	( ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
7.	GS013	Special topics of building physics and thermodynamics	( G10) Energy Efficiency in Buildings, Specialised Academic Studies
8.	BMIM4A	Transport phenomena and Living systems	( BM0) Biomedical Engineering, Master Academic Studies
9.	M3508	Mass Transfer	( M30) Energy and Process Engineering, Master Academic Studies ( M40) Technical Mechanics and Technical Design, Master Academic Studies
10.	DM307	Selected Chapters in Mass Transfer	( M00) Mechanical Engineering, Doctoral Academic Studies
11.	DM313	Process Kinetics	( M00) Mechanical Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Dragutinovic, G.D., Baclic, B.S. "Operation of Counterflow Regenerators", Book Vol. 4 in Series "Developments in Heat Transfer", Computational Mechanics Publications, Southampton, 1998.
2.	Baclic, B.S. and Dragutinovic, G.D., "Asymmetric-unbalanced Counterflow Thermal Regenerator Problem: Solution by the Galerkin Method and meaning of dimensional Parameters, Int. J. Heat Mass Transfer, Vol.34, No. 2, 1991, pp. 483-498.

	UNIVERSITY OF NOVI SAD		
	FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6		
<b>Study Programme Accreditation</b>			
MASTER ACADEMIC STUDIES		Biomedical Engineering	
Representative references (minimum 5, not more than 10)			
3.	Dragutinovic, G.D., Baclic, B.S., "Interpolation and collocation methods for prediction of thermal regenerator performances", Thermal Science, Vol. 12, No. 4, 1996. pp. 307-327.		
4.	Baclic, B.S., Heggs, P.J., and Dragutinovic, G.D., "Prediction of the Effectiveness of Unbalanced - Asymmetric Counterflow Regenerators", Publications of the Faculty of Technical Sciences, Vol. 15, 1984, pp. 1-15, University of Novi Sad.		
5.	Baclic, B.S., Gvozdenac, D.D., and Dragutinovic, G.D., "Easy way to calculate the Amzelius-Schumann J function", Thermal Science, Vol. 1, No. 1, 1997, pp. 109-116.		
6.	Dragutinović, D.G., Dimić, M., Sinteza optimalnih mreša toplotnih razmenjivača, Termotehnika, 1, 1998.		
7.	Bašić, Đ., Petrović, J., Marić, M., Dragutinović, G., i dr., Mogućnost korišćenja energetskeg potencijala geotermalnih voda u Vojvodini, Novi Sad, Prometej, 2009		
8.	Martinov, M., Dragutinović, G., i dr., Mogućnost kombinovane proizvodnje električne i toplotne energije iz biomase u AP Vojvodini, Novi Sad, PSEMR AP Vojvodina, 2008		
9.	Nedeljkov, M., Dragutinović, G., Mathematical Simulation od Deep-Bed Drying of Grains - A numerical simulation, CHISA, Prag, avgust 1987		
10.	Nedeljkov, M., Dragutinović, G., Mogućnosti i uslovi racionalizacije procesa konvektivnog sušenja zrnastih poljoprivrednih proizvoda, 7. simpozijum termičara, Ohrid, maj 1984.		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		11	
Total of SCI(SSCI) list papers :		2	
Current projects :		Domestic :	2
		International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:		Dudić P. Slobodan	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 21.08.1995	
Scientific or art field:		Mechatronics, Robotics and Automation and Intelligent Systems	
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Intelligent Systems
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Intelligent Systems
Magister thesis	1999	Faculty of Technical Sciences - Novi Sad	Production Systems, Organization and Management
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Production Systems, Organization and Management

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

	ID	Course name	Study programme name, study type
1.	H102	Fundamentals in Product Development	( H00) Mechatronics, Undergraduate Academic Studies
2.	H1401	Material Handling Technologies	( H00) Mechatronics, Undergraduate Academic Studies
3.	H1403	Automation of work processes	( H00) Mechatronics, Undergraduate Academic Studies
4.	H1504	Computer Integration of Production Systems	( H00) Mechatronics, Undergraduate Academic Studies
5.	H310	Components of technological systems	( H00) Mechatronics, Undergraduate Academic Studies
6.	II1011	Automation of work processes 1	( I10) Industrial Engineering, Undergraduate Academic Studies
7.	II1013	Material Handling Technologies	( I10) Industrial Engineering, Undergraduate Academic Studies
8.	II1023	Packaging technology	( I10) Industrial Engineering, Undergraduate Academic Studies
9.	II1038	Automation of work processes 2	( I10) Industrial Engineering, Undergraduate Academic Studies
10.	II1042	Automation of Continual Processes	( I10) Industrial Engineering, Undergraduate Academic Studies
11.	IM1114	Energy Flows in the Enterprise	(I20) Engineering Management, Undergraduate Academic Studies
12.	H505	Implementation of automated systems	( H00) Mechatronics, Master Academic Studies ( I10) Industrial Engineering, Master Academic Studies
13.	HDOK4 S	Selected chapters from automation of work processes	( I12) Industrial Engineering, Specialised Academic Studies
14.	I829	Automation of packaging processes	( I10) Industrial Engineering, Master Academic Studies
15.	I830	Energy efficiency of compressed air systems	( I10) Industrial Engineering, Master Academic Studies
16.	PLM02	Product Development and Management in PLM	( I10) Industrial Engineering, Master Academic Studies ( I1U) Industrial Engineering - Product Lifecycle Management and Development, Master Academic Studies
17.	PLM04	Sustainable Production and LCA	( I1U) Industrial Engineering - Product Lifecycle Management and Development, Master Academic Studies
18.	LIM34	Material Handling	( LIM) Logistic Engineering and Management, Master Academic Studies
19.	NIT02	Factory Automation	( NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
20.	NIT05	Advanced Technology for Material Handling	( NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
21.	BMIM4C	Fluid filtration and separation	( BM0) Biomedical Engineering, Master Academic Studies
22.	I911	Sustainable production	( I10) Industrial Engineering, Master Academic Studies
23.	IIDS27	Selected chapters of the energy efficiency of automated systems	( I12) Industrial Engineering, Specialised Academic Studies
24.	IIDS6	Selected chapters in automation	( I12) Industrial Engineering, Specialised Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
25.	IM2103 New technologies in engineering and management	( I10) Industrial Engineering, Master Academic Studies (I20) Engineering Management, Master Academic Studies
26.	IMDR86 Selected chapters from energy efficiency of compressed air systems	( H00) Mechatronics, Doctoral Academic Studies ( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
27.	IMDR80 Selected chapters in automation	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies

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

1.	Šešlija D., Ignjatović I., Dudić S.: Increasing the Energy Efficiency in Compressed Air Systems, Rijeka, InTech, 2012, str. 151-174, ISBN 978-953-51-0800-9
2.	Dudić S., Ignjatović I., Šešlija D., Blagojević V., Miodrag S.: Leakage quantification of compressed air using ultrasound and infrared thermography, MEASUREMENT, 2012, Vol. 45, No 7, pp. 1689-1694, ISSN 0263-2241
3.	Ignjatović I., Šešlija D., Tarjan L., Dudić S.: Wireless sensor system for monitoring of compressed air filters, Journal of Scientific and Industrial Research (JSIR), 2012, Vol. 71, No 5, pp. 334-340, ISSN 0022-4456
4.	Jocanović M., Šević D., Karanović V., Beker I., Dudić S.: Increased Efficiency of Hydraulic Systems Through Reliability Theory and Monitoring of System Operating Parameters, Strojniški vestnik - Journal of Mechanical Engineering, 2012, Vol. 58, No 4, pp. 281-288, ISSN 0039-2480
5.	Dudić S., Ignjatović I., Šešlija D., Blagojević V., Stojiljković M.: Leakage quantification of compressed air on pipes using thermovision, Thermal Science, 2012, Vol. 16, No 2, pp. 621-631, ISSN 0354-9836
6.	Šešlija D., Ignjatović I., Dudić S., Lagod B.: Potential energy savings in compressed air systems in Serbia, African Journal of Business Management, 2011, Vol. 5, No 14, pp. 5637-5645, ISSN 1993-8233
7.	Blagojević V., Šešlija D., Stojiljković M., Dudić S.: Efficient control of servo pneumatic actuator system utilizing by-pass valve and digital sliding mode, Sadhana - Academy Proceedings in Engineering Science, 2012, ISSN 0256-2499
8.	Šešlija D., Ignjatović I., Dudić S.: Compressed air system structure and energy efficiency, 15. Symposium on Thermal Science and Engineering of Serbia, Soko Banja: University of Nis, Faculty of Mechanical Engineering and Society of Thermal Engineers of Serbia, 18-21 Oktobar, 2011, pp. 649-658, ISBN 978-86-6055-018-9
9.	Šešlija D., Dudić S., Ignjatović I.: Cost effectiveness t of pressure regulation on return stroke of pneumatic actuators, 11. International Scientific Conference "Flexible Technologies" - MMA, Novi Sad: Fakultet tehničkih nauka, 20-21 Septembar, 2012
10.	Dudić S., Ignjatović I., Šešlija D.: Usage of non-destructive methods in compressed air system, 15. International Scientific Conference on Industrial Systems - IS, Novi Sad: Faculty of Technical Sciences, 14-16 Septembar, 2011, pp. 101-104, ISBN 978-86-7892-341-8

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

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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### 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 career	Year	Institution	Field
Academic title election:	2011		Automatic Control and System Engineering
PhD thesis	2000	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	1993	School of Electrical Engineering - Beograd	Automatic Control and System Engineering
Bachelor's thesis	1989	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering

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

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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

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

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

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

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

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



	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

Science, arts and professional qualifications

Name and last name:	Grahovac M. Nenad		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 29.12.2004		
Scientific or art field:	Mechanics		
Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Mechanics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Mechanics
Magister thesis	2005	Faculty of Technical Sciences - Novi Sad	Continuum Mechanics
Bachelor's thesis	2002	Faculty of Technical Sciences - Novi Sad	Deformable Body Mechanics

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

	ID	Course name	Study programme name, study type
1.	A207	Mechanics	( A00) Architecture, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
2.	E104	Mechanics	( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
3.	GG07	Mechanics 1	( G00) Civil Engineering, Undergraduate Academic Studies
4.	H112	Mechanics 1 – Fundamentals	( H00) Mechatronics, Undergraduate Academic Studies ( S00) Traffic and Transport Engineering, Undergraduate Academic Studies
5.	H201	Mechanics 2 - General	( H00) Mechatronics, Undergraduate Academic Studies
6.	H303	Mechatronics 3 – Further Chapters	( H00) Mechatronics, Undergraduate Academic Studies
7.	M204	Strength of Materials	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
8.	M4401	Continuum mechanics	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
9.	BMI127	Biomechanics	( BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	II1004	Mechanics and Industrial Engineering	( I10) Industrial Engineering, Undergraduate Academic Studies
11.	M44041	Dynamics of non-smooth mechanical systems	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
12.	M44061	Optimization of mechanical systems	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
13.	BMIM4A	Transport phenomena and Living systems	( BM0) Biomedical Engineering, Master Academic Studies
14.	M45991	Biomechanics of cardiovascular system	( M40) Technical Mechanics and Technical Design, Master Academic Studies
15.	SZD051	Applications of optimal control theory in living environment protection	( Z00) Environmental Engineering, Specialised Academic Studies
16.	DM801	Biomedical mechanics	( M40) Technical Mechanics, Doctoral Academic Studies
17.	DTM02	Theory of impact	( H00) Mechatronics, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( S00) Traffic Engineering, Doctoral Academic Studies



UNIVERSITY OF NOVI SAD

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

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
18. DTM03	Biomechanical models and analysis of impact	( M40) Technical Mechanics, Doctoral Academic Studies
19. ZRD16A	Selected chapters in mechanics and elasticity theory	( Z01) Safety at Work, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Grahovac N., Žigić M., Spasić D.: On impact scripts with both fractional and dry friction type of dissipation, INT J BIFURCAT CHAOS, 2012, Vol. 22, No 4, pp. 1-10, ISSN 0218-1274
2.	Grahovac N., Žigić M.: Modelling of the hamstring muscle group by use of fractional derivatives, Computers and Mathematics with Applications, 2010, Vol. 59, No 5, pp. 1695-1700, ISSN 0898-1221.
3.	Glavardanov V., Maretić R., Grahovac N.: Buckling of a twisted and compressed rod supported by Cardan joints , European Journal of Mechanics - A: Solids, 2009, Vol. 28, pp. 131-140, ISSN 0997-7538
4.	N. M. Grahovac, M. M. Zigić, and D. T. Spasić: On multiple impacts with fractional type of dissipation, 1st International Congress of Serbian Society of Mechanics, Beograd: Serbian Society of Mechanics, 10-13 April, 2007, str. 173- 180
5.	Grahovac N., Žigić M: Fractional derivative viscoelastic model of the hamstring muscle group, 3rd IFAC Workshop on Fractional Differentiation and its Applications, Ankara, Turkey: 05-07 november, 2008
6.	Žigić M., Grahovac N.: Dynamical behavior of a polymer gel during impact. Fractional derivative viscoelastic model, 3. International Congress of Serbian Society of Mechanics, Vlasinsko jezero, 5-8 Jul, 2011, pp. 871-878, ISBN 978-86-909973-3-6, UDK: 531/534(082)
7.	Grahovac N., Žigić M., Spasić D.: On impact scripts with both fractional and dry friction type of dissipation, 4. IFAC Workshop on Fractional Differentiation and Its Applications, Badajoz, 18-20 Oktobar, 2010
8.	Grahovac N.: Generalized Zener model in the analysis of free vibration of a viscoelastic oscillator, 2. International Congress of Serbian Society of Mechanics, Palić: Serbian Society of Mechanics, 1-5 Jun, 2009, pp. 145-153, ISBN 978-86-7892-173-5, UDK: 531/534(082)
9.	Žigić M., Grahovac N., Spasić D.: A simplified earthquake dynamics of a column like structure with fractional type of dissipation , 1. International Congress of Serbian Society of Mechanics, Kopaonik: Serbian Society of Mechanics, 10-13 April, 2007, pp. 165-172, ISBN 978-86-909973-0-5, UDK: 531/534(082)
10.	Kovinčić N., Žigić M., Grahovac N., Spasić D.: On Impact in Biomechanical Systems, International scientific conference on mechanics, 6. International Scientific Conference on Mechanics - Sixth Polyakhov's Reading, Saint Petersburg, 31-3 Januar, 2012, pp. 251-251, ISBN 978-5-91563-101-3

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

Quotation total :	5
Total of SCI(SSCI) list papers :	3
Current projects :	Domestic : 1 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

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

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

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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

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

Representative references (minimum 5, not more than 10)

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

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

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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:		Kovačević R. Pavle	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Medical Faculty in Novi Sad - Novi Sad 01.01.2000	
Scientific or art field:		Medical Science	
Academic career	Year	Institution	Field
Academic title election:	2000	Medical Faculty in Novi Sad - Novi Sad	Medical Science
PhD thesis	1998	Medical Faculty in Novi Sad - Novi Sad	Medical Science
Education Specialist Thesis	1993	Medical Faculty in Novi Sad - Novi Sad	Medical Science
Magister thesis	1991	Medical Faculty in Novi Sad - Novi Sad	Medical Science
Bachelor's thesis	1984	Medical Faculty in Novi Sad - Novi Sad	Medical Science
List of courses being held by the teacher in the accredited study programmes			
ID	Course name	Study programme name, study type	
1.	BMIM6 Clinical medicine for engineers	(BM0) Biomedical Engineering, Master Academic Studies	
Representative references (minimum 5, not more than 10)			
1.	Kovačević P., Velicki L., Mojašević R., Kieffer E.: Thromboexclusion of the complete aorta in the treatment of chronic type B aneurysm. doi:10.1016/j.avsg.2011.02.049, ANN VASC SURG, 2011, ISSN 0890-5096		
2.	Golubović M., Mihajlović B., Kovačević P., Čemerlić-Adić N., Pavlović K., Velicki L., Šušak S.: Postoperativne neletalne komplikacije nakon operacije na otvorenom srcu, Vojnosanitetski pregled, 2012, Vol. 69, No 1, pp. 27-31, ISSN 0042-8450		
3.	Kovačević P., Velicki L., Komazec N., Vujan B., Ivanović V., Golubović M.: Early graft thrombosis due to antithrombin III deficiency following CABG, Herz, 2011, Vol. 36, No 2, pp. 144-146, ISSN 0340-9937, UDK: DOI 10.1007/s00059-011-3430-y		
4.	Kovačević P., Redžek A., Ivanović-Kovačević S., Velicki L., Ivanović V., Kieffer E.: Coronary and carotid artery occlusive disease: single center experience - in press, European Review for Medical and Pharmacological Sciences (Eur Rev Med Pharmacol Sci), 2011, ISSN 1128-3602		
5.	Kovačević P., Mihajlović B., Velicki L., Redžek A., Ivanović V., Komazec N.: Mini-sternotomija - preliminarno iskustvo u vulvularnoj hirurgiji srca, Vojnosanitetski pregled, 2011, Vol. 68, No 5, pp. 405-409, ISSN 0042-8450		
6.	Mihajlović B., Nićin S., Kovačević P., Šušak S., Velicki L., Kovačević D., Fabri M.: Ocena rezultata u koronarnoj hirurgiji primenom modela EuroSCORE, Srpski arhiv za celokupno lekarstvo, 2011, Vol. 139, No 1-2, pp. 25-29, ISSN 0370-8179, UDK: Ocena rezultata u koronarnoj hirurgiji primenom modela EuroSCOR		
7.	Velicki L., Nićin S., Mihajlović B., Kovačević P., Šušak S., Fabri M.: Cardiac myxoma: clinical presentation, surgical treatment and outcome., Journal of the Balkan Union of Oncology (J BUON), 2010, Vol. 15, No 1, pp. 51-55, ISSN 1107-0625		
8.	Kovačević P., Velicki L., Redžek A.: Surgical treatment of coronary artery-pulmonary artery fistula with coronary artery disease, J Card Surg, 2009, Vol. 24, No 6, pp. 670-672, ISSN 0886-0440		
9.	Velicki L., Milosavljević A., Majin M., Vujan B., Kovačević P.: Postpartal right ventricular thrombosis, Herz, 2008, Vol. 33, No 7, pp. 532-534, ISSN 0340-9937		
10.	Golubović M., Mihajlović B., Kovačević P., Čemerlić-Adić N., Pavlović K., Velicki L., Šušak S.: Postoperativne neletalne komplikacije posle operacije na otvorenom srcu prihvaćen za štampu, Vojnosanitetski pregled, 2010, ISSN 0042-8450		
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 :	0

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

Science, arts and professional qualifications

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

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

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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

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

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

1.	Lendak I., Erdeljan A. & Popović D. (2011), „Algorithm for cataloguing topologies in the Common Information Model (CIM)“, Computers and mathematics with applications, February 2011, vol 61 (3), pp. 715-721. DOI 10.1016/j.camwa.2010.12.021
2.	Vukmirović S., Erdeljan A., Čapko D., Lendak I., Nedić N. (2011), „Optimization of workflow scheduling in Utility Management System with hierarchical neural network“, International Journal of Computational Intelligence Systems, 2011, vol 4 (4), pp. 672-679.
3.	Lendak I., Ivancevic N., Vukmirović 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.	Vukmirović S., Erdeljan A., Lendak I. & Čapko 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.	Vukmirović S., Erdeljan A., Lendak I. & Čapko 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

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Lončar-Turukalo G. Tatjana		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.05.2006		
Scientific or art field:	Telecommunications and Signal Processing		
Academic career	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	2007	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.	BMI105	Statistical basics, processing and modelling of biomedical signals	( BM0) Biomedical Engineering, Undergraduate Academic Studies
2.	BMI123	Advanced biomedical signal analysis	( BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	EK202	Communication networks - introduction	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EK321	IP technology	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK450	Development Tools in Telecommunications and Signal Processing 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK458	Telecommunication networks	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	ETI25	Pattern recognition	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	ETI37	Digital Image Processing	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
9.	SZP01	Selected topics in Information technologies	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
10.	BMIM2B	Biomedical statistics	( BM0) Biomedical Engineering, Master Academic Studies
11.	BMIM2C	Multivariable analysis and complexity of physiological processes	( BM0) Biomedical Engineering, Master Academic Studies
12.	BMIM2D	Information theory in biosystems	( BM0) Biomedical Engineering, Master Academic Studies

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

1.	Lončar-Turukalo T., Japundzic-Zigon N., Bajić D.: Temporal Sequence Parameters in Isodistributional Surrogate Data: Model and Exact Expressions, IEEE Transactions of Biomedical Engineering, 2011, Vol. 58, No 1, pp. 16-24, ISSN 0018-9294
2.	Bošković A., Lončar-Turukalo T., Sarenac O., Japundzic-Zigon N., Bajić D.: Unbiased entropy estimates in stress: a parameter study, COMPUT BIOL MED, 2012, ISSN 0010-4825
3.	Dragana Bajić, Tatjana Loncar Turukalo, Sonja Stojicic, Olivera Sarenac, Tijana Bojic, David Murphy, Julian Paton,; Japundzic Zigon, Nina: "Temporal Analysis of the Spontaneous Baroreceptor Reflex During Mild Emotional Stress"; Stress 2009;00;1-13; ISSN 1025-3890 print/ISSN 1607-8888 online
4.	Dragana Bajić, Sonja Stojičić, Olivera Šarenac, Tatjana Lončar-Turukalo, Tijana Bojić, Nina Japundžić-Žigon: Temporal Analysis of Spontaneous Baroreceptor Reflex during Emotional Stress in Freely Moving Rats, 5th Conference of the European Study Group of Cardiovascular Oscillations, ESCGO, April, 2008, str. 012-5- 012-8.
5.	Tatjana Lončar-Turukalo, Dragana Bajić, Nina Japundžić Žigon: Cardiovascular Response to Acute Stress in Freely Moving Rats: Time-Frequency Analysis, 30th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, august, 2008, pp. 2614- 2617.
6.	Olivera Šarenac, Srdja Drakulić, Maja Lozić, Tatjana Lončar Turukalo, Dragana Bajić, Nina Japundžić Žigon: Temporal Analysis of the Spontaneous Baroreceptor Reflex during Acute and Chronic Shaker Stress in Freely Moving Rats, Computers in Cardiology Conference, 14-17 september, 2008, pp. 813- 816.
7.	Damir Varga, Tatjana Lončar-Turukalo, Dragana Bajić, Sanja Milutinović, Nina Japundžić-Žigon: Joint Symbolic Dynamics of Cardiovascular Time Series of Rats, 11th Mediterranean Conference on Medical and Biological Engineering and Computing MEDICON, 26-30 June, 2007.





## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

8.	Tatjana Lončar-Turukalo, Snežana Milosavljević, Olivera Šarenac, Nina Japundžić Žigon, Dragana Bajić: Entropy and Gaussianity - Measures of Deterministic Dynamics of Heart Rate and Blood Pressure Signals of Rats , Acta Polytechnica Hungarica, Journal of Applied Sciences, 2008, Vol. 5, No. 1, pp. 121- 133, ISSN 1785-8860.
9.	Dragana Bajić, Tatjana Lončar-Turukalo, Olijandra Šibarević, "On Direct Sequential Analysis of HRV Signals", Archive of Oncology, Vol.13, No.1, January 2005
10.	Olivera Šarenac, Srđa Drakulić, Maja Lozić, Tanja Lončar-Turukalo, Dragana Bajić, Julian FR Paton, David Murphy, Nina Japundž: Time and frequency domain analysis of the cardiovascular response to stress in conscious rats, Acta Cardiologica, 2008, Vol. 63, No. 3.

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

Quotation total :	28			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	2	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:		Mitić M. Igor	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Medical Faculty in Novi Sad - Novi Sad 01.01.2000	
Scientific or art field:		Medical Science	
Academic carier	Year	Institution	Field
Academic title election:	2000	Medical Faculty in Novi Sad - Novi Sad	Medical Science
PhD thesis	2001	Medical Faculty in Novi Sad - Novi Sad	Medical Science
Magister thesis	1993	Medical Faculty in Novi Sad - Novi Sad	Medical Science
Bachelor's thesis	1987	Medical Faculty in Novi Sad - Novi Sad	Medical Science
List of courses being held by the teacher in the accredited study programmes			
ID	Course name	Study programme name, study type	
1.	BMIM6 Clinical medicine for engineers	( BM0) Biomedical Engineering, Master Academic Studies	
Representative references (minimum 5, not more than 10)			
1.	Stojanović V., Mitić I., Jokić R., Vučković N., Doronjski A., Vijatov-Đurić G., Milošević B., Đapić M.: Splenic peliosis in the course of IgA nephropathy , Pediatric nephrology, 2007, Vol. 22, No 12, pp. 2137-2140, ISSN 0931-041X		
2.	Felle D., Gebauer E., Sterio M., Tepavčević P., Čurić S., Đisalov M., Vodopivec S., Lenert P., Šoltes Š., Ilić V., Mitić I., Božić D.: PRIMARY IMMUNODEFICIENCIES AND IgG SUBCLASS DEFICIENCIES Naziv časopisa: Period. biologorum , Periodicum Biologorum, 1990, Vol. 92, pp. 67-68, ISSN 0031-5362		
3.	Lenert P., Felle D., Mitić I., Tepavčević P., Čurić S., Božić D., Vodopivec S.: IMMUNOCHEMICAL INVESTIGATION ON TYPE III MIXED CRYOGLOBULINS Naziv časopisa: Period. biologorum , Periodicum Biologorum, 1990, Vol. 92, No suppl. 3, pp. 88-88, ISSN 0031-5362		
4.	Felle D., Tepavčević P., Tepavčević P., Lenert P., Čurić S., Mitić I., Božić D., Sakač V.: MONOCLONAL GAMMAPATHIES DIAGNOSTIC PROCEDURES AND THE RESULTS Naziv časopisa: Period. biologorum , Periodicum Biologorum, 1990, Vol. 92, No Supp. 3, ISSN 0031-5362		
5.	Felle D., Tepavčević P., Lenert P., Vodopivec S., Čurić S., Đisalov M., Mitić I., Božić D., Sakač V.: Monoclonal gammopathies diagnostic procedures and the results , Periodicum Biologorum, 1990, Vol. 92, No Supp. 3, pp. 89-90, ISSN 0031-5362		
6.	Felle D., Gebauer E., Sterio M., Tepavčević P., Čurić S., Đisalov M., Vodopivec S., Lenert P., Šoltes Š., Ilić V., Mitić I., Božić D.: Primary immunodeficiencies and IgG subclass deficiencies, Periodicum Biologorum, 1990, Vol. 92, No 1, pp. 67-68, ISSN 0031-5362		
7.	Lenert P., Felle D., Mitić I., Tepavčević P., Čurić S., Božić D., Vodopivec S.: Immunochemical investigation on type III mixed cryoglobulins, Periodicum Biologorum, 1990, Vol. 92, No Suppl 3, pp. 88-89, ISSN 0031-5362		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :			
Total of SCI(SSCI) list papers :			
Current projects :		Domestic :	International :

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications



Name and last name:	Nađ F. Laslo		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.05.1977		
Scientific or art field:	Electronics		
Academic career	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1992	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	1983	Faculty of Electronic Engineering - Niš	Electronics
Bachelor's thesis	1977	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.	EM304	Impulse and Digital Electronic Circuits	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM436	Mechatronics	( M30) Energy and Process Engineering, Undergraduate Academic Studies
3.	EM440	Computer-Aided Electronic Circuit Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	H305	Analogue Electronics	( H00) Mechatronics, Undergraduate Academic Studies
5.	H309	Impuls Electronics	( H00) Mechatronics, Undergraduate Academic Studies
6.	H311	Application of Sensors and Actuators	( H00) Mechatronics, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	BMI110	Sensors and actuators in medicine	( BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	BMI99	Electronics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	E138A	Digital Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EM301A	Analog Microelectronic Circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	EM436A	Mechatronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
12.	DE400S	Complex Digital Systems and High Frequency Circuits	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE501S	Selected Chapters in Pulse and Analogue Electronics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	EM530	Selected Chapters in Impulse Electronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	SI032	Selected Chapters in Mechatronics	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	BMIM1B	EMI and EMC in medicine equipment	( BM0) Biomedical Engineering, Master Academic Studies
17.	EM406A	High-Frequency Digital Systems and Circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
18.	DE400	Complex Digital Systems and High Frequency Circuits	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
19.	DE501	Selected Chapters in Pulse and Analogue Electronics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

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

1.	Radosavljević G., Živanov Lj., Smetana W., Marić A., Unger M., Nađ L.: A Wireless Embedded Resonant Pressure Sensor Fabricated in the Standard LTCC Technology, IEEE Sensor Journal, 2009, Vol. 9, No 12, pp. 1956-1962, ISSN 1530-437X
2.	L. Juhas, A. Vujanić, N. Adamović, L. Nagy, B. Borovac, "A Platform for Micro-Positioning Based on Piezo-Legs", The Journal of Mechatronics, Vol. 11 (2001), pp.869-897.

		UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6					
		<b>Study Programme Accreditation</b>					
		MASTER ACADEMIC STUDIES		Biomedical Engineering			
Representative references (minimum 5, not more than 10)							
3.	Damnjanović M., Živanov Lj., Nađ L., Đurić S., Biberdžić B.: A Novel Approach to Extending the Linearity Range of Displacement Inductive Sensor , IEEE Transactions on Magnetics, 2008, Vol. 44, No 11, pp. 4123-4126, ISSN 0018-9464						
4.	Nađ L., Radić J., Đugova A., Videnović-Mišić M.: Ultra Low-Power Low-Complexity Tunable 3-10 GHz IR-UWB Pulse Generator, Informacije MIDEM - Journal of microelectronics, electronic components and materials, 2012, Vol. 3, ISSN 0352-9045						
5.	Đurić S., Nađ L., Damnjanović M., Đurić N., Živanov Lj.: A novel application of planar-type meander sensors, Microelectronics International, 2011, Vol. 28, No 1, pp. 41-49, ISSN 1356-5362						
6.	Radić J., Đugova A., Nađ L., Videnović-Mišić M.: Feedback Influence on Performance of Ring Oscillator for IR-UWB Pulse Generator in 0.18µm CMOS technology, 28. International Conference on Microelectronics – MIEL, Niš: IEEE, 13-16 Maj, 2012, pp. 357-360, ISBN 978-1-4673-0235-7 , UDK: 10.1109/MIEL.2012.6222873						
7.	Nađ L., Babković K., Krklješ D., Borovac B.: Elastic Foot Contact Force Sensor System — Pendulum Application Example, 14. International Power Electronics and Motion Control Conference EPE-PEMC, Ohrid, 6-9 Septembar, 2010, pp. 38-38, ISBN 978-1-4244-7856-9						
8.	Babković K., Nađ L., Krklješ D.: Optical Sensor for Vibration Monitoring with Automatic Operating Point Adjustment, 28. International Conference on Microelectronics – MIEL, Niš, 13-16 Maj, 2012, pp. 189-192, ISBN 978-1-4673-0235-7						
9.	Radić J., Đugova A., Nađ L., Videnović-Mišić M.: Body Bias Influence on Ring Oscillator Performance for IR-UWB Pulse Generator in 0.18µm CMOS technology , 47. International Scientific Conference on Information, Communication and Energy Systems and Tehnologies - ICEST, Veliko Trnovo, 28-30 Jun, 2012, pp. 82-85						
10.	Krklješ D., Babković K., Nađ L.: Specific Conductance Characteristic of Force Sensing Resistor (FSR) with Custom Made Single-gap Conductive Contacts, 2. ICMAS-International Conference on Materials and Applications for Sensors and Transducers, Budapest, 24-28 Maj, 2012						
Summary data for teacher's scientific or art and professional activity:							
Quotation total :				6			
Total of SCI(SSCI) list papers :				5			
Current projects :				Domestic :	3	International :	1

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Pejić V. Dragan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.09.1995		
Scientific or art field:	Electrical Measurements		
Academic career	Year	Institution	Field
Academic title election:	2011		Electrical Measurements
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	1997	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Bachelor's thesis	1993	Faculty of Technical Sciences - Novi Sad	Electrical Measurements

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

	ID	Course name	Study programme name, study type
1.	E130	Electrical Measurements	( S00) Traffic and Transport Engineering, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	E130A	Electrical Measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	E140	Measuring in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	E142	Measuring Instruments	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EIEKI	Electronic Components in Instrumentation	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIEMER	Electronic measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIPMS1	Design and development of industrial devices and measurement systems 1	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIPMS2	Design and development of industrial devices and measurement systems 2	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	MR0UL R	Introduction to laboratory practice	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
11.	BMIM5B	Design and development of medical devices and systems	( BM0) Biomedical Engineering, Master Academic Studies
12.	EIMIO	Measurement systems in industrial environment	( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

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

1.	Pejić D., Vujičić V.: Accuracy Limit of High-Precision Stochastic Watt-Hour Meter, IEEE Transaction on Instrumentation and Measurement, 2000, Vol. 49, No 3, pp. 617-620
2.	Vujičić V., Milovančev S., Pešaljević M., Pejić D., Župunski I.: Low Frequency Stochastic True RMS Instrument, IEEE Transaction on Instrumentation and Measurement, 1999, Vol. 48, No 2, pp. 467-470
3.	Antić B., Pejić D.: A Measuring System for Supervision of the Rail Welding Machine PRSM-4 No. 083, Journal of Automatic Control, 2006, Vol. 16, No 1, pp. 9-12, UDK: 621.3-52
4.	Pejić D.: Stohastičko merenje električne snage i energije, Novi Sad, FTN, 2010
5.	D. Pejić, P. Sovilj, M. Urekar, V. Vujičić, Lj. Župunski, Uticaj zajedničkog napona na merenje biomedicinskog p300 potencijala, Zbornik radova 56. konferencije za ETRAN, Zlatibor, 11. – 14.6. 2012, pp. ML1.9-1-4, ISBN 978-86-80509-67-9



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

Representative references (minimum 5, not more than 10)

6.	Pejić D., Urekar M., Vujičić V., Avramov-Zamurović S.: Comparator offset error suppression in stochastic converters used in a Watt-Hour Meter, 1. Conference on Precision Electromagnetic Measurements - CPEM 2010, Daejeon, 13-18 Jun, 2010, pp. 235-236, ISBN 978-1-4244-6794-5
7.	Pejić D., Urekar M., Crnojakić M., Župunski I., Vujičić V.: ETALONSKO BROJILO ELEKTRIČNE ENERGIJE, 4. Kongres metrologa, Zlatibor: Kongres metrologa, 24-26 Septembar, 2007
8.	Antić B., Pejić D.: Merni sistem za nadzor mašine za zavarivanje šina PRSM-4 br.083, 50. ETRAN, Beograd, 6-9 Jun, 2006
9.	Pejić D.: Višekanalno merenje faktora izobličenja, Novi Sad, 1997
10.	Mitrović Z., Pejić D., Župunski I., Urekar M., Milovančev S., Vujičić V.: Metoda merenja aktivne snage u složenoperiodičnom režimu, 2011

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

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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Pjevalica U. Nebojša		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.08.1997		
Scientific or art field:	Electrical Measurements		
Academic carier	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	2007	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	2001	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Electrical Measurements

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

	ID	Course name	Study programme name, study type
1.	E130	Electrical Measurements	( S00) Traffic and Transport Engineering, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	E227A	Logic Design of Computer Systems 1	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	E244	Selected Chapters in Physical Architecture Design	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	BMI115	Biomedical Engineering in Cognitive Neuroscience	( BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	E1410	Biophysics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIMET	Metrology	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	BMIM5A	Virtual measurement instrumentation in biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
8.	BMIM5B	Design and development of medical devices and systems	( BM0) Biomedical Engineering, Master Academic Studies
9.	BMIM5D	Magnetic-Resonance Devices in Biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
10.	BMIM5E	Distributed measurement and acquisition systems in biomedicine	( BM0) Biomedical Engineering, Master Academic Studies

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

1.	A.Kozarev, N. Pjevalica, V. Macar, D. Roncevic, O. Varga-Silberholc, "Some Issues in Multimedia/B-ISDN Based Telecommunication Network Evolution - General Model", Telsiks"97, Vol2, pp.425-428, Nis, Yugoslavia 1997.
2.	A.Kozarev, M. Nikolic, D. Milidrag, N. Pjevalica, "An Integrated Approach to Public Telecommunication Network in Multimedia/B-ISDN Environment", Telsiks"97, Vol2, pp.421-424, Nis, Yugoslavia 1997.
3.	D. Zrilic, N. Pjevalica, "Frequency Deviation Measurement Based on Two - Arm Delta - Sigma Modulated Bridge", IMTC2001 IEEE Instrumentation and Measurement Technology Conference, pp.756-760, Budapest, Hungary 2001.
4.	D. Zrilic, N. Pjevalica, "Stochastic Signal Processing Using Delta - Sigma Modulation", Proceedings of the Fifth Biannual World Automation Congress WAC 2002, Vol 14, pp653-658, Orlando, Florida, USA 2002.
5.	B. Antić, N. Pjevalica, A New Approach to Power Grid Measurements - Measuring in Frequency Domain, JUKO CIRED 2006, Zlatibor 17.-20. oktobar.
6.	Djuro G. Zrilic, Nebojsa U. Pjevalica, "Frequency Deviation Measurement Based on Two-Arm D-S Modulated Bridge" IEEE Transactions on instrumentation and measurement, vol. 53, no.2, april 2004, pp.293-299.
7.	N. Pjevalica, V. Pjevalica, "Merenja na visokonaponskoj distributivnoj mreži primenom digitalnih mernih pretvarača", Simpozijum o merenjima i mernoj opremi, Zbornik radova, knjiga prva, pp505-513, Beograd, Yugoslavia,1998.



UNIVERSITY OF NOVI SAD

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

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

Representative references (minimum 5, not more than 10)

8.	V. Vujičić, N. Pjevalica, "Stohastička realizacija digitalnih filtara", D.O.G.S. 2000 zbornik radova, pp.60-63, Novi Sad, Yugoslavia 2000
9.	N. Pjevalica, "Digitalno merilo efektivne vrednosti", Kongres metrologa Jugoslavije 2000, (CD-ROM zbornik radova), Novi Sad, Yugoslavia 2000.
10.	J. Tomić, N. Pjevalica, Integrisano merilo harmonika, Kongres metrologa, Beograd, 2005 godina.

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

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



	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Plančak E. Miroslav		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.01.1975		
Scientific or art field:	Plastic Deformation Technology, Rapid Prototyping, Virtual		
Academic carieer	Year	Institution	Field
Academic title election:	1995	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
PhD thesis	1985	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
Magister thesis	1979	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology
Bachelor's thesis	1969	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual

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

	ID	Course name	Study programme name, study type
1.	IA016	Introduction to Virtual Reality Technology	( F10) Engineering Animation, Undergraduate Academic Studies
2.	P207	Metal forming	( P00) Production Engineering, Undergraduate Academic Studies
3.	P2401	Advanced Methods in Metal Forming	( P00) Production Engineering, Undergraduate Academic Studies
4.	P2413	Computer Aided Design of Tools and Dies for Metal Forming	( P00) Production Engineering, Undergraduate Academic Studies
5.	P303	Machines for Processing by Deforming	( P00) Production Engineering, Undergraduate Academic Studies
6.	P3403	Technology of Plastic Forming - Shaping of plastic material	( P00) Production Engineering, Undergraduate Academic Studies
7.	P3503	Machines and Devices for Plastic Processing	( P00) Production Engineering, Undergraduate Academic Studies
8.	BM119D	Reverse engineering and rapid prototyping in biomedical engineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	M2062	Mechanical engineering technologies 2	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
10.	P2407	Rapid Prototyping and Rapid Tooling	( PM0) Production Engineering, Master Academic Studies
11.	P3501	Tool Designing for Plastic	( PM0) Production Engineering, Master Academic Studies
12.	P3503A	Contemporary Process Systems for Plastic Treatment	( PM0) Production Engineering, Master Academic Studies
13.	NIT01	Innovative Product Development	( NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
14.	BMIM4B	Technologies of shaping biomedical materials	( BM0) Biomedical Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies
15.	MIA11	Machines and dies for powder forming	( PM0) Production Engineering, Master Academic Studies
16.	P321	Reverse Engineering and Rapid Prototyping	( I10) Industrial Engineering, Master Academic Studies
17.	PMISP1	Modelling and Simulation of Metal Forming Processes	( PM0) Production Engineering, Master Academic Studies
18.	DM411	Contemporary Approach to Integration of Reverse Engineering of Rapid Prototyping, Tools, Products and Virtual Manufacturing	( M00) Mechanical Engineering, Doctoral Academic Studies
19.	DP001	Design and Research Methods in Production Engineering	( M00) Mechanical Engineering, Doctoral Academic Studies
20.	DP005	State and Tendencies in Development of Metrology, Quality and Equipment	( M00) Mechanical Engineering, Doctoral Academic Studies
21.	DP008	Contemporary Methods and TPD Systems	( M00) Mechanical Engineering, Doctoral Academic Studies
22.	DP012	Physical Modelling and TPD Simulation by Computers	( M00) Mechanical Engineering, Doctoral Academic Studies
23.	DP015	Nonconventional Procedures of Forming in TPD	( M00) Mechanical Engineering, Doctoral Academic Studies
24.	DP027	Advanced technologies of plastics packiging manufacturing	( M00) Mechanical Engineering, Doctoral Academic Studies
25.	DP029	Advanced Development of Polymeric Products	( M00) Mechanical Engineering, Doctoral Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

1.	Essa K., Kacmarcik I., Hartley P., Plancak M., Vilotic D.: Upsetting of bi-metallic ring billets, Journal of Materials Processing Technology, 2012, Vol 212, Nr 4, pp. 817-824, ISSN/ISBN: 0924-0136
2.	Vilotić D., Plančak M., Čupković Đ., Aleksandrov S., Aleksandrov N.: Free Surface Fracture in Three Upsetting Tests, Experimental Mechanics, 2006, Vol 46, pp. 115-120, ISSN: 0014-4851
3.	Plančak M., Bramley A. N., Osman F. H.: Some observation on contact stress measurement by pin load cell in bulk metal forming, Journal of Material and Processing Technology 60, 1996, pp. 339-342, ISSN/ISBN: 0924-0136
4.	Plančak M., Bramley A. N., Osman F. H.: Non conventional cold extrusion, Journal of Material and Processing Technology 34, 1992, pp. 465-472, ISSN/ISBN: 0924-0136
5.	Hiroši I., Plančak M.: Coining process as a means of controlling surface microgeometry, Journal of Material Processing Technology, Vol 80-81, 1998, pp. 101-107, ISSN/ISBN: 0924-0136
6.	Plančak M., Vollertsen F., Woitschig J.: Analysis, finite element simulation and experimental investigation of friction in tube hydroforming, Journal of Material Processing Technology, Vol. 170, Issue I-2, 2005, pp.220-228, ISSN/ISBN: 0924-0136
7.	Vollertsen F., Plančak M.: On possibilities for the determination of the coefficient of friction in hydroforming of tubes, Journal of Material processing Technology, Vol 125-126, 2002, pp. 412-420, ISSN/ISBN: 0924-0136
8.	Plančak M.: Stress distribution within specimen in cold forward extrusion of steel, Journal of Materials Processing Technology, Vol 24, 1990, pp. 387-394, ISSN/ISBN: 0924-0136
9.	Vilotic D., Alexandrov S., Plancak M., Vilotic M., Ivanisevic I., Kacmarcik I.: Material Formability at Upsetting by Cylindrical and Flat Dies, Steel Research International Special Issue, 2012, pp. 1175-1178, ISSN: 1611-3683
10.	Plancak M., Hartley P., Essa K., Vilotic D., Movrin D., Luzanin O.: Deformation analysis during bi-metallic coining operations, Steel Research International Special Issue, 2012, pp. 1247-1250, ISSN/ISBN: 1611-3683

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

Quotation total :	92		
Total of SCI(SSCI) list papers :	23		
Current projects :	Domestic :	1	International : 2

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	



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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6				
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>				
Representative references (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., Šečerov 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: <a href="http://dx.doi.org/10.5755/j01.eee.18.9.2806">http://dx.doi.org/10.5755/j01.eee.18.9.2806</a> , 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: <a href="http://www.intechopen.com/articles/show/title/speech-technologies-for-serbian-and-kindred-south-slavic-languages">http://www.intechopen.com/articles/show/title/speech-technologies-for-serbian-and-kindred-south-slavic-languages</a> , 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: <a href="http://www.intechopen.com/articles/show/title/applications-of-speech-technologies-in-western-balkan-countries">http://www.intechopen.com/articles/show/title/applications-of-speech-technologies-in-western-balkan-countries</a> , 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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Simić S. Srbojlob		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 25.11.1993		
Scientific or art field:	Mechanics		
Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Mechanics
PhD thesis	1999	Faculty of Technical Sciences - Novi Sad	Mechanics
Magister thesis	1997	Faculty of Mathematics - Beograd	Mechanics
Bachelor's thesis	1993	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.	E104	Mechanics	( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	GG07	Mechanics 1	( G00) Civil Engineering, Undergraduate Academic Studies
3.	M4305	Thermomechanics	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
4.	Z108	Fundamentals of Mechanics	( Z01) Safety at Work, Undergraduate Academic Studies ( ZC0) Clean Energy Technologies, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
5.	M44031	Analytical mechanics	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
6.	M4505	Modelling of non-linear systems	( M40) Technical Mechanics and Technical Design, Master Academic Studies
7.	BMIM4A	Transport phenomena and Living systems	( BM0) Biomedical Engineering, Master Academic Studies
8.	DM407	Nonlinear Mechanics with Nonconservative Properties	( M00) Mechanical Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
9.	DSIM8	Selected Chapters in Dynamics and Control	( M40) Technical Mechanics, Doctoral Academic Studies
10.	DZ003	Selected Chapters in Mechanics	( M00) Mechanical Engineering, Doctoral Academic Studies

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

1.	Srbojlob S. Simić: Analiitička mehanika: dinamika, stabilnost, bifurkacije, Fakultet tehničkih nauka, Novi Sad 2006., Edicija „Tehničke nauke - udžbenici“, 415 str., ISBN 86-85211-83-2
2.	Srbojlob S. Simić, Ratko B. Maretić: Osnove mehanike, Fakultet tehničkih nauka, Novi Sad 2008., Edicija „Tehničke nauke - udžbenici“, 273 str., ISBN 978-86-7892-147-6
3.	B.D. Vujanovic, T. Kawaguchi, S.S. Simic (1997), A Class of Conservation Laws of Linear Time-Dependent Dynamical Systems, TENSOR (NS), 58 (3), pp. 243-252.
4.	T.M. Atanackovic, S.S. Simic (1999), On the optimal shape of a Pflüger column, European Journal of Mechanics, A/Solids, 18 (5), pp. 903-913.<lang>
5.	S.S. Simic (2002), On the symmetry approach to polynomial conservation laws of one-dimensional Lagrangian systems, International Journal of Non-Linear Mechanics, 37, pp. 197-211.<lang>
6.	T. Ruggeri, S. Simić (2004), Non Linear Wave Propagation in Binary Mixtures of Euler Fluids, Continuum Mechanics and Thermodynamics, 16, pp. 125-148.<lang>
7.	T. Ruggeri, S. Simić (2007), On the Hyperbolic system of a mixture of Eulerian fluids: a comparison between single- and multi-temperature models, Mathematical Methods in the Applied Sciences, 30, pp. 827-849.<lang>
8.	T. Ruggeri, S. Simić (2009) Average temperature and Maxwellian iteration in multitemperature mixtures of fluids, Physical Review E, vol. 80, 026317
9.	T. Atanacković, S. Konjik, S. Pilipović, S. Simić (2009) Variational problems with fractional derivatives: Invariance conditions and Nöther's theorem, Nonlinear Analysis: Theory, Methods and Applications, vol. 71, pp. 1504-1517
10.	S. Simić (2009) Shock structure in continuum models of gas dynamics, Nonlinearity, vol. 20, pp. 1337-1366

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



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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

Quotation total :	7			
Total of SCI(SSCI) list papers :	9			
Current projects :	Domestic :	1	International :	1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### 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 career	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	Warehouse and storage	( S00) Traffic Engineering, Doctoral Academic Studies
12.	DSSL4	Logistics information systems	( S00) Traffic Engineering, Doctoral Academic Studies

#### Representative references (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



UNIVERSITY OF NOVI SAD

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



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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



	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

Science, arts and professional qualifications

Name and last name:	Slankamenac P. Miloš		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.02.2002		
Scientific or art field:	Electronics		
Academic career	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2004	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Electronics

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

	ID	Course name	Study programme name, study type
1.	EM414	Optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	F207	Electronics and Optoelectronics	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
3.	EM430A	Control and process electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM444B	Applied electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM455	Electronic multimedia systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EM456	Computers in the supervisory and control systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	ETI02	Electronics and Telecommunication Development Tools 1	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	ETI09	Electronics	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
9.	ETI14	Digital Electronics	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
10.	ETI22	Sensors and Actuators	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI28	Industrial Electronics	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	ETI38	Optoelectronics for communication and sensors	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
13.	DE201S	Selected Chapters in Optoelectronics and Photonics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	DE503S	Industrial Electronics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	SI013	Applied electronics in industry	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	SI035	Electronic Systems in Oil Industry	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
17.	SI042	Optoelectronics components	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
18.	BMIM1A	Applications of lasers in medicine	( BM0) Biomedical Engineering, Master Academic Studies
19.	DE117S	Selected chapters from optoelectronics sensors systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
20.	DE315S	Optoelectronics sensors systems-advanced course	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
21.	DE418S	Design of complex optoelectronics systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
22.	EM435A	Electronic Systems in Oil Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
23.	EM437A	The application of electronic systems in clean and renewable energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
24. EM439A	Electronics in vehicles	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
25. EM520	Industrial networks and protocols	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
26. EM521	Applied optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
27. EM523	Applied electronics in industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
28. EM532	Design of electronic devices.	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
29. F510E1	Electronic multimedia systems	( F00) Graphic Engineering and Design, Master Academic Studies
30. DE201	Selected Chapters in Optoelectronics and Photonics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
31. DE400	Complex Digital Systems and High Frequency Circuits	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
32. DE503	Industrial Electronics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies
33. DE117	Selected chapters from optoelectronics sensors systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
34. DE315	Optoelectronics sensors systems-advanced course	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
35. DE418	Design of complex optoelectronics systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

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

1.	Miloš P. Slankamenac, Miloš B. Živanov, Nikola Stojanović "Optoelektronske komponente -skripta", Fakultet tehničkih nauka u Novom Sadu, 281 str., 2010.
2.	Miloš Slankamenac, Kalman Babković, Ivan Mezei: Mikrokontroler 8051/8052 - praktikum laboratorijskih vežbi, Fakultet tehničkih nauka u Novom Sadu, Edicija: Tehničke nauke – udžbenici, 115 str. ISBN: 978-86-7892-045-5, Novi Sad, 2007.
3.	Miloš B. Živanov, Miloš P. Slankamenac, Optoelektronika, praktikum za laboratorijske vežbe, Fakultet tehničkih nauka u Novom Sadu, Edicija: Univerzitetski udžbenik, 110 str. ISBN: 978-86-7892-085-1, UDK: 621.38:535(075.8)(076), Novi Sad, 2008.
4.	Slankamenac M., Lukić-Petrović S., Živanov M., Čajko K.: Electrical switching behavior of bulk $Cu_x(AsSe_{1.410.2})_{100-x}$ glasses: Composition dependence and topological effects, SOLID STATE COMMUN, 2012, Vol. 152, No 13, pp. 1160-1163, ISSN 0038-1098
5.	Bajić J., Stupar D., Manojlović L., Slankamenac M., Živanov M.: A simple, low-cost, high-sensitivity fiber-optic tilt sensor, Sensors and Actuators A: Physical, 2012, Vol. 185, pp. 33-38, ISSN 0924-4247
6.	Stupar D., Bajić J., Manojlović L., Slankamenac M., Joža A., Živanov M.: A Wearable Low-Cost System for Human Joint Movements Monitoring Based on Fiber-Optic Curvature Sensor, IEEE Sensors Journal, 2012, ISSN 10.1109/JSEN.2007.90
7.	Manojlović L., Živanov M., Slankamenac M., Bajić J., Stupar D.: High-speed and high-sensitivity displacement measurement with phase-locked low-coherence interferometry, APPL OPTICS, 2012, Vol. 51, pp. 4333-4342
8.	Lukić-Petrović S., Skuban F., Petrović D., Slankamenac M.: Effect of copper on DC and AC conductivity of $(As_2Se_3)(AsI_3)$ glassy semiconductors, Journal of Non-Crystalline Solids, 2010, Vol. 40, No 10, pp. 108-112, UDK: doi:10.1016/j.jnoncrysol.2010.05.009
9.	Slankamenac M., Lukić-Petrović S., Živanov M.: Electrical switching in the bulk metal chalcogenide glassy semiconductor $Cu_{10}(AsSe_{1.410.2})_{90}$ , Semicond. Sci. Technol., 2009, Vol. 24, No 8, pp. 1-7, ISSN 0268-1242, UDK: 10.1088/0268-
10.	Bajić J., Stupar D., Joža A., Slankamenac M., Jelić M., Živanov M.: A simple fiber optic inclination sensor based on the refraction of light, Physica scripta, 2012, Vol. 149, pp. 1-4, ISSN 0031-8949, UDK: doi:10.1088/0031-8949/2012/T149/014024

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

Quotation total :	26		
Total of SCI(SSCI) list papers :	18		
Current projects :	Domestic :	3	International : 2

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:		Sovilj N. Bogdan	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 05.01.1973	
Scientific or art field:		Cutting Processing Tools and Tribology	
Academic carieer	Year	Institution	Field
Academic title election:	1998	Faculty of Technical Sciences - Novi Sad	Cutting Processing Tools and Tribology
PhD thesis	1988	Faculty of Technical Sciences - Novi Sad	Cutting Processing Tools and Tribology
Magister thesis	1980	Faculty of Technical Sciences - Novi Sad	Cutting Processing Tools and Tribology
Bachelor's thesis	1972	Faculty of Mechanical Engineering - Novi Sad	Cutting Processing Tools and Tribology
List of courses being held by the teacher in the accredited study programmes			
ID	Course name	Study programme name, study type	
1.	P1404 Tribodiagnostics and Maintenance	( P00) Production Engineering, Undergraduate Academic Studies	
2.	P1502A Tribology	( P00) Production Engineering, Undergraduate Academic Studies	
3.	P302 Tools for Cutting Processing	( P00) Production Engineering, Undergraduate Academic Studies	
4.	P4409 Evolution Methods	( P00) Production Engineering, Undergraduate Academic Studies	
5.	P1502B Contemporary Tools in CIM Systems	( PM0) Production Engineering, Master Academic Studies	
6.	BMIM4F Biotribology	( BM0) Biomedical Engineering, Master Academic Studies	
7.	PP103 Measurement and tools in precision engineering	( PM0) Production Engineering, Master Academic Studies	
8.	SMI003 Software support for cutting tools and fixtures modeling	( PM0) Production Engineering, Master Academic Studies	
9.	DM421 Design and Expoitation of Metal Cutting Machine Tools	( M00) Mechanical Engineering, Doctoral Academic Studies	
10.	DM422 Tribology	( M00) Mechanical Engineering, Doctoral Academic Studies	
11.	ZRD21 Tribodiagnostics and maintenance of tehcnical systems-selected chapters	( Z01) Safety at Work, Doctoral Academic Studies	
Representative references (minimum 5, not more than 10)			
1.	Sovilj, B.: Profilni noževi, Novi Sad, Univerzitet u Novom Sadu, Forum OJ Izdavačka delatnost, FTN-Institut za proizvodno mašinstvo, Jugoslovensko društvo za tribologiju, 1995. 268str.,		
2.	Sovilj. B.: Identifikacija triboloških procesa pri odvalnom glodanju, Novi Sad, IPM, FTN, 1988.		
3.	Sovilj B., Sovilj-Nikić I., Ješić D., Measurement Methodology of Characteristics and Election of Materials of Elements of Tribomechanical Systems, Metalurgija, Vol. 50, No. 1, pp. 107-111, 2011, ISSN 0543-5846		
4.	SOVILJ, B., TODIĆ, V., BABIĆ, M., NIKIĆ, Z.: Relationship between tool life and cutting speed by uncoated and coated end milling tool in dependence on wear criterion, Tribology in industry, 1998, Vol. 4, str. 105- 110,		
5.	Sovilj, B., Sovilj-Nikić, I., Ješić, D., The effect of specific relationship between material and coating on tribological and protective features of product, Metalurgija, Vol. 51, No. 1, pp. 21-24, 2012, ISSN 0543-5846		
6.	SOVILJ, B., PRAPOTNIK, B., MITROVIĆ, R., TODIĆ, V.: ,Influence of gearing process on the occurence of cutting edge break by hob milling tools, Tribology in industry, 1999, Vol. 21, No. 2, str. 53- 58,,		
7.	SOVILJ, B., TODIĆ, V., BABIĆ, M., NIKIĆ, Z.: Relationship between tool life and cutting speed by uncoated and coated end milling tool in dependence on wear criterion, Tribology in industry, 1998, Vol. 4, str. 105- 110,,		
8.	SOVILJ, B., PRAPOTNIK, B., MITROVIĆ, R., TODIĆ, V.: ,Influence of gearing process on the occurence of cutting edge break by hob milling tools, Tribology in industry, 1998, Vol. 3, str. 73- 78,,		
9.	SOVILJ B., ZLOKOLICA M., ĐOKIĆ V., SOVILJ-NIKIĆ I.: Identification of tribological processes on uncoated and coated cutting elements of hob milling tools in model and real conditions, 2-nd World Tribology Congress, Vienna, Austria: 2001,		
10.	Sovilj-Nikić, I., Sovilj, B., Kandeve, M., Gajić, V., Sovilj-Nikić, S., Legutko, S., Kovač, P., Tribological characteristics of hob milling tools from economical aspect, Journal of the Balkan Tribological Association, Vol.18, No. 4, pp. 577-585, 2012, ISSN 1310-4772		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		3	
Total of SCI(SSCI) list papers :		3	
Current projects :		Domestic :	International :
		1	2

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Sovilj M. Platon		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.10.2007		
Scientific or art field:	Electrical Measurements		
Academic career	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Biomedical Engineering
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Electronics

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

	ID	Course name	Study programme name, study type
1.	BM119E	Technical standards and regulations for medical devices and systems	( BM0) Biomedical Engineering, Undergraduate Academic Studies
2.	BMI115	Biomedical Engineering in Cognitive Neuroscience	( BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	EI408	Project Management	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EIDMS1	Microprocessor based measurement and data acquisition systems 1	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EIDMS2	Microprocessor based measurement and data acquisition systems 2	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIMMBM	Methods of measurement and measurement-acquisition systems in biomedicine	( BM0) Biomedical Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIPDMS	Programming of Measurement and Data Acquisition Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIVI	Virtual measurement systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EIWDS	Web-based Measurement and Data Acquisition Systems	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	BMIM5A	Virtual measurement instrumentation in biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
11.	BMIM5B	Design and development of medical devices and systems	( BM0) Biomedical Engineering, Master Academic Studies
12.	BMIM5C	Brain Computer Interface	( BM0) Biomedical Engineering, Master Academic Studies
13.	BMIM5D	Magnetic-Resonance Devices in Biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
14.	BMIM5E	Distributed measurement and acquisition systems in biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
15.	EIKL	Engineering communication, logistics and intellectual property	( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	EIMRV1	Real Time Measurements	( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	DE303	Biomedical Instrumentation	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies



UNIVERSITY OF NOVI SAD

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

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
18. DE417	Web-based Measurement Systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
19. DE518	Brain Computer Interface Systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Sovilj P.: Stohastičko digitalno merenje EEG signala, Novi Sad, Fakultet tehničkih nauka, 2010
2.	Sovilj P.: Eksterno testiranje površinskih kalemova uređaja za magnetsku rezonancu, FTN Novi Sad, 2006
3.	Sovilj P., Milovančev S., Vujičić V.: Digital Stochastic Measurement of a Nonstationary Signal With an Example of EEG Signal Measurement, IEEE Transactions on Instrumentation and Measurement, 2011, Vol. 60, No 9, pp. 3230-3232, ISSN 0018-9456
4.	Sovilj P., Pjevalica N.: FPGA based model of processing EEG signal, 17. Telekomunikacioni forum TELFOR, Beograd: Telecommunications society, Belgrade, 24-26 Novembar, 2009, pp. 677-680, ISBN 978-86-7466-375-2
5.	Sovilj P., Čabrilo N., Vujičić V., Župunski I.: Remote measurements by ZigBit wireless module, 10. International Conference on Accomplishments in Electrical and Mechanical Engineering and Information Technology - DEMI, Banja Luka: Mašinski fakultet Banja Luka, 26-28 Maj, 2011, pp. 885-891, ISBN 978-99938-39-36-1, UDK: 621(082);621.3(082)
6.	Sovilj P., Davidović D., Beljić Ž., Ković V.: Measurement and processing of event-related brain potential records, 19. Telekomunikacioni forum TELFOR, Beograd: TELFOR, 22-24 Novembar, 2011, pp. 683-686, ISBN 978-1-4577-1498-6
7.	Pjevalica N., Pjevalica V., Sovilj P.: Tehničko rešenje: Unapređeni algoritam upravljanja memorijom, Razvijeno: u okviru projekta tehnološkog razvoja TR-11005, 2011
8.	Ivanović M., Sovilj P.: Developing Expert System for assessment of quality management level, International Journal Total Quality Management
9.	M. Bobrek, Z. Tanasić, P. Sovilj: Upravljanje projektima, udžbenik, MFBL, Banja Luka, 2006
10.	M. Bobrek, M. Soković, P. Sovilj, Z. Tanasić: Upravljanje kvalitetom, udžbenik, MFBL, Banaj Luka 2006, COBISS.SI-ID 982249

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

Quotation total :	5
Total of SCI(SSCI) list papers :	1
Current projects :	Domestic : 2 International : 1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

Science, arts and professional qualifications

Name and last name:	Spasić T. Dragan		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad		
	01.09.1985		
Scientific or art field:	Mechanics		
Academic carier	Year	Institution	Field
Academic title election:	2005	Faculty of Technical Sciences - Novi Sad	Mechanics
PhD thesis	1993	Faculty of Technical Sciences - Novi Sad	Mechanics
Magister thesis	1991	Faculty of Mathematics - Beograd	Mechanics
Bachelor's thesis	1884	Faculty of Technical Sciences - Novi Sad	Information-Communication Systems

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

	ID	Course name	Study programme name, study type
1.	A207	Mechanics	( A00) Architecture, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
2.	H112	Mechanics 1 – Fundamentals	( H00) Mechatronics, Undergraduate Academic Studies ( S00) Traffic and Transport Engineering, Undergraduate Academic Studies
3.	H201	Mechanics 2 - General	( H00) Mechatronics, Undergraduate Academic Studies
4.	H303	Mechatronics 3 – Further Chapters	( H00) Mechatronics, Undergraduate Academic Studies
5.	I600	Industrial Robotics	( F10) Engineering Animation, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	M4302	Biomechanics and mechanics of sport	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
7.	ASO	Introduction to engineering	( ASO) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
8.	BMI127	Biomechanics	( BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	BMI128	Continuum Biomechanics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	BMI96	Mechanics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
11.	II1004	Mechanics and Industrial Engineering	( I10) Industrial Engineering, Undergraduate Academic Studies
12.	M44041	Dynamics of non-smooth mechanical systems	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
13.	M44061	Optimization of mechanical systems	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
14.	BMIM4A	Transport phenomena and Living systems	( BM0) Biomedical Engineering, Master Academic Studies
15.	M45991	Biomechanics of cardiovascular system	( M40) Technical Mechanics and Technical Design, Master Academic Studies
16.	SZD051	Applications of optimal control theory in living environment protection	( Z00) Environmental Engineering, Specialised Academic Studies
17.	DM406	Nonsmooth Mechanics and Optimization	( H00) Mechatronics, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	DZ003	Selected Chapters in Mechanics	( M00) Mechanical Engineering, Doctoral Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
19. ZD051	Applications of optimal control theory in living environment protection	( Z00) Environmental Engineering, Doctoral Academic Studies
20. DM801	Biomedical mechanics	( M40) Technical Mechanics, Doctoral Academic Studies
21. DTM02	Theory of impact	( H00) Mechatronics, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( S00) Traffic Engineering, Doctoral Academic Studies
22. DTM03	Biomechanical models and analysis of impact	( M40) Technical Mechanics, Doctoral Academic Studies
23. ZRD16A	Selected chapters in mechanics and elasticity theory	( Z01) Safety at Work, Doctoral Academic Studies

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

1.	Spasić D., Glavardanov V.: Does generalized elastica lead to bimodal optimal solutions?, International Journal of Solids and Structures, 2009, Vol. 46, No 14-15, pp. 2939-2949, ISSN 0020-7683
2.	Grahovac N., Žigić M., Spasić D.: On impact scripts with both fractional and dry friction type of dissipation, INT J BIFURCAT CHAOS, 2012, No Prihvaćen za štampu, ISSN 0218-1274
3.	D. T. Spasic and T. M. Atanackovic (2004), "Bimodal optimization of a compressed rotating rod", Acta Mechanica, 173, N 1-4, 77-87
4.	Spasić D.: Optimizing the electrodynamic stabilization method for a man-made Earth satellite, AUTOMAT REM CONTR , 2011, Vol. 72, No 9, pp. 112-121, ISSN 0005-1179
5.	Petrović Lj., Spasić D., Atanacković T.: On a mathematical model of a human root dentin , Dental Materials, 2005, Vol. 21, pp. 125-128, ISSN 0109-5641
6.	Mitić G., Spasić D.: Clinical Characteristic and type of thrombophilia in women with pregnancy-related venous thromboembolic disease, GYNECOL OBSTET INVES, 2011, Vol. 72, No 2, pp. 103-108, ISSN 0378-7346
7.	T. M. Atanackovic and D. T. Spasic, (2004): "On viscoelastic compliant contact-impact models", Transactions of ASME Journal of Applied Mechanics, 71, 134-138
8.	Radovic R., Spasic D.T., Karadzic B., Novakovic B., Atanackovic J., Jelcic Z.. and Tepavcevic B., (2002), ""New challenges and opportunities for the city of Novi Sad"", Coordinated by T. Atanackovic, The Danube Commision of EU and The University of Novi Sad, (monograph 157 pages in English and Serbian)
9.	Spasić D.: Boudary elements, theory and applications (English to serbian traslation done by D.T. Spasić), Beograd, Gradjevinska knjiga, 2011
10.	BD Vujanović, DT Spasić: Metodi optimizacije: primenjeni varijacioni račun, analitička mehanika, optimalno upravljanje, UNS, 1997.

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

Quotation total :	16
Total of SCI(SSCI) list papers :	8
Current projects :	Domestic : 1 International : 0

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### Science, arts and professional qualifications

Name and last name:	Šešlija D. Dragan		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 15.06.1985		
Scientific or art field:	Mechatronics, Robotics and Automation and Integral Systems		
Academic carier	Year	Institution	Field
Academic title election:	2007	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Integral Systems
PhD thesis	1997	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Intelligent Systems
Magister thesis	1989	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Intelligent Systems
Bachelor's thesis	1981	Faculty of Technical Sciences - Novi Sad	Internal Combustion Engines

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

	ID	Course name	Study programme name, study type
1.	H1401	Material Handling Technologies	( H00) Mechatronics, Undergraduate Academic Studies
2.	H1403	Automation of work processes	( H00) Mechatronics, Undergraduate Academic Studies
3.	H1504	Computer Integration of Production Systems	( H00) Mechatronics, Undergraduate Academic Studies
4.	H310	Components of technological systems	( H00) Mechatronics, Undergraduate Academic Studies
5.	II102	The basic theory of industrial systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	II1000	Fundamentals of industrial engineering and management	( I10) Industrial Engineering, Undergraduate Academic Studies
7.	II1011	Automation of work processes 1	( I10) Industrial Engineering, Undergraduate Academic Studies
8.	II1013	Material Handling Technologies	( I10) Industrial Engineering, Undergraduate Academic Studies
9.	II1029	Computer integrated manufacturing	( I10) Industrial Engineering, Undergraduate Academic Studies
10.	II1038	Automation of work processes 2	( I10) Industrial Engineering, Undergraduate Academic Studies
11.	II1042	Automation of Continual Processes	( I10) Industrial Engineering, Undergraduate Academic Studies
12.	IM1001	Fundamentals of industrial engineering	( I20) Engineering Management, Undergraduate Academic Studies
13.	IM1117	Computer integrated manufacturing (CIM)	(I20) Engineering Management, Undergraduate Academic Studies
14.	H505	Implementation of automated systems	( H00) Mechatronics, Master Academic Studies ( I10) Industrial Engineering, Master Academic Studies
15.	HDOK4 S	Selected chapters from automation of work processes	( I12) Industrial Engineering, Specialised Academic Studies
16.	I829	Automation of packaging processes	( I10) Industrial Engineering, Master Academic Studies
17.	I830	Energy efficiency of compressed air systems	( I10) Industrial Engineering, Master Academic Studies
18.	IMDR0S	Selected chapters in enterprise's design, organization and control	( I12) Industrial Engineering, Specialised Academic Studies ( I22) Engineering Management, Specialised Academic Studies
19.	PLM04	Sustainable Production and LCA	( I1U) Industrial Engineering - Product Lifecycle Management and Development, Master Academic Studies
20.	LIM34	Material Handling	( LIM) Logistic Engineering and Management, Master Academic Studies
21.	NIT02	Factory Automation	( NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
22.	NIT05	Advanced Technology for Material Handling	( NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
23.	BMIM4C	Fluid filtration and separation	( BM0) Biomedical Engineering, Master Academic Studies
24.	I911	Sustainable production	( I10) Industrial Engineering, Master Academic Studies





## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
25. IIDS27	Selected chapters of the energy efficiency of automated systems	( I12) Industrial Engineering, Specialised Academic Studies
26. IIDS6	Selected chapters in automation	( I12) Industrial Engineering, Specialised Academic Studies
27. IM2103	New technologies in engineering and management	( I10) Industrial Engineering, Master Academic Studies (I20) Engineering Management, Master Academic Studies
28. HDOK-4	Selected Chapters in Production Process Automation	( H00) Mechatronics, Doctoral Academic Studies ( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
29. HDOKL4	Selected chapters from automation of work processes	( H00) Mechatronics, Doctoral Academic Studies
30. IMDR0	Science of Industrial Engineering and Management	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
31. IMDR86	Selected chapters from energy efficiency of compressed air systems	( H00) Mechatronics, Doctoral Academic Studies ( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
32. IMDR80	Selected chapters in automation	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies

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

1.	Ignjatović I., Komenda T., Šešlija D., Malisa V.: Optimisation of compressed air and electricity consumption in a complex robotic cell, Robotics and Computer-integrated Manufacturing, 2012, ISSN 0736-5845
2.	Dudić S., Ignjatović I., Šešlija D., Blagojević V., Miodrag S.: Leakage quantification of compressed air using ultrasound and infrared thermography, MEASUREMENT, 2012, Vol. 45, No 7, pp. 1689-1694, ISSN 0263-2241
3.	Ignjatović I., Šešlija D., Tarjan L., Dudić S.: Wireless sensor system for monitoring of compressed air filters, Journal of Scientific and Industrial Research (JSIR), 2012, Vol. 71, No 5, pp. 334-340, ISSN 0022-4456
4.	Dudić S., Ignjatović I., Šešlija D., Blagojević V., Stojiljković M.: Leakage quantification of compressed air on pipes using thermovision, Thermal Science, 2012, Vol. 16, No 2, pp. 621-631, ISSN 0354-9836
5.	Čajetinac S., Šešlija D., Aleksandrov S., Todorović M.: PLC Controller used for PWM Control and for Identification of Frequency Characteristics of a Pneumatic Actuator, Electronics and electrical engineering, 2012, Vol. 123, No 7, pp. 21-26, ISSN 1392-1215
6.	Blagojević V., Šešlija D., Stojiljković M., Dudić S.: Efficient control of servo pneumatic actuator system utilizing by-pass valve and digital sliding mode, Sadhana - Academy Proceedings in Engineering Science, 2012, ISSN 0256-2499
7.	Blagojević V., Šešlija D., Miodrag S.: Cost effectiveness of restoring energy in execution part of pneumatic system, Journal of Scientific and Industrial Research, 2011, Vol. 70, pp. 170-176, ISSN 0022-4456
8.	Šešlija D., Ignjatović I., Dudić S., Lagod B.: Potential energy savings in compressed air systems in Serbia, African Journal of Business Management, 2011, Vol. 5, No 14, pp. 5637-5645, ISSN 1993-8233
9.	Šešlija D., Ignjatović I., Dudić S.: Increasing the Energy Efficiency in Compressed Air Systems, Rijeka, InTech, 2012, str. 151-174, ISBN 978-953-51-0800-9
10.	Stankovski S., Šešlija D., Rakić-Skoković M., Ostojić G.: Primena RFID tehnologije u automatizaciji, Novi Sad, Centar za automatizaciju i mehatroniku, 2009, ISBN 978-86-907827-3-4

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

Quotation total :	10
Total of SCI(SSCI) list papers :	10
Current projects :	Domestic : 0 International : 3

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Tabaković N. Slobodan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 10.10.2000		
Scientific or art field:	Machine Tools, Flexible Technological Systems and Automatization		
Academic carier	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design
PhD thesis	2008	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design
Magister thesis	2002	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design
Bachelor's thesis	1998	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design

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

	ID	Course name	Study programme name, study type
1.	P1402	CAD/CAE/CAM i CIM Systems	( P00) Production Engineering, Undergraduate Academic Studies
2.	P1407	Machine Tools Designing	( P00) Production Engineering, Undergraduate Academic Studies
3.	P1410	Virtual Product Designing	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	P301	Automation in Production Engineering	( P00) Production Engineering, Undergraduate Academic Studies
5.	P307	Automated Flexible Technological Systems	( P00) Production Engineering, Undergraduate Academic Studies
6.	ZR408A	Safety at work on the machines for processing	( Z01) Safety at Work, Undergraduate Academic Studies
7.	P1405	Contemporary Approach to Product Designing	( PM0) Production Engineering, Master Academic Studies
8.	PR408	Fundamentals on Protection for Operation on Processing Machines	( PM0) Production Engineering, Master Academic Studies
9.	IM2118	Fundamentals of CAD / CAM technology	(I20) Engineering Management, Master Academic Studies
10.	P307A	Flexible technological systems	( E20) Computing and Control Engineering, Master Academic Studies
11.	PAUP1	Automatization in plastic	( PM0) Production Engineering, Master Academic Studies
12.	PP102	Precision of machine tools	( PM0) Production Engineering, Master Academic Studies
13.	PP110	The dynamics of micro machining systems	( PM0) Production Engineering, Master Academic Studies
14.	PP2112	Design of prosthetic devices	( BM0) Biomedical Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies
15.	SM2	Methods and software tools for computer aided design	( PM0) Production Engineering, Master Academic Studies
16.	ZRMI1A	Occupational noise and human vibration in industry	( Z01) Safety at Work, Master Academic Studies

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

1.	Tabaković S., Živković A., Grujić J., Zeljković M.: Using CAD/CAE software systems in the design process of modular, revision total hip endoprosthesis, Academic Journal of Manufacturing Engineering – AJME, 2011, Vol. 9, No 2/2011, pp. 97-102, ISSN 1583-7904
2.	Tabaković, S., Živković, A., Gatalo, R., Zeljković, M., Mijušković, M.: Unapređenje karakteristika univerzalnog zgloba optimizacijom geometrije pojedinih njegovih elemenata, XXXIII SAVETOVANJE PROIZVODNOG MAŠINSTVA SRBIJE 2009 sa međunarodnim učešćem, Beograd: Mašinski fakultet Beograd, 16-17 jun, 2009, str. 119- 122, ISBN 978-86-7083-662-4.
3.	Bojanić M., Tabaković S., Milojević Z., Zeljković M.: Processing of diagnostic images of the skeletal system, 11. International Scientific Conference "Advanced Production Technologies" - MMA, Novi Sad: Fakultet tehničkih nauka, 20-21 Septembar, 2012, pp. 215-218, ISBN 978-86-7892-419-4
4.	Tabaković S., Živković A., Grujić J., Zeljković M.: Design process of modular, revision total hip endoprosthesis, 5. International Conference on Manufacturing Science and Education - MSE, Sibiu: University of Sibiu, Romania, 2-5 Jun, 2011, pp. 395-398, ISBN 1843-2522



UNIVERSITY OF NOVI SAD

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

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

Representative references (minimum 5, not more than 10)

5.	Tabaković, S., Gatalo, R., Zeljković, M., Toma, J.: A concept of Automated Design of modular Machine Tools with parallel kinematics based on CAD workpiece model, Machine Engineering, Vol. 2, No 1-2, 2002, pp. 171 - 182
6.	Živković A., Zeljković M., Tabaković S.: Matematički Model za određivanje vijeka trajanja valjčanih ležajeva, Akademski časopis za inženjering i tehnologiju – AJME, 2010, Vol. 8, No 3/2010, pp. 108-115, ISSN 1583-7904
7.	Blanuša V., Zeljković M., Vilotić D., Tabaković S.: The specificity of punch presses programming, Journal for Technology of Plasticity, 2011, Vol. 36, No 2, pp. 121-235, ISSN 0354-3870
8.	Tabaković S., Zeljković M., Mladenović C., Gatalo R.: Uređaj za manipulaciju radnim predmetima ili alatima kod mašina alatki i industrijskih manipulatora, Beograd, Zavod za intelektualnu svojinu, Glasnik intelektualne svojine, 2012, UDK: Broj patenta RS20121243
9.	TABAKOVIĆ, S., ZELJKOVIĆ, M., GATALO, R.: A contribution to workspace analysis of machine tools based on parallel mechanism, Journal of Machine Engineering, 2007, Vol. 7, No. 1, str. 80- 90, ISSN 1895-7595.
10.	Tabaković S., Zeljković M., Živković A., Movrin D., Grujić J.: Development of the endoprosthesis of the femur according to the characteristics of a specific patient with using modern methods for product design and rapid prototyping, Journal for Technology of Plasticity, 2012, Vol. 37, No 2, pp. 195-208, ISSN 0354-3870

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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Tomić J. Josif		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.09.1995		
Scientific or art field:	Electrical Measurements		
Academic career	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	2007	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	2004	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Bachelor's thesis	1990	Faculty of Technical Sciences - Novi Sad	Electrical Measurements

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

	ID	Course name	Study programme name, study type
1.	E130A	Electrical Measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK301	Measurement Systems in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EOS10	Laboratory of electrical measurement	( E01) Power Engineering - Renewable Sources of Electrical Energy, Undergraduate Professional Studies
4.	EIEEM	Electrical and electronic measurements	( BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	EIEEMI	Electrical and electronic measurements in industry	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
6.	EIEKI	Electronic Components in Instrumentation	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIVI	Virtual measurement systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EM456	Computers in the supervisory and control systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	ETI28	Industrial Electronics	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI38	Optoelectronics for communication and sensors	( E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	MR0UL R	Introduction to laboratory practice	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
13.	DE503S	Industrial Electronics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	SI048	Measurement Systems in the Field of Biomedicine	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
15.	BMIM5A	Virtual measurement instrumentation in biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
16.	DE117S	Selected chapters from optoelectronics sensors systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
17.	DE315S	Optoelectronics sensors systems-advanced course	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
18.	DE418S	Design of complex optoelectronics systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
19.	EIDNU	Supervisory Control and Data Acquisition Systems Design	( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	EIMRV1	Real Time Measurements	( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
21.	EIORM	Measurement and Data Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
22.	EM520 Industrial networks and protocols	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
23.	EM532 Design of electronic devices.	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
24.	DE503 Industrial Electronics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies
25.	DE117 Selected chapters from optoelectronics sensors systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
26.	DE315 Optoelectronics sensors systems-advanced course	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
27.	DE418 Design of complex optoelectronics systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

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

1.	Poljak P., Kušljević M., Tomić J.: Power Components Estimation According to IEEE Standard 1459-2010 Under Wide-Range Frequency Deviations, IEEE Transactions on Instrumentation and Measurement, 2012, Vol. 61, No 3, pp. 636-644, ISSN 0018-9456
2.	J. Tomić, M. Kušljević, D. Marčetić, An Adaptive Resonator Based Method for Power Measurements According to the IEEE Trial-Use Standard 1459-2000, IEEE Transactions on Instrumentation & Measurement, Vol. 59, No. 2, pp. 250-258, February 2010.
3.	M. Kušljević, J. Tomić, Lj. Jovanović, Frequency Estimation of Three-Phase Power System Using Weighted-Least-Square Algorithm and Adaptive FIR Filtering, IEEE Transactions on Instrumentation & Measurement, Vol. 59, No. 2, pp. 322-329, February 2010.
4.	Tomić J., Kušljević M., Vujičić V.: A New Power System Digital Harmonic Analyzer , IEEE Transactions on Power Delivery, 2007, Vol. 22, No 2, pp. 772-780
5.	M. Kušljević, J. Tomić, D. Marčetić, Active power measurement algorithm for power system signals under non-sinusoidal conditions and wide-range frequency deviations, IET Generation, Transmission & Distribution, Vol. 3, No. 1, pp. 57-65, September 2008.
6.	D. Marčetić, J. Tomić, M. Kušljević, Unbalanced 3-Phase Distribution System Frequency Estimation Using LMS Method and Positive Voltage Sequence, IET Science, Measurement & Technology, 2013. rad prihvacen za objavljivanje
7.	Bajić J., Stupar D., Tomić J., Slankamenac M., Joža A., Živanov M.: Implementation of the Optical Beam Profiler System Using LabVIEW Software Package and Low-Cost Web Camera, 35. MIPRO - International convention on information and communication technology, electronics and microelectronics - Savjetovanje o mikroročunalima u telekomunikacijama, Opatija: MIPRO Croatian Society, 21-25 Maj, 2012, pp. 173-178, ISBN 978-953-233-069-4
8.	Tomić J., Slankamenac M., Kušljević M., Živanov M.: A Virtual Laboratory for Teaching Frequency Estimation Techniques, 15. International Power Electronics
9.	Stupar D., Bajić J., Slankamenac M., Živanov M., Jelić M., Joža A., Tomić J.: Influence of fiber diameter on fiber optic displacement sensor, 16. International Symposium on Power Electronics – Ee, Novi Sad, 26-28 Oktobar, 2011, pp. 1-5, ISBN 978-86-7892-355-5
10.	Stupar D., Bajić J., Slankamenac M., Tomić J., Živanov M., Jelić M., Manojlović L.: Optoelectronics system for measuring light-wave attenuation in liquids, 3. Research People and Actual Tasks on Multidisciplinary Sciences, Lozenec: Printing house "Angel Kunchev" Univeristy of Rousse 8, Studentska Street, 7016 Rouse, Bulgaria, 8-10 Jun, 2011, pp. 184-188, ISBN 1313-7735

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

Quotation total :	46
Total of SCI(SSCI) list papers :	6
Current projects :	Domestic : 2 International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:		Vilotić Ž. Dragiša	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.01.1975	
Scientific or art field:		Plastic Deformation Technology, Rapid Prototyping, Virtual	
Academic carier	Year	Institution	Field
Academic title election:	1998	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
PhD thesis	1986	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
Magister thesis	1981	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
Bachelor's thesis	1974	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual

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

	ID	Course name	Study programme name, study type
1.	P207	Metal forming	( P00) Production Engineering, Undergraduate Academic Studies
2.	P2401	Advanced Methods in Metal Forming	( P00) Production Engineering, Undergraduate Academic Studies
3.	P2413	Computer Aided Design of Tools and Dies for Metal Forming	( P00) Production Engineering, Undergraduate Academic Studies
4.	P303	Machines for Processing by Deforming	( P00) Production Engineering, Undergraduate Academic Studies
5.	P3403	Technology of Plastic Forming - Shaping of plastic material	( P00) Production Engineering, Undergraduate Academic Studies
6.	P3503	Machines and Devices for Plastic Processing	( P00) Production Engineering, Undergraduate Academic Studies
7.	M2062	Mechanical engineering technologies 2	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
8.	M3203	Technology of machinery	( M30) Energy and Process Engineering, Undergraduate Academic Studies
9.	P3402	Physical and Phase States of Polymers	( P00) Production Engineering, Undergraduate Academic Studies
10.	ZR408A	Safety at work on the machines for processing	( Z01) Safety at Work, Undergraduate Academic Studies
11.	P2407	Rapid Prototyping and Rapid Tooling	( PM0) Production Engineering, Master Academic Studies
12.	P3501	Tool Designing for Plastic	( PM0) Production Engineering, Master Academic Studies
13.	P3503A	Contemporary Process Systems for Plastic Treatment	( PM0) Production Engineering, Master Academic Studies
14.	BMIM4B	Technologies of shaping biomedical materials	( BM0) Biomedical Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies
15.	PMISP1	Modelling and Simulation of Metal Forming Processes	( PM0) Production Engineering, Master Academic Studies
16.	PTS01	Technology of sintering	( PM0) Production Engineering, Master Academic Studies
17.	DP001	Design and Research Methods in Production Engineering	( M00) Mechanical Engineering, Doctoral Academic Studies
18.	DP005	State and Tendencies in Development of Metrology, Quality and Equipment	( M00) Mechanical Engineering, Doctoral Academic Studies
19.	DP008	Contemporary Methods and TPD Systems	( M00) Mechanical Engineering, Doctoral Academic Studies
20.	DP012	Physical Modelling and TPD Simulation by Computers	( M00) Mechanical Engineering, Doctoral Academic Studies
21.	DP015	Nonconventional Procedures of Forming in TPD	( M00) Mechanical Engineering, Doctoral Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type
22.	SID04 Current State in the Field	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( E20) Computing and Control Engineering, Doctoral Academic Studies ( F00) Graphic Engineering and Design, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies ( G00) Civil Engineering, Doctoral Academic Studies ( G10) Geodesy and Geomatics, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies ( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies ( S00) Traffic Engineering, Doctoral Academic Studies ( Z00) Environmental Engineering, Doctoral Academic Studies
23.	DP026 Modern methods for polymers investigation	( M00) Mechanical Engineering, Doctoral Academic Studies
24.	DP028 Theoretical basis for forming polymer technology	( M00) Mechanical Engineering, Doctoral Academic Studies
25.	SID04 Present State in the Field	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies ( Z01) Safety at Work, Doctoral Academic Studies

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

1.	Essa K., Kačmarčik I., Hartley P., Plančak M., Vilotić D.: Upsetting of bi-metallic ring billets, Journal of Materials Processing Technology, 2012, Vol. 212, No 4, pp. 817-824, ISSN 0924-0136
2.	Alexandrov S., Vilotić D., Konjovć Z., Vilotić M.: An Improved Experimental Method for Detrmining the Workability Diagram, Experimental Mechanics, 2012, Vol. 52, No 11340, ISSN 0014-4851
3.	Alexandrov S., Vilotić D.: A study on an effect of geometric singularities on ductile fracture , Engineering Fracture Mechanics, 2009, Vol. 76, No 14, pp. 2309-2315, ISSN 0013-7944
4.	Vilotić D., Plančak M., Čupković Đ., Aleksandrov S., Aleksandrov N.: Free Surface Fracture in Three Upsetting Tests , Experimental Mechanics, 2006, Vol. 46, pp. 115-120, ISSN 0014-4851
5.	Plančak M., Hartley P., Esssa K., Vilotić D., Movrin D., Lužanin O.: Deformation analysis during bi-metallic coining operations, Steel Research International, 2012, pp. 1247-1250, ISSN 1611-3683
6.	Vilotić D., Alexandrov S., Plančak M., Vilotić M., Ivanišević A., Kačmarčik I.: Material Formability at Upsetting by Cylindrical and Flat Dies, Steel Research International, 2012, pp. 1175-1178, ISSN 1611-3683
7.	Vilotić D., Alexandrov S., Plančak M., Movrin D., Ivanišević A., Vilotić M.: Material Formability of Upsetting by V-Shape Dies , Steel Research International, 2011, pp. 923-928, ISSN 1611-3683
8.	Lyamina E., Alexandrov S., Vilotić D., Movrin D.: Effect of Shape of Samples on Ductile Fracture Initiation in Upsetting, Steel Research International, 2010, Vol. 9, No 81, pp. 306-3090, ISSN 1611-3683
9.	D. Vilotić, D. Milikić, M. Plančak, M. Milutinović: Obrazovanje inženjera proizvodnog mašinstva iz oblasti oblikovanja plastike na Fakultetu tehničkih nauka u Novom Sadu, 4. kongres inženjera plastičara i gumara K – IPG 2006., zbornik na CDu, ppt 100 slajdova, Vršac, 13-16. juni 2006.
10.	Obradović R., Vilotić D.: Prikaz tehnologije i opreme za za ultrazvučno zavarivanje termoplastičnih komponenata, Zbornik radova MMA 2006, strana 27-28, FTN, Novi Sad, juni 2006.

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

Quotation total :	17
Total of SCI(SSCI) list papers :	15
Current projects :	Domestic : 1 International : 1

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	



### Science, arts and professional qualifications

Name and last name:	Vujičić V. Vladimir		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.09.1975		
Scientific or art field:	Electrical Measurements		
Academic career	Year	Institution	Field
Academic title election:	2002	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	1992	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	1983	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1974	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

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

	ID	Course name	Study programme name, study type
1.	E142	Measuring Instruments	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK301	Measurement Systems in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EIEEM	Electrical and electronic measurements	( BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EIEEMI	Electrical and electronic measurements in industry	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
5.	EIEMER	Electronic measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIMMB M	Methods of measurement and measurement-acquisition systems in biomedicine	( BM0) Biomedical Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIMNV	Measurements of non-electrical quantities	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIPDMS	Programming of Measurement and Data Acquisition Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EIPMS1	Design and development of industrial devices and measurement systems 1	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	EISMP	Sensors and transducers	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
12.	EIVI	Virtual measurement systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
13.	MR0UL R	Introduction to laboratory practice	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
14.	DE103S	Measurement Systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	DE304S	Measurements in Telecommunications	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
16.	DE404S	Intelligent Measurements	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
17.	SI018	Ionizing and Non-Ionizing Radiation and Protection	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies



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		FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6			
<b>Study Programme Accreditation</b>					
MASTER ACADEMIC STUDIES			Biomedical Engineering		
List of courses being held by the teacher in the accredited study programmes					
ID	Course name	Study programme name, study type			
18.	BMIM5D	Magnetic-Resonance Devices in Biomedicine	( BM0) Biomedical Engineering, Master Academic Studies		
19.	EIDNU	Supervisory Control and Data Acquisition Systems Design	( MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies		
20.	EIORM	Measurement and Data Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies		
21.	DE103	Measurement Systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies		
22.	DE304	Measurements in Telecommunications	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies		
23.	DE404	Intelligent Measurements	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies		
Representative references (minimum 5, not more than 10)					
1.	Sovilj P., Milovančev S., Vujičić V.: Digital Stochastic Measurement of a Nonstationary Signal With an Example of EEG Signal Measurement, IEEE Transactions on Instrumentation and Measurement, 2011, Vol. 60, No 9, pp. 3230-3232, ISSN 0018-9456				
2.	Santrač B., Sokola M., Mitrović Z., Župunski I., Vujičić V.: A Novel Method for Stochastic Measurement of Harmonics at Low Signal-to-Noise Ratio, IEEE Transactions on Instrumentation and Measurement, 2009, Vol. 58, No 10, pp. 3434-3441, ISSN 0018-9456				
3.	Antić B., Mitrović Z., Vujičić V.: Method for Harmonic Measurement of Real Power Grid Signals with Frequency Drift using Internally Generated Reference Frequency, Measurement Science Review, 2012, Vol. 12, No 6, pp. 277-285, ISSN 1335-8871				
4.	J.J.Tomić, M.D.Kušljević, V.V.Vujičić: "A New Power System Digital Harmonic Analyzer", IEEE Trans. on Power Delivery, Vol. 22, No. 2, pp.772-780, April 2007.				
5.	Radonjić A., Vujičić V.: Integer Codes Correcting Burst Errors Within A Byte, IEEE Transactions on Computers, 2011				
6.	Radonjić A., Vujičić V.: Integer SEC-DED Codes for Low Power Communications, Information Processing Letters, 2009, Vol. 110, No 12-13, pp. 518-520, ISSN 0020-0190				
7.	V.Vujičić: "GENERALIZED LOW FREQUENCY STOCHASTIC TRUE RMS INSTRUMENT", IEEE Trans.Instrum.Meas., Vol. 50, No. 5, pp.1089-1092, October 2001.				
8.	S. S. Milovančev, V. V. Vujičić, V. A. Katić: "Improvements of On-Line Measurement in Distribution System Using a New Adding A/D Converter", IEEE Trans. on Power Delivery, Vol. 10, No. 4, pp. 1750-1756, October 1995.				
9.	I. Župunski, L. Holiček, V. Vujičić, S. Milovančev: "POWER FACTOR CALIBRATOR", IEEE Trans. Instrum. Meas., vol. IM-46, No.2, pp. 408-411, Apr. 1997.				
10.	V. Vujičić, I. Župunski, S. Milovančev: "PREDETERMINATION OF THE QUANTIZATION ERROR IN DIGITAL MEASUREMENT SYSTEMS, IEEE Trans. Instrum. Meas., vol. IM-46, No.2, pp. 439-441, Apr. 1997.				
Summary data for teacher's scientific or art and professional activity:					
Quotation total :		9			
Total of SCI(SSCI) list papers :		18			
Current projects :		Domestic :	1	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### 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 career	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 references (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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6		
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>		
Representative references (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

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:		Zeljko V. Milan	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 15.11.1977	
Scientific or art field:		Machine Tools, Flexible Technological Systems and Automatization	
Academic career	Year	Institution	Field
Academic title election:	2007	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design
PhD thesis	1996	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design
Magister thesis	1984	Faculty of Technical Sciences - Novi Sad	Machine Tools, Flexible Technological Systems and Automatization Processes Design
Bachelor's thesis	1977	Faculty of Technical Sciences - Novi Sad	Technological Processes, Techno-Economic Optimization and Virtual Design

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

	ID	Course name	Study programme name, study type
1.	P1402	CAD/CAE/CAM i CIM Systems	( P00) Production Engineering, Undergraduate Academic Studies
2.	P1407	Machine Tools Designing	( P00) Production Engineering, Undergraduate Academic Studies
3.	P1410	Virtual Product Designing	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	P301	Automation in Production Engineering	( P00) Production Engineering, Undergraduate Academic Studies
5.	P304	Processing and Technological Systems	( P00) Production Engineering, Undergraduate Academic Studies
6.	P307	Automated Flexible Technological Systems	( P00) Production Engineering, Undergraduate Academic Studies
7.	ZR308A	Security and Safety Equipment for working	( Z01) Safety at Work, Undergraduate Academic Studies
8.	ZR408A	Safety at work on the machines for processing	( Z01) Safety at Work, Undergraduate Academic Studies
9.	P1405	Contemporary Approach to Product Designing	( PM0) Production Engineering, Master Academic Studies
10.	PR408	Fundamentals on Protection for Operation on Processing Machines	( PM0) Production Engineering, Master Academic Studies
11.	IM2118	Fundamentals of CAD / CAM technology	(I20) Engineering Management, Master Academic Studies
12.	P307A	Flexible technological systems	( E20) Computing and Control Engineering, Master Academic Studies
13.	PP102	Precision of machine tools	( PM0) Production Engineering, Master Academic Studies
14.	PP110	The dynamics of micro machining systems	( PM0) Production Engineering, Master Academic Studies
15.	PP2112	Design of prosthetic devices	( BM0) Biomedical Engineering, Master Academic Studies ( PM0) Production Engineering, Master Academic Studies
16.	DP001	Design and Research Methods in Production Engineering	( M00) Mechanical Engineering, Doctoral Academic Studies
17.	DP003	State and Developing Trend in the Field of Machine Tools, FTS, and Automation of Designing Processes	( M00) Mechanical Engineering, Doctoral Academic Studies
18.	DP010	Behaviour Modelling and Experimental Testing of Working Systems	( M00) Mechanical Engineering, Doctoral Academic Studies
19.	ZRD18A	Behaviour Modelling and Experimental Testing of Working Systems	( Z01) Safety at Work, Doctoral Academic Studies
20.	ZRD235	Systemic regulation in the field of occupational safety and health	( Z01) Safety at Work, Doctoral Academic Studies
21.	ZRD238	State and trends of development safety and health at work in the area mechanical engineering	( Z01) Safety at Work, Doctoral Academic Studies

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

1.	Zeljko V. Milan, Gatalo R.: Experimental and Computer Aided Analysis of High-Speed Spindle Assembly behaviour, CIRP Annals - Manufacturing Technology, 1999, Vol. 48, No 1, pp. 325-328, ISSN 0007-8506
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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

2.	Gatalo R., Hodolič J., Zeljković M., Milošević V., Konjović Z.: Achievements in the development and future development of SAPOR-S systems for automatic programming of NC Lathes , Robotics and Computer-integrated Manufacturing, 1988, Vol. 4, No 1/2, pp. 91-102, ISSN 0736-5845
3.	Gatalo R., Rekecki J., Hodolič J., Borojev Lj., Zeljković M., Milošević V., Konjović Z., Malbaški D.: Automatic design of the technological process for NC lathes by the use of SAPOR-S system, International Journal of Production Research, 1983, Vol. 21, No 2, pp. 197-213, ISSN 0020-7543
4.	Todić V., Zeljković M., Tepić J., Milošević M., Lukić D.: Techno-economic method for evaluation and selection of flexible manufacturing systems, Metalurgija, 2012, Vol. 51, No 3, ISSN 0543-5846
5.	Antić A., Petrović P., Zeljković M., Kosec B., Hodolič J.: The influence of tool wear on the chip-forming mechanism and tool vibrations, Materijali in tehnologije, 2012, Vol. 46, No 3, pp. 279-285, ISSN 1580-2949
6.	Milojević Z., Vičević M., Zeljković M., Navalušić S.: Methodology of the bone tissue diagnostic images processing, Academic Journal of Manufacturing Engineering – AJME, 2012, Vol. 10, No 3, pp. 63-70, ISSN 1583-7904
7.	Milojević Z., Navalušić S., Zeljković M., Vičević M., Beju L.: Haptic interaction program systems development as a part of virtual environment, Academic Journal of Manufacturing Engineering – AJME, 2011, Vol. 9, No 2/2011, pp. 61-66, ISSN 1583-7904
8.	Tabaković S., Živković A., Grujić J., Zeljković M.: Using CAD/CAE software systems in the design process of modular, revision total hip endoprosthesis, Academic Journal of Manufacturing Engineering – AJME, 2011, Vol. 9, No 2/2011, pp. 97-102, ISSN 1583-7904
9.	Živković A., Zeljković M., Tabaković S.: Mathematical Model for the Roller Bearing Life Determination, Academic Journal of Manufacturing Engineering – AJME, 2010, Vol. 8, No 3/2010, pp. 108-115, ISSN 1583-7904
10.	Čiča Đ., Zeljković M., Lakić-Globočki G., Sredanović B., Borojević S.: Identification of contact parameters of spindle-holder-tool assembly using artificial neural networks, 11. International Scientific Conference "Advanced Production Technologies" - MMA, Novi Sad: Fakultet tehničkih nauka, 20-21 Septembar, 2012, pp. 57-60, ISBN 978-86-7892-419-4

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

Quotation total :	22		
Total of SCI(SSCI) list papers :	6		
Current projects :	Domestic :	1	International : 0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Zuković M. Miodrag		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.12.1995		
Scientific or art field:	Mechanics		
Academic career	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Mechanics
PhD thesis	2008	Faculty of Technical Sciences - Novi Sad	Mechanics
Magister thesis	2000	Faculty of Technical Sciences - Novi Sad	Mechanics
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Mechanics

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

	ID	Course name	Study programme name, study type
1.	IAKI01	Selected Chapters in Kinematics	( F10) Engineering Animation, Undergraduate Academic Studies
2.	M103	Mechanics 1	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
3.	M107	Mechanics 2	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
4.	M201	Mechanics 3	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
5.	M2411	Theory of Oscillation	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
6.	M4301	Computer Methods in Mechanics	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
7.	Z108	Fundamentals of Mechanics	( Z01) Safety at Work, Undergraduate Academic Studies ( ZC0) Clean Energy Technologies, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
8.	BMI127	Biomechanics	( BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	M44061	Optimization of mechanical systems	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

ID	Course name	Study programme name, study type	
10. BMIM4A	Transport phenomena and Living systems	( BM0) Biomedical Engineering, Master Academic Studies	
11. M45021	Computer Methods in Mechanics 2	( M40) Technical Mechanics and Technical Design, Master Academic Studies	
12. DTM01	Computer Methods in kinematics and dynamics of mechanical systems	( M40) Technical Mechanics, Doctoral Academic Studies	
Representative references (minimum 5, not more than 10)			
1.	Zukovic, M. and Cveticanin, L.: Chaotic Responses in a Stable Duffing System of Non-ideal Type, Journal of Vibration and Control, 2007, Vol. 13, No. 6, str. 751- 767, ISSN 10775463.		
2.	Zukovic, M., Cveticanin, L., Chaos in non-ideal mechanical system with clearance, Journal of Vibration and Control , 15(8): 1229-1246, 2009		
3.	Miodrag Zuković, TORZIONE PARAMETARSKE OSCILACIJE CILINDRIČNOG ZUPČASTOG PARA SA EVOLVENTNIM OZUBLJENJEM, Magistarska teza, Novi Sad, 2000.		
4.	Zuković, M., NELINEARNE TORZIONE OSCILACIJE U ZUPČASTIM PRENOSNICIMA, VII Međunarodna konferencija fleksibilne tehnologije MMA 2000, Novi Sad, 08.juna 2000.		
5.	Zuković, M., Radomirović, D. Kuzmanović, S.: Analiza uticaja rasporeda zupčanika na dinamiku dvostepenog reduktora, Drugi skup o konstruisanju, oblikovanju i dizajnu KOD 2002, Novi Kneževac, Maj 2002, str. 141-144.		
6.	Radomirović, D., Zuković, M., Gligorić, Radojka: Uticaj ubrzanja, nagiba i mase prikolice na kretanje traktora, Traktori i pogonske mašine, Vol.7, No.4, Novi Sad, Decembar, 2002, str.57-61.		
7.	Zuković, M., Radomirović, D. Rakarić, Z.: Nelinearne oscilacije u mehaničkim sistemima sa zazorom, VIII MEĐUNARODNA KONFERENCIJA FLEKSIBILNE TEHNOLOGIJE, MMA 2003., Novi Sad, Srbija i Crna Gora, 26-27. Jun 2003.		
8.	Radomirović, D., Maretić, R., Zuković, M.: UNUTRAŠNJE KOORDINATE RAVANSKIH KRIVIH U MEHANICI, Letopis naučnih radova, Godina 27(2003), broj 1, strana 119-127		
9.	Radomirović, D., Gligorić, Radojka, Zuković, M.: Kretanje traktora sa jednoosovinskom prikolicom, Traktori i pogonske mašine, Vol.8, No.4, Novi Sad, Novembar, 2003, str.124-129.		
10.	M. Zuković and Z. Rakarić : Steady state vibration of mechanical system with electric motor and nonlinear spring, Book of Abstracts, The First International Conference on COMPUTATION MECHANICS, Belgrade (CM'04), Serbia and Montenegro, November, 15-17, 2004., 31		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :	0		
Total of SCI(SSCI) list papers :	7		
Current projects :	Domestic :	1	International : 0

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Žigić M. Miodrag		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.10.2007		
Scientific or art field:	Mechanics		
Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Mechanics
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Mechanics
Magister thesis	2008	Faculty of Technical Sciences - Novi Sad	Mechanics
Bachelor's thesis	2004	Faculty of Technical Sciences - Novi Sad	Mechanics



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

	ID	Course name	Study programme name, study type
1.	GG15	Strength of Materials	( G00) Civil Engineering, Undergraduate Academic Studies
2.	GG410	Selected Chapters in the Theory of Elasticity	(G00) Civil Engineering, Undergraduate Academic Studies
3.	H112	Mechanics 1 – Fundamentals	( H00) Mechatronics, Undergraduate Academic Studies ( S00) Traffic and Transport Engineering, Undergraduate Academic Studies
4.	H201	Mechanics 2 - General	( H00) Mechatronics, Undergraduate Academic Studies
5.	H202	Strength of materials	( H00) Mechatronics, Undergraduate Academic Studies
6.	H303	Mechatronics 3 – Further Chapters	( H00) Mechatronics, Undergraduate Academic Studies
7.	M204	Strength of Materials	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
8.	M4302	Biomechanics and mechanics of sport	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
9.	M4306	Similarity and dimensional methods	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
10.	BMI128	Continuum Biomechanics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
11.	II1004	Mechanics and Industrial Engineering	( I10) Industrial Engineering, Undergraduate Academic Studies
12.	M44061	Optimization of mechanical systems	( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
13.	M4504	Thermal Elasticity	( M40) Technical Mechanics and Technical Design, Master Academic Studies
14.	BMIM4A	Transport phenomena and Living systems	( BM0) Biomedical Engineering, Master Academic Studies
15.	M45991	Biomechanics of cardiovascular system	( M40) Technical Mechanics and Technical Design, Master Academic Studies
16.	SZD051	Applications of optimal control theory in living environment protection	( Z00) Environmental Engineering, Specialised Academic Studies
17.	DM801	Biomedical mechanics	( M40) Technical Mechanics, Doctoral Academic Studies
18.	DTM02	Theory of impact	( H00) Mechatronics, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( S00) Traffic Engineering, Doctoral Academic Studies
19.	DTM03	Biomechanical models and analysis of impact	( M40) Technical Mechanics, Doctoral Academic Studies
20.	ZRD16A	Selected chapters in mechanics and elasticity theory	( Z01) Safety at Work, Doctoral Academic Studies

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

1.	N. M. Grahovac, M. M. Zigic: Modelling of the hamstring muscle group by use of fractional derivatives, Computers and Mathematics with applications, Vol. 59, Issue 5 (2010), 1695-1700.
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	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6		
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>		
Representative references (minimum 5, not more than 10)			
2.	N. Grahovac., M. Žigić, D. Spasić, On impact scripts with both fractional and dry friction type of dissipation, International Journal of Bifurcation and Chaos, Vol. 22, No 4 (2012), 1250076 (10 pages).		
3.	N. M. Grahovac, M. M. Zigić, and D. T. Spasić: On multiple impacts with fractional type of dissipation, 1st International Congress of Serbian Society of Mechanics, Beograd: Serbian Society of Mechanics, 10-13 April, 2007, str. 173- 180, UDK: 531/534(082), ISBN 978-86-909973-0-5.		
4.	M. M. Žigić, N. M. Grahovac and D. T. Spasić: A simplified earthquake dynamics of a column like structure with fractional type of dissipation, 1st International Congress of Serbian Society of Mechanics, Beograd: Serbian Society of Mechanics, 10-13 April, 2007, str. 165- 172, UDK: 531/534(082), ISBN 978-86-909973-0-5.		
5.	Grahovac N., Žigić M: Fractional derivative viscoelastic model of the hamstring muscle group, 3rd IFAC Workshop on Fractional Differentiation and its Applications, Ankara, Turkey: 05-07 november, 2008.		
6.	M. M. Zigic, Viscoelastic response of the human hamstring muscle during a ramp-and-hold type of experiment, 2nd International Congress of Serbian Society of Mechanics, Palic: Serbian Society of Mechanics, 01-05 June, 2009, str. 165-173, UDK: 531/534(082), ISBN 978-86-7892-173-5.		
7.	Grahovac N., Žigić M., Spasić D.: On impact scripts with both fractional and dry friction type of dissipation, 4. IFAC Workshop on Fractional Differentiation and Its Applications, Badajoz, 18-20 Oktobar, 2010		
8.	Žigić M., Grahovac N.: Dynamical behavior of a polymer gel during impact. Fractional derivative viscoelastic model, 3. International Congress of Serbian Society of Mechanics, Vlasinsko jezero, 5-8 Jul, 2011, pp. 871-878, ISBN 978-86-909973-3-6, UDK: 531/534(082)		
9.	Bačlić B., Žigić M., Phase spaces of rheonomic energy-like conservation laws, 25th Yugoslav Congress on Theoretical and Applied Mechanics, 1-3 June, 2005.		
10.	Kovinčić N., Žigić M., Grahovac N., Spasić D.: On Impact in Biomechanical Systems, International scientific conference on mechanics, 6. International Scientific Conference on Mechanics - Sixth Polyakhov's Reading, Saint Petersburg, 31-3 Januar, 2012, pp. 251-251, ISBN 978-5-91563-101-3		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		5	
Total of SCI(SSCI) list papers :		2	
Current projects :		Domestic :	1
		International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	

### Science, arts and professional qualifications

Name and last name:	Živanov D. Ljiljana		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 15.03.1976		
Scientific or art field:	Electronics		
Academic career	Year	Institution	Field
Academic title election:	2000	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1989	School of Electrical Engineering - Beograd	Electronics
Magister thesis	1980	School of Electrical Engineering - Beograd	Electronics
Bachelor's thesis	1974	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

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

	ID	Course name	Study programme name, study type
1.	E222A	Electronics	( E20) Computing and Control Engineering, Undergraduate Academic Studies
2.	EM303	Microelectronics	( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	H110	Materials in Electrical Engineering	( H00) Mechatronics, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	H311	Application of Sensors and Actuators	( H00) Mechatronics, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	BM117C	MEMS and NEMS	( BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	BMI107	Materials and fabrication technologies in medical devices	( BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	BMI110	Sensors and actuators in medicine	( BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	DE101S	Contemporary microelectronic technologies and materials	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE502S	Micro-sensors and MEMS	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	EM517	Modeling and Simulation of Semiconductor Components	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	SI014	Microelectronic technologies	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
12.	SI024	Application of Sensors and Actuators	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
13.	BMIM1D	Application of MEMS and NEMS in biomedicine	( BM0) Biomedical Engineering, Master Academic Studies
14.	EM519	Sensors, actuators, MEMS and NEMS	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	DE101	Contemporary Microelectronic Technologies and Materials	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE502	Micro-sensors and MEMS	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

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

1.	R. Raghavendra, P. Bellew, N. Mcloughlin, G. Stojanović, M. Damjanović, V. Desnica, Lj. Živanov, "Characterization of Novel Varistor+Inductor Integrated Passive Devices," IEEE Electron Devices Letters , vol. 25, no. 12, pp. 778-780, 2004.
2.	G.Stojanović, M. Damjanović, V. Desnica, Lj. Živanov, R. Raghavendra, P. Bellew, N. Mcloughlin, "High performance zig-zag and meander inductors embedded in ferrite material," Journal of Magnetism and Magnetic Materials, vol. 297/2, pp. 76-83, 2006.
3.	M.Damjanović, G. Stojanović, Lj. Živanov, V. Desnica, "Comparison of different structures of ferrite EMI suppressors," Microelectronics International, vol. 23, no. 3, pp. 42-48, September 2006.



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

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

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

4.	M.Damnjanović, G. Stojanović, V. Desnica, Lj. Živanov, R. Raghavendra, P. Bellew, N. Mcloughlin, "Analysis, design and characterization of ferrite EMI suppressors," IEEE Transactions on Magnetics (impact factor: 0.837), vol. 42, no. 2, pp. 270-277, 2006.
5.	G. Stojanović, Lj. Živanov, "Novel efficient method for inductance calculation of inductors with optimized layout," International Journal of RF and Microwave Computer-Aided Engineering, vol. 16, no. 5, pp. 463-469, September 2006
6.	V. Desnica, Lj. Živanov, O. Aleksić, "The modeling and design of symmetrical thick film EMI/EMC cells", Studies in Applied Electromagnetics and Mechanics: Electromagnetic Fields in Electrical Engineering, vol. 22, pp. 395-400, IOS Press, Amsterdam, 2002
7.	V. Desnica, Lj. Živanov, M. Nimrihter, O. Aleksić, M. Luković: "A Comparative Characteristics of Thick Film Integrated LC Filters", IEEE Transactions on Instrumentation and Measurement - IMTC Special Issue, Vol. 51, No. 4, pp. 570-576,
8.	V. Desnica, Lj. Živanov, O. Aleksić, S. Jenei: "Modeling and optimization of thick film solenoid-bar type inductors and transformers", COMPEL (Computation and Mathematics in Electrical and Electronic Engineering), Vol. 19, No. 2, pp. 615-621, 2000
9.	P.M.Nikolić, M.B.Pavlović, Z.Maričić, S.Djurić, Lj.Živanov, D.Samaras, G.A.Gledhill, "Low temperature far-infrared complete reflectivity spectra of single crystal Ba hexaferrite", Infrared Physics, vol. 33, No.5, Pergamon Press, G.B., pp.401-408, 1992
10.	P.M.Nikolić, Lj.D.Živanov, O.S.Aleksić, D.Samaras, G.Gledhil, J.Collins: "Far infrared optical properties of single crystal Ba- and Sr- hexaferrite", Infrared Physics, Vol.30,

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

Quotation total :	48		
Total of SCI(SSCI) list papers :	12		
Current projects :	Domestic :	1	International : 3

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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Biomedical Engineering</span>	



### Science, arts and professional qualifications

Name and last name:	Živanov B. Miloš		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.04.1994		
Scientific or art field:	Electronics		
Academic career	Year	Institution	Field
Academic title election:	2004	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1992	School of Electrical Engineering - Beograd	Electronics
Magister thesis	1978	School of Electrical Engineering - Beograd	Electronics
Bachelor's thesis	1973	School of Electrical Engineering - Beograd	Physics

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

	ID	Course name	Study programme name, study type
1.	EM414	Optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM301A	Analog Microelectronic Circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM430A	Control and process electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM444B	Applied electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	DE201S	Selected Chapters in Optoelectronics and Photonics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	DE503S	Industrial Electronics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	E1SO01	Modern technologies in electrical engineering	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
8.	H1402	Digital Controlling Electronics	( H00) Mechatronics, Master Academic Studies
9.	SI013	Applied electronics in industry	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
10.	SI035	Electronic Systems in Oil Industry	( E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	BMIM1A	Applications of lasers in medicine	( BM0) Biomedical Engineering, Master Academic Studies
12.	DE117S	Selected chapters from optoelectronics sensors systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE315S	Optoelectronics sensors systems-advanced course	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	DE418S	Design of complex optoelectronics systems	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	EM435A	Electronic Systems in Oil Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	EM437A	The application of electronic systems in clean and renewable energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	EM439A	Electronics in vehicles	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
18.	EM521	Applied optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
19.	EM523	Applied electronics in industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	DE201	Selected Chapters in Optoelectronics and Photonics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
21.	DE503	Industrial Electronics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies
22.	DE117	Selected chapters from optoelectronics sensors systems	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

		UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6					
		<b>Study Programme Accreditation</b>					
		MASTER ACADEMIC STUDIES		Biomedical Engineering			
Representative references (minimum 5, not more than 10)							
1.	Šašić B., Živanov M., Lazić M.: Desing of Multiphase Boost Converter for Hybrid Fuel Cell/Battery Power Sources, Beč, Jatin Nathwani and Artie Ng (Ed.), 2010, str. 1-51, ISBN 978-953-307-401-6						
2.	Manojlović L., Živanov M.: White-Light Interferometric Sensor for Rough Surface Height Distribution Measurement, IEEE Sensors Journal, 2010, Vol. 10, No 6, pp. 1125-1132, ISSN 10.1109/JSEN.2007.90						
3.	Slankamenac M., Lukić-Petrović S., Živanov M., Čajko K.: Electrical switching behavior of bulk $Cu_x(AsSe_{1.410.2})_{100-x}$ glasses: Composition dependence and topological effects, SOLID STATE COMMUN, 2012, Vol. 152, No 13, pp. 1160-1163, ISSN 0038-1098						
4.	Sekulić D., Satarić M., Živanov M.: Symbolic Computation of Some New Nonlinear Partial Differential Equations of Nanobiosciences Using Modified Extended Tanh-function Method, Applied Mathematics and Computation, 2011, Vol. 218, No 7, pp. 3499-3506, ISSN 0096-3003						
5.	Stupar D., Bajić J., Manojlović L., Slankamenac M., Joža A., Živanov M.: A Wearable Low-Cost System for Human Joint Movements Monitoring Based on Fiber-Optic Curvature Sensor, IEEE Sensors Journal, 2012, ISSN 10.1109/JSEN.2007.90						
6.	Manojlović L., Živanov M.: Spectrally Resolved White-Light Interferometric Sensor for Absolute Position Measurement Based on Hilbert Transform, IEEE Sensors Journal, 2012, Vol. 12, No 6, pp. 2199-2204, ISSN 10.1109/JSEN.2007.90						
7.	Bajić J., Stupar D., Manojlović L., Slankamenac M., Živanov M.: A simple, low-cost, high-sensitivity fiber-optic tilt sensor, Sensors and Actuators A: Physical, 2012, Vol. 185, pp. 33-38, ISSN 0924-4247						
8.	Manojlović L., Živanov M., Slankamenac M., Bajić J., Stupar D.: High-speed and high-sensitivity displacement measurement with phase-locked low-coherence interferometry, APPL OPTICS, 2012, Vol. 51, pp. 4333-4342, ISSN 0003-6935						
9.	M.B. Živanov, "Elektronika - elektronske komponente i kola - analiza i projektovanje", 2001. Univerzitet u Novom Sadu, Fakultet tehničkih nauka, No. 129, Novi Sad, str. 651. 2001.						
10.	G.Mančić, S.Martinović, M.Živanov, "Karotažna merenja - osnovni fizički principi", 2002.						
Summary data for teacher's scientific or art and professional activity:							
Quotation total :				32			
Total of SCI(SSCI) list papers :				23			
Current projects :				Domestic :	2	International :	2



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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

### Standard 10. Organizational and Material Resources

To perform a study programme, the adequate human, spatial, technical and technological, library and other resources adequate for the study programme features and predicted students' number are provided. Teaching is done in classrooms and specialized computer laboratories or laboratories for measurement which are equipped with contemporary equipment where students experimentally confirm and deepen material from lectures and practices. Through the emphasis on the individual work, students are prepared for successful further education at the doctoral studies and successful scientific and professional work. The library, located in the building of the Faculty of Engineering, has more than x library units relevant to carrying out this program.

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Biomedical Engineering

**Standard 11. Quality Control**

The quality control of the study programme is performed regularly and systematically through self-evaluation and external quality control. At the Faculty of Technical Sciences there is a perennial positive practice of interviewing students through questionnaire.

The quality control of the study programme is performed through following activities:

(a) Interviewing students by questionnaire at the end of the lectures for the given course, (b) interviewing graduated students by questionnaire about study programme quality and logistic support to the studies at the diploma awarding ceremony, (c) interviewing students by questionnaire about evaluation of logistic support to the studies at the certification of the study year, (d) interviewing students by questionnaire when enrolling to the year of study.

Students assess study programme of the previously completed school year. For monitoring study programme Committee for Quality is formed. The members of the Committee for Quality are the managers of the given study programme and the heads of the departments of the study programmes these courses belong to, or professors assigned by the heads of the departments.



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Biomedical Engineering

### Standard 12. Distance Education

Distance learning is not provided in this study programme.