

REPUBLIC OF MACEDONIA " Ss. CYRIL AND METHODIUS" UNIVERSITY IN SKOPJE FACULTY OF MECHANICAL ENGENEERING - SKOPJE



AN ELABORATE

FOR ACCREDITATION OF STUDY PROGRAM, SECOND CYCLE OF UNIVERSITY ACADEMIC STUDIES (ONE YEAR STUDIES)

STUDY PROGRAM

"SUSTAINABLE ENERGY AND ENVIRONMENT"

NOMINATING INSTITUTION

" Ss. CYRIL AND METHODIUS" UNIVERSITY IN SKOPJE FACULTY OF MECHANICAL ENGINEERING - SKOPJE

SKOPJE, DECEMBER, 2014

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Proposed by: Faculty's Board

Adopted by: Educational-scientific Council

USED REGULATIONS

This elaborate for accreditation of the study program for the second cycle studies in Sustainable energy and environment is made in accordance with the provisions of:

- Law on Higher Education ("Official gazette of the Republic of Macedonia" no. 35/2008, 103/2008, 26/2009, 83/2009, 99/2009, 115/210, 17/2011, 51/2011, 123/2012, 15/2013, 24/2013 and 41/2014),
- The Rulebook for the organization, operation, the way of making decision, methodology for evaluation and accreditation, accreditation standards and evaluation, and other issues related to the work of the Board for Accreditation and Evaluation of Higher Education ("Official Gazette of the Republic of Macedonia" " No. 151 / 2012)
- Statute of the University "Ss. Cyril and Methodius" in Skopje
- The Rulebook for adopting study programs ("University messenger" no. 140/2009)
- The Rulebook for the conditions, criteria and rules for enrollment and study of first and second cycle university studies ("University messenger" no. 141/2009)
- Regulation on the norms and standards for the establishment of higher education institutions and to perform higher education ("Official Gazette of the Republic of Macedonia" no. 103/2010 and 168/2010, Annex 2-Classification of scientific-research areas, fields and areas according to the International Frascati classification)
- Regulation on the National Framework for Higher Education qualifications ("Official Gazette of the Republic of Macedonia", br.154 / 2010),
- The Rulebook for obligatory components that study programs should own from his first, second and third cycle ("Official Gazette of the Republic of Macedonia" no. 154/2011 and 25/2011).

1. MAP OF THE HIGHER EDUCATION INSTITUTION

Name of the high education	"Ss. Cyril and Methodius" University in Skopje
institution	Faculty of Mechanical Engineering - Skopje
Address	P.O.Box 464, 1000 Skopje
Web page	http://www.mf.ukim.edu.mk/
Type of the high education	University / Faculty
institution (public, private-public	
non-profit, private non-profit,	
private profit)	
Data for the founder (private	National assembly of Republic of Macedonia
higher education institution)	
Data for the last accreditation	First cycle – year 2012
	Second cycle – year 2008, 2011, 2012, 2014
	Third cycle – year 2011
Study and research areas for	Research fields:
which accreditation has been	Machinery, Energy, Industrial Engineering and Management,
obtained	Quality Control, Materials, Environment, Transport,
	Transportation, Construction and Water Management,
	Regulation and management of technological processes
	Scientific research area:
	Technical and Technological Sciences
Faculty in the higher education	Faculty at "Ss. Cyril and Methodius" University in Skopje
institution	26 members (21 faculties and 5 institutes)
Study programs that are realized	First cycle:
in the unit who requires extension	a)Four years academic study programs (240 ECTS):
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering
in the unit who requires extension	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics
in the unit who requires extension of the activity by introducing new	a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics Automation and Control Systems
in the unit who requires extension of the activity by introducing new	 a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics Automation and Control Systems b)Three years academic study programs (180 ECTS):
in the unit who requires extension of the activity by introducing new	 a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics Automation and Control Systems b)Three years academic study programs (180 ECTS): Production informatics
in the unit who requires extension of the activity by introducing new	 a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics Automation and Control Systems b)Three years academic study programs (180 ECTS): Production informatics Industrial design
in the unit who requires extension of the activity by introducing new	 a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics Automation and Control Systems b)Three years academic study programs (180 ECTS): Production informatics
in the unit who requires extension of the activity by introducing new	 a)Four years academic study programs (240 ECTS): Production Engineering Transport, Mechanization and Logistics Hydraulic Engineering and Water Management Thermal Engineering Materials, Welding and Construction Engineering Industrial Engineering and Management Motor Vehicles Energy and environment Mechatronics Automation and Control Systems b)Three years academic study programs (180 ECTS): Production informatics Industrial design

	Dechartion During '	~		
	Production Engineering			
	Transport and Logistic	2S		
	Thermal Engineering			
	Automatics and fluids engineering			
	Materials and Welding			
	Industrial Engineering and Management			
	Motor Vehicles			
	Sustainable energy and	l environment	-	
	Mechatronics			
	Product lifecycle mana	-		
	Management and Qual	•		· · · ·
	b) Name of the study		two year Ma	aster studies:
	Industrial design and n	narketing		
	Work Safety	· · · · · · ·		
	Management and Qual	ity Control		
	Th •			
	Third cycle:			
	Study program in Mac	-	1	4
	Study program Industr	lai engineerin	g and manage	ement
Data for international cooperation	The Faculty of Mechar	nical Engineer	ring has inter	national
in the field of teaching, research	cooperation in the field			
and student mobility	1	•		
and student mobility	mobility within the CEEPUS mobility program of teaching and student staff, Erasmus and Erasmus + program (signed			
	several agreements with foreign universities, information			
	available at http:	ii ioreigii uiir	versities, into	Indulon
	//www.ukim.edu.mk/de	okumenti m/	431 Erazmus	+%20dogovo
	ri.doc) and other agree			
Information about area for	1. Total area (gross are			F
teaching and research	(space for teaching ar	/		
8	9918 m ²			
	2. Total teaching area (net space)		
	$\frac{4840 \text{ m}^2}{4840 \text{ m}^2}$			
	3. Number of lecture theaters with total number of chairs			
	lecture theaters with total number of chairs 480			
	4. Number of classrooms with total number of chairs			
	24 classrooms with total number of chairs 1111			
	no. Types of	Number of	Area in	Total
	didactic space	premises	square	seating
	numeration		metres	capacity
	1. Lecture	2	426	480
	I. Lecture	-		
	theaters	-		
		1	228	300

	2.	Classrooms	25	1628,8	1113
		123	1	87	56
		124	1	87	64
		125	1	75	40
		224	1	111	80
		310	1	127	88
		311	1	76	48
		A1-1	1	88	88
		A1-2 left	1	38	38
		A1-2 right	1	43	28
		A1-3	1	43	28
		A1-5	1	43	28
		F1-2	1	54,5	22
		F2-4	1	60,4	32
		F2-5	1	42,3	18
		F2-6	1	53,3	22
		К2-6	1	44,7	28
		К2-7	1	44,7	25
		К2-15	1	44,7	20
		КЗ-9	1	80	40
		К3-1	1	55,1	36
		КЗ-18	1	55,1	36
Information about the equipment for teaching and research		umber of classro uter workplaces	ooms with c	omputer and	capacity of
for teaching and research	comp		lassrooms wit	h total 274 w	orknlaces
	no.	Types of			
	110.	didactic space	premises	square	seating
		numeration	premises	metres	capacity
	1	Computer	10	391	274
		rooms			
		Room 309	1	75	25
		Room 312	1	75	25
		Web Lab			
		Computer	1	79	30
		center 1			
		Computer	1	84	44
		center 2			
		Room	1	47,4	24
		К1-2		-	
		Room	1	47,4	24
		К1-3			
		Room	1	48,3	40
		К2-8			

		1	A A 7	10
	Room	1	44,7	12
	K3-18			
	Idea.lab	1		
	Room	1	35	22
	F1-1			
	Room	1	43	28
	A1-4			
	 Number of labora Equipment for pe 	-	_	
	Equipment value			
Number of students that a accreditation is obtained for	Number of students 450			
Number of students (enrolled for the first time)	Number of regular students on postgraduate studies 209			
Number of staff in teaching and	Structure of the tea	aching staff	in teaching sc	ience, research,
research, scientific and teaching	teaching and associate titles			
positions	Full professor 36			
	Associate professor 9			
	Assistant pro	ofessor	10	
Number of staff with assistant	Structure of assoc		teaching sci	ence, research,
positions	teaching and associa	ate titles	-	
	Teaching As	ssistant	1	2
	Research ass	sistant		7
Teacher : students ratio (number	$209/55 \approx 4$			
of students per teacher) for each	$450/55 \approx 8$			
unit separately				
Internal mechanisms that ensure	Developmen	t of teaching	contents	
quality control for the studies	Completion	of the teachi	ng process	
	Evaluation o	f students	• •	
	Graduation p			
	-	-	ching by studer	nts with surveys
	• Rating the quality of teaching by students with survey at the end of each semester for each subject,			
	 Evaluate the quality of the study program by the 			
			the diploma and	
			-	and logistics of
	the teaching		5 10 100001005	10815005 01
	-	-	σ of the educat	ional process of
				ing in Skopje,
	academic		year	2013/2014
	academic		your	2013/2014

	(http://www.mf.edu.mk/sites/default/files/files/IZVESH TAJ%20za%20samoevaluacija%20na%20MFS%20201 3.pdf)
Frequency of self-evaluation process (every year, two years, three years) Data of last conducted external	In order to provide conditions for continuous improvement of the quality of teaching (educational process) it is provided a self-evaluation in every three years. Report for the subsequent evaluation of Ss Cyril and
evaluation of the institution	Methodius University in Skopje for the 2006-07 period to the 2009-10 year. Issued by the European University Association, 2011. New ongoing in 2014.
Other information that the institution wants to specify as an argument for its success	

1a. General qualification descriptors for second cycle one year university studies 60 ECTS at faculty of Mechanical engineering in accordance with the Regulation on the National Framework for higher education qualifications

Level in the national frame of higher education qualifications	Higher education	Level in the European frame of higher education qualifications
VIIA	Second cycle, university, Master academic studies, One year studies 60 ECTS	7

Knowledge and	Shows the knowledge and understanding in scientific research fields Machinery,
understanding	Energy, Industrial Engineering and Management, Quality Control, Materials,
	Environment, Transport, Construction and water management, regulation and
	management of technological processes, and organizational sciences
	(management) which builds on previous education and training acquired in the
	first cycle of studies, including knowledge in the domain of theoretical, practical,
	conceptual, comparative and critical perspectives in scientific fields and areas
	under the appropriate methodology.
Applying	May apply the acquired knowledge and understanding in the field of course
knowledge and	programs in a way that shows a thorough, professional and competent approach
understanding	to solving tasks in work or profession.
_	Shows the competence in identifying, analyzing and solving problems in related
	scientific areas from the second cycle.
	Is capable of finding and reliance arguments within the field of study of the
	second cycle.
Ability	Is capable of collecting, analyzing, evaluating and presenting information, ideas
assessment	and concepts within the scientific and research realized activities, based on

	relevant acquired data. Making appropriate assessments taking into account the personal, social, scientific research, development and ethical aspects. Capable to evaluate theoretical and practical issues, to form opinion and explain
	the reasons that lead to certain phenomena and choose an appropriate solution.
Communication skills	Capable to establish contacts, to develop arguments and discuss with professional and lay public for questions and information, ideas, problems, tasks and solutions when deciding criteria and scope of the task is clearly defined and set. Undertakes personal responsibility for issues arising out as a result of team work, the collective results. Is capable of independent participation in a professional and comprehensive approach, in terms of running a specific scientific and interdisciplinary discussions.
Learning skills	Take initiative to identify the needs for gaining further knowledge and learning
	with a high degree of independence.

1b. Specific qualification descriptors that determine learning outcomes for second cycle one year university studies 60 ECTS at study program Sustainable energy and environment in accordance with the Regulation on the National Framework for higher education qualifications

Knowledge and	Shows the thorough knowledge and understanding in scientific research
understanding	fields and areas acquired in the second cycle and relate to:
	• Knowledge of energy sources, ways of transformation and its efficient
	use
	Operation and maintenance of power plants
	 Regulations and testing of machines and power plants
	• Technical control, supervision and inspection during the construction of power plants and systems
	• Development of expert reports on energy machinery and equipment
	• Knowledge of techniques, rules and measures to protect the environment
Applying knowledge	Qualified for the study of complex tasks under consideration, showing
and understanding	elements of insight, and can apply knowledge and understanding in a way
	that indicates a professional approach to the job or profession.
	Shows the competence in identifying, analyzing and solving problems in
	related scientific fields studied in the second cycle.
	He/she is capable of finding and reliance arguments within the field and areas
	of study.

Ability assessment	Possesses the ability to collect, analyze, evaluate and present information, ideas, concepts of relevant data. Makes appropriate estimates taking into account the personal, social, scientific and ethical aspects. Able to evaluate the theoretical and practical issues in the field of Sustainable energy and environment, to give arguments explaining the causes that give rise to certain phenomena, explaining the rules and choose an appropriate solution.
Communication skills	Develops ability to establish communication and to discuss with the experts, and the lay public, for information, ideas, problems and solutions when deciding criteria and scope of the task is clearly defined. Taking split, separate collective responsibility for results. Is capable of independent participation, professional approach, specific, scientific and interdisciplinary discussions.
Learning skills	Take the initiative to identify the needs for further knowledge acquisition and learning with a high degree of independence, ie estimates of the need for continuous upgrading his knowledge and skills.

2. Decision for adopting the study program by the Academic Council of Scientific unit (faculty of Mechanical engineering – Skopje), or school board of the Independent High School or the Scientific Council of the scientific institution.

The document is attached in Appendix 1 at the end of this elaborate.

3. Decision for adopting the study program from Rector's Office or the University Senate Council or the Council of scientific institution

The document is attached in Appendix 2 at the end of this elaborate.

4. Scientific research field and area of the study program

Study program: Sustainable energy and environment, one year university studies

Scientific research area	Technical and technological sciences
Scientific research field	Mechanical Engineering, Energy, Environment
Scientific research range	Areas of these scientific research fields studied in this course programs according to the study program, as well as areas that correspond to the course programs studied in the study program, and belong in research fields that are not listed.

5. Type of the study program (academic or professional studies)

The type of studies of the Sustainable energy and environment study program in organization of the Faculty of Mechanical engineering in Skopje is academic, university studies.

6. Level of education (first or second cycle)

Sustainable energy and environment study program is organized by the Faculty of Mechanical engineering in Skopje is second cycle, one year studies with 60 ECTS.

7. Purpose and justification for the study program in Sustainable energy and environment

The Faculty of Mechanical Engineering – Skopje at "Ss. Cyril and Methodius" University in Skopje is the leading institution in educating mechanical engineers in this country. In order to satisfy the requirements deriving from foreign investors, but also from domestic manufacturing companies, it is needed constantly educating personnel who have new interdisciplinary knowledge, and successfully responding to global trends. The Institute of Thermal technology and thermal power and the Institute for Hydraulic Engineering and Automation at faculty of Mechanical Engineering in Skopje, suggests study program which results from the previously derived comprehensive analysis and identification of needs and employment opportunities for university graduates in: Research and optimization of energy systems and installations, management and management of energy facilities and systems, energy management systems and systems design, construction and operation of power plants, design and construction of thermal machines and plants, technical inspection and control the design and construction of energy plants and systems, protection environment. Recognizing the basic profile competencies and acquired qualifications in motor vehicles this study program justifies expectations for analysis, exploration of energy sources, ways of transformation and its efficient use, design and construction of thermal machines and facilities, design and construction hydropower and hydrotechnical installations and machinery, management and exploitation of thermal and hydraulic plants and systems, regulations and testing of thermal and hydraulic machines and plants, technical control and inspection during construction of thermal and hydraulic plants and systems, expertise and expertise in the field thermal and hydraulic machines and plants, regulations and measures to protect the environment.

Another very important fact of such a study program in English are the provisions of the Law for Higher education which stipulates the minimum necessary study programs at higher education institution. The above reasons are showing the basic elements of social viability and the benefit of this study program and its sustainability in the future.

8. Years and semester duration of the study program

The study program in Sustainable energy and environment is implemented for a period of one year, or two semesters.

9. ECTS credits that the student acquires

With the completion of one year university academic studies of second cycle study program in Sustainable energy and environment, organized by the Faculty of Mechanical Engineering in Skopje, students shall acquire 60 ECTS.

10. Way of financing, and for private higher education institutions and scientific institutions, and proof of quality provided financial assurance for the study program

Covering the costs of the postgraduate study program in Sustainable energy and environment will be done by self-financing by the candidates. The amount, method of payment, and all other conditions are regulated by the conditions, rules and criteria for enrollment and study in the first and second cycle of studies at the University of "Ss. Cyril and Methodius" in Skopje. If the State participates in future, the amount of participation will be taken into account when defining the amount of funds for co-financing.

11. Enrollment conditions

The right to enroll in this study program have students that have completed a university, academic studies and have acquired 240 ECTS, and completed studies in accordance with the law of higher education before the introduction of the ECTS system according to the Bologna Declaration.

The enrollment of students in the second cycle of all study programs will be implemented in accordance with the provisions of the Competition for enrollment of students for the second cycle of "Ss.Cyril and Methodius" University in Skopje.

The teaching boards of the study program will decide for the fulfillment of the similarity of previously completed education.

12. Information for continuing student's education

After completion of the second cycle of university academic studies at the Sustainable energy and environment study program at Faculty of Mechanical Engineering in Skopje, students can continue their education at the third cycle.

13. Fixed ratio between required and elective courses, with a list of required and a list of electives and defined way of selecting courses

The second cycle of university, academic studies at Sustainable energy and environment study program, is organized as a regular one-year (two-semester) study.

The study program is a continuation - deepening the knowledge acquired in the first cycle of university, academic studies for a period of four years.

There are four recognized modules at the second cycle of university studies

- 1. Module M4 Knowledge of mathematics and computer science
- 2. Module M5 Advanced levels of basic knowledge
- 3. Module M6 Advanced levels of specific knowledge
- 4. Module M7 Master thesis

One year of university second cycle studies is containing a number of course programs (subjects) that have a certain number of credits, as defined in the course programs.

The structure of annual academic, university studies, second cycle, Sustainable energy and environment study program, is given in Table 1, and the ratio between required and elective courses in Table 2.

Table 1.

No.	Course programs (subjects)	ECTS	Winter	Summer	
			semester	semester	
			IX	Χ	
1.	M4-1 Elective course from table 3	6	6		
2.	M5-1 Elective course from table 4	6	6		
3.	M5-2 Elective course from table 4	6	6		
4.	M5-3 Elective course from table 4	6	6		
5.	Elective from University list	6	6		
6.	M6-1 Elective course from table 5	6		6	
7.	M6-2 Elective course from table 5	6		6	
	M7 Master thesis	18		18	
Total	credit per semester:		30	30	
Total	credit:	42 ECT	42 ECTS from courses + 18 ECTS		
		from ma	aster thesis =	60 ECTS	

Table 2.

No.	Study	Duration of the	Total	Number /	Number /	Number /
	Program -	studies	number/	percentage of	percentage	percentage
	subprogram	(years)/ECTS	percentage of	the compulsory	of the	of the
	1 0		the study	courses by	elective	elective
			program	module (60%)	courses,	courses,
					from study	from
					program	University
					(30%)	list (10%)
1.	Sustainable	1 year	7	0	6	1
	Energy and	60 ECTS	100%	0 %	86 %	14 %
	Environment					

Table 3. Elective courses from faculty module M4, knowledge of mathematics and computer science

No.	Course programs (subjects) –one course is elected	ECTS
1.	Selected topics in Applied Mathematics	6
2.	Selected topics in informatics	6
3.	Probability and Statistics	6

Table 4. Elective courses from faculty module M5, advanced levels of basic knowledge

No.	Course programs (subjects) - three courses are elected	ECTS
1.	Modern thermal plants	6
2.	Advanced thermodynamics – selected chapters	6
3.	Transport and the environment	6
4.	Fluid mechanics in environmental engineering	6
5.	Environmental measurement methods and monitoring systems	6
6.	Environmental systems analysis	6
7.	An introduction to eco-innovations	6

Table 5. Elective courses from faculty module M6, advanced levels of specific knowledge

No.	Course programs (subjects) - two courses are elected	ECTS
1.	Non-conventional power plants	6
2.	Water and waste water treatment	6
3.	Energy efficiency	6
4.	Eco-engines	6
5.	Design of fluid conveying and hydro power system	6
6.	Waste management	6
7.	Energy vs. sustainable development: Concepts and aspects	6
8.	Automation of environmental processes	6
9.	Clean fossil and alternative fuels energy	6
10.	Experts in teamwork	6

The structure of the study program is providing a free course from the list of university courses proposed by each unit of the university, especially to meet the elective 10% under Article 99 of the Law on Higher Education from which students can choose only one course program.

Free list of university course programs are supplemented by all accredited courses from the second cycle (compulsory and elective) at the faculty of Mechanical Engineering in Skopje.

According to the Law on Higher Education the courses are provided in Macedonian language, and courses of certain programs can be conducted in English, to meet the provision in Article 99 of the Law on Higher Education "window for mobility".

14. Information about provided space for the realization of the study program

Postgraduate studies are organized as full-time study with teaching. The Faculty of Mechanical Engineering has sufficient space for the implementation of teaching the first, second and third cycle, which is included in the map of higher education institution. The practical part of teaching is mostly performed in the laboratories of the faculty of Mechanical Engineering, which are also listed in the map of higher education institution.

The course programs envisages clinical teaching as well as recommended in the legislation, which is carried out in the workplace, the economy or the faculty by hiring prominent experts from practice.

15. List of equipment provided for the realization of the study program

The faculty of Mechanical Engineering - Skopje has the following laboratory equipment which is used for teaching:

- Spectrometer System for Field Measurements S::CAN Austria, http://www.s-can.at/
- WTW Wissenschaftlich-Technische Werkstätten GmbH Germany, http://www.wtw.de
- Portable Data Acquisition System (PDAS) for Ambient vibration measurements
- Spectrophotometers for Laboratory Measurements, Hach-Lange Gmbh Germany, http://shop.hachlange.com
- Portable Radar Flow Meter with Automatic Water Sampler; Hach-Lange Gmbh Germany, http://shop.hach-lange.com
- Ammonia, Nitrate, Chlorine, Potassium, Temperature and pH Ion-Selective Measurement System;
- Nadler Chemische Analysentechnik AG Switzerland, http://www.nadler.ch/
- Dissolved Oxygen and Conductivity Measurement Equipment; S::CAN Austria, http://www.s-can.at/
- Devices for chemical preparation of water,
- Handheld devices for measuring water quality Eureka Manta Multiprobe Logger 3.0, Cond Graphite,
- 4 electrode, Amphibian Display Package;
- Ultrasonic flowmeter EESIFLO PORTALOK 7S;
- Hiperspectral process photometer spectro::lyser:
- Data acquisition system con::stat industrial process control terminal (900/1800 MHz GSM);
- Laboratory testing equipment, Laboratory Conductivity Meter, Laboratory Oxygen Meter;
- GPS Global Positioning Unit, One Frequence R3 GPS system (Base+rover) with post-processing software Trimble Recon;
- Zeta Meter 3.0 + System with Microscope Unitron FSB 4c;

- Hydraulic system for measurements of small turbine;
- System for laboratory tests of fluidized bed combustion (defining the flow and the temperature in the
- combustion of solid fuels in fluidized bed);
- Portable pressure sensor;
- sensors for fluid pressure
- force sensor
- sensors (of different types) to measure temperature;
- A device for measuring relative humidity and speed;
- Chamber for air conditioning on a certain temperature and relative humidity;
- Chamber of examination and testing of thermal devices;
- Instruments for measuring heat.

16. Course programs information in accordance with Article 4 of the Regulation for obligatory components that should own the study programs from the first, second and third cycle (Official Gazzete of the Republic of Macedonia" no. 21/2011) and the Regulation for changes and supplement of the Regulation for obligatory components that should own the study programs from the first, second and third cycle ("Official Gazzete of the Republic of Macedonia" no. 154/2011)

Add	.3	Course program for th	he seco	nd level (second	cyc	le - postgraduate) (of studies
1.	Course title			Selected topics in applied mathematics			
2.	Code		1	M4SEE01			
3.	Study group	(s)	S	SEE			
4.	The organize	er of the study program (u	nit, '	Ss. Cyril and M	etho	lius" University in	Skopje,
	institute, dep	partment)	I	Faculty of Mecha	anica	l Engineering - Sko	pje
5.	Level (first,	second, third degree)	S	Second			
6.	Academic ye	ear / semester	V	V / winter	7.	ECTS credits	6
8.	Professor(s)			Prof. dr. Aleksa M	Malc	heski	
	Ass. Prof. dr. Bojan Prangoski						
9.	Prerequisites	s for enrolling the course	1	None			
10.	Course object	ctives (competences):					
	Introduction	to selected topics in nume	erical a	nalysis, optimiza	tion,	linear algebra, diffe	erential
		d complex analysis.					
11.	Course conte						
		plems in numerical mather					complex
		plication of software tools		<u> </u>			
12.	Study metho	ds: lectures, lab, project a	ssignm	1	Ŭ		
13.	Total hours			6 ECTS x 30 = 180 hours			
14.		tion per activity:		30+15+40+30-	+65 =	= 180 hours	
15.	Lectures/Lat	0	15.1.	Lectures (15 w	reeks	x 2)	30 hours
			15.2.	Lab (student w	ork)		15 hours

16.	Project Work/Assignments 16.1			16.1.	Project assignmen	40 hours		
			-	16.2.	2. Individual assignments		30 hours	
			-	16.3.	Self-study		65 hours	
17.	Points/	Marks	:					
	17.1.	H	Exams				40	
	17.2.	F	Projects				50	
	17.3.	A	Attendance				10	
18.	Gradin	g scale	2		Under	50	5 (five) (F)	
10.	orwann	8 5 6 6 1 6			51 - 60 poi		$\frac{6 (six) (1)}{6 (six) (E)}$	
					61 - 70 poi		7 (seven) (D)	
					71 - 80 poi	nts	8 (eight) (C)	
					81 - 90 points		9 (nine) (B)	
					91 - 100 points 10 (ten)			
19.	Prerequ	uisites	for taking the final exam	A	Activity 16.1			
20.	Langua	age		F	English			
21.	Course	evalua	ation	S	Student questionnaire			
22.	Textbo	oks						
	22.1	Instr	uction materials					
		No.	Author		Title	Publisher	Year	
		1.	R. Fletcher		Practical methods of optimization	John Willey and Sons	2006	
		2.	Alhfors L.		Complex analysis	McGraw Hill	2009	
		3.	S. Axler		Linear Algebra Done Right	Springer	2004	
	22.2	Supp	blemental Instruction Mate			•	•	
		No.	Author		Title	Publisher	Year	
		1.	A. Ralston, P. Rabinowi	N	A First Course in Numerical Analysis	Dover Publications	2001	

Add. 3		Course program for the second level (second cycle - postgraduate) of studies				
1.	Course title		Selected topics in	ı info	ormatics	
2.	Code		1M4SEE02			
3.	Study group(s	SEE				
4.	The organizer	of the study program (unit,	t, "Ss. Cyril and Methodius" University in Skopje,			
	institute, depa	artment)	Faculty of Mechanical Engineering – Skopje			
5.	Level (first, se	econd, third degree)	Second			
6.	Academic yea	ar / semester	V / winter	7.	ECTS credits	6

-								
8.	Professor(s)				Prof. Dr. Dushan Chakmakov			
	Deserve initial Company Iling the second				Ass. Prof. dr. Emilija Celakoska			
9.	Prerequisites for enrolling the course				None			
10.			ives (competences):		с :с о	c · ·	1	
11			se of computer databases	or use	e of specific software	for engineering	g applications.	
11.	Course			an data	hagag Ingluding, rala	tional database		
			of basic topics in compute ign and normalization and					
			the students can choose					
			ccording to their interests			er sontware for	engineering	
12.						actice selfrunn	ing and/or team	
12.	Study methods: Interactive lectures, auditory and/or laboratory practice, selfrunning and/or team work on project assignments, selfrunning assignments							
13.	Total hours $6 \text{ ECTS } \times 30 = 180 \text{ hours}$							
14.			ion per activity:		30+30+60+60=180			
15.	Lecture			15.1.			30 hours	
				15.2.		/	/	
16.	Project	Work	Assignments	16.1.			30	
				16.2.	. Individual assignm	nents	60	
	1			16.3.	Self-study		60	
17	Dainta/	I a ml a m						
17.	Points/1 17.1.		Exams				50	
	17.2.		rojects				50	
	17.3.	A	Attendance				/	
18.	Grading	g scale	:		Under 50		5 (five) (F)	
					51 - 60 points		6 (six) (E)	
					61 - 70 points		7 (seven) (D)	
					71 - 80 poir		8 (eight) (C)	
					81 - 90 poir		9 (nine) (B)	
10	D	••,	0 1 1 1 0 1		91 - 100 poir	nts	10 (ten) (A)	
19.			for taking the final exam					
20.	Langua	-			English			
21.	Course	evalua	ation		Student questionnaire			
22.	Textboo	oks						
	22.1	Instr	uction materials					
		No.	Author		Title	Publisher	Year	
		1.	Oppel A.		Database	McGrow-	2004	
			**		Demystified	Hill		
		2.	Gilat A.		MATLAB An	John Wiley	2011	
					Introduction with	& Sons		
					Applications			

22.2	22.2 Supplemental Instruction Materials						
	No.	Author	Title	Publisher	Year		
	1.	Cormen T.H., Leiserson C.E., Rivest R.L., Stein C.	Introduction to Algorithms, 3rd edition	The MIT Press	2009		

Add	1. 3	Course program for	r the se	cond level (second cycle	e - postgraduate)	of studies		
1.	Course ti	tle	P	Probability and statistics				
2.	Code		1	1M4SEE03				
3.	Study gro	oup(s)		EE				
4.		nizer of the study program		Ss. Cyril and Methodius'				
		titute, department)	F	aculty of Mechanical En	gineering - Skopj	e		
5.		est, second, third)		econd				
6.	Academic year / semester				ECTS credits	6		
8.	Professor			rof. dr. Nikola Tuneski				
9.	Prerequis		N	lone				
10.	Introduct	Course objectives (competences): Introduction to the probability and techniques for probability calculations. Usage of elements of statistics and statistical estimates.						
11.	Course content: Combinatory. Theory of probability: classical approach, conditional probability, Bayes formula. Random variables, limit theorems. Elements of statistics: parameter estimates, interval estimates, testing hypothesis.							
12.	Study me	thods: lectures, lab, proje	ect assig	gnments, individual assig	gnments, self-stud	у.		
13.	Total hou	ırs		6 ECTS x 30 = 180 h	nours			
14.	Hours all	ocation per activity:		30+15+40+30+65 =				
15.	Lectures/	Lab	15.1.	Lectures (15 week x	2)	30 hours		
			15.2.	· · · · · · · · · · · · · · · · · · ·		15 hours		
16.	Project W	Vork/Assignments	16.1.			40 hours		
			16.2.	Individual assignment	nts	30 hours		
			16.3.	Self-study		65 hours		
17.	Points/M	arks:			·			
	17.1.	Exams				40		
	17.2.	Projects				50		
	17.3.	Attendance				10		
18.	Grading s	scale		Under 50		5 (five) (F)		
				51 - 60 points		6 (six) (E)		
1								

				71 - 80 poin	ts	8 (eight) (C)		
				81 - 90 poin		9 (nine) (B)		
				91 - 100 poin		10 (ten) (A)		
19.	Prerec	quisites	for taking the final exam	Activity 16.1	·	, , , , , , , , , , , , , , , , , , ,		
20.	Langu	iage		English				
21.	Cours	e evalua	ation	Student questionnaire				
22.	Textb	ooks						
	22.1.	Instruc	ction materials					
		No.	Author	Title	Publisher	Year		
		1.	Walpole R.E., Myers R.H., Myers S.L., Ye K.	Probability & Statistics for Engineering & Scientists	Prentice Hall	2007		
		2.	J.P. Marques de Sa	Applied Statistics using SPSS, STATISTICA and MATLAB	Springer- Verlag	2003		
	22.2.	Supple	mental Instruction Materi	als				
		No.	Author	Title	Publisher	Year		
		1.	Mendenhal W., Sincich T.	Statistics for Engineering and the Sciences	Maxwel Macmillan	1992		

Add	. 3	Course program for the	e second level (secon	d cy	cle - postgraduate) of	fstudies	
1.	Course title		Modern thermal po	wer p	olants		
2.	Code		1M5SEE01				
3.	Study group	(s)	SEE				
4.	The organize	er of the study program	"Ss. Cyril and Meth	nodiu	s" University in Skopj	e,	
	(unit, institut	te, department)	Faculty of Mechani	cal E	ngineering – Skopje		
5.	Level (first,	second, third)	Second				
6.	Academic ye	ear / semester	V / Winter	7.	ECTS credits	6	
8.	8. Professor Prof. dr. Slave Armenski						
9.	Prerequisites	6	None				
10.	Course object	ctives (competences):					
	Profound kn	owledge of modern facilitie	es that analyze, desig	n, an	alysis and selection of	•	
	advanced eq	uipment, technical control,	supervision and insp	ectio	n during construction,		
	exploitation	and maintenance, environn	nental protection				
11.	Course conte						
		on of plants with increased					
	1	riple loop-three generation	1	•	-	ces;	
	efficiency co	pefficient; equipment; econ	omic and environment	ntal a	spects		

12.	Study r	nethod	ls.					
13.	Total h				6 ECTS x 30 = 18	30 hours		
14.			ion per activity:		30+45+40+30+35			
15.	Lecture			15.1			30 hours	
				15.2			45 hours	
16.	Project	Work	/Assignments	16.1	. Project assignmen	nts	40 hours	
				16.2	. Individual assignment	ments	30 hours	
				16.3	. Self-study		35 hours	
17.	Points/	Marks	•		1			
	17.1.	Γ	Tests				50 points	
	17.2.	F	Projects				50 points	
	17.3.	A	Attendance				-	
18.	Grading scale Under 5				r 50	5 (five) (F)		
					51 - 60 po	oints	6 (six) (E)	
					61 - 70 po	oints	7 (seven) (D)	
		71 - 80 points				oints	8 (eight) (C)	
					81 - 90 po		9 (nine) (B)	
					91 - 100 po		10 (ten) (A)	
19.	Prerequ	isites	for taking the final exan	n	Accomplished 16.1	and 16.2		
20.	Langua	ge			English			
21.	Course	evalua	ation		Student questionnai	re		
22.	Textbo	oks						
		Instr	uction materials					
		No.	Author		Title	Publisher	Year	
		1.	L. Drbal et al.		Power Plant	Black&Veatch,	1996	
					Engineering	Chapman&Haal,		
	22.1.					New York		
		2.	Klas Jonhagen:		"Modern Thermal	Lund University	January,	
					Power Plant-		2011,	
					Aspects on		Sweden	
					Modelling and Evaluation"			
		Supplemental Instruction Materials						
	22.2	No.	Author		Title	Publisher	Year	
	22.2.	1.	B.W.Wilkinson,		Cogeneration of	CRC Press, Inc,		
			R.W.Barnes		Electricity and	Boca Raton,		
					Useful Heat	Florida		

Add	Add. 3 Course program for the second level (second cycle - postgraduate) of studies								
1.	Course title	Advanced thermodynamics - selected chapters							
2.	Code	1M5SEE02							
3.	Study group(s)	SEE							
4.	The organizer of the study program (unit,	"Ss. Cyril and Methodius" University in Skopje,							
	institute, department)	Faculty of Mechanical Engineering - Skopje							
5.	Level (first, second, third degree)	Second							
6.	Academic year / semester	V / winter 7. ECTS credits 6							
8.	Professor	Assoc. prof. Risto Filkoski							
9.	Prerequisites for enrolling the course	None							
10.	Course objectives (competences):								
	related to mechanical engineering, with emphasize to thermal power engineering and environmental protection. The course includes additional thermodynamics relations, including advanced thermodynamic cycles, two- and three-component systems and their applications. The course also covers advanced topics in conduction, convection and radiation heat transfer and related industrial applications.								
	Advanced methods of modelling techniques of fluid flow, turbulence, combustion and heat transfer in engineering applications, with emphasize on numerical modelling. Engineering and scientific approach to the advanced techniques of modelling and simulation of thermal processes. Ability to create and use software applications for design, energy efficiency analysis and operating problems solution of steady-state and dynamic systems in the field of thermal and power engineering.								
11.	irreversible processes. Entropy. Thermodyn chemical potential, Maxwell relations. Mult equilibrium. Energy and exergy analysis of Real gases, Van der Waals equation of state other equations. Liquid state. Internal press Third law of classical thermodynamics, ext Mixtures and mixing. Binary solutions. The Thermo-mechanical transformations. Therm and plants. Advanced thermodynamic cycle Thermodynamic efficiency of the processes exergy balance, energy analysis, Grassmann Mass and energy balance of combustion pro process of solid, liquid and gaseous fuels. H similarity. Heat transfer in different applica Selected chapters on fluid flow, turbulence, Computational fluid dynamics (CFD) and c volume method. Discretisation of the gover	thermal engineering systems e of real gases, equation of corresponding states and ure, surface stress and capillary phenomenon. ensivity, entropy.Flow of compressible fluids. ermodynamics of two- and three component systems. nodynamic processes in thermal machines, facilities es. a, maximal work, maximal technical work - exergy, n diagram for exergy flow becess. Kinetics and dynamics of the combustion Heat transfer topics and efficiency. Theory of tions in power engineering and process industry.							

12.	 chemical reactions. Modelling of combustion. Modelling of heat transfer with CFD/CTA. Convection. Radiation energy transfer. Equation for radiation energy transfer. Modelling of thermal radiation heat transfer by different methods. Time-dependant flow modelling, modelling of transitional processes. CFD technique as a tool for modelling operation of burners, combustors, combustion chambers, boiler plants, industrial furnaces (ovens), other industrial facilities and devices. Modelling of the formation and reduction of air pollutants (CO, NO_x, SO₂, etc.). Study methods: Interactive lectures, auditory and/or laboratory practice, selfrunning and/or team work on project assignments, selfrunning assignments 								
13.	Total ho	ours				6 ECTS x 30 hour	s = 180 hc	ours	
14.			ion per activity:			30+30+35+15+60			
15.	Lecture			15.1.		Lectures (15 week			30 hours
				15.2		Lab (student work)		30 hours
16.	Project	Work	Assignments	16.1		Project assignmen	ts		35 hours
				16.2.		Individual assignm	nents		15 hours
				16.3	3. Self-study				60 hours
17.	Points/N	Points/Marks:							
	17.1.	E	Exams						50 points
	17.2.	Р	Projects						45 points
	17.3.	A	Attendance						5 points
18.	Grading	g scale						5 (five) (F)	
	-				51 - 60 points			6 (six) (E)	
					61 - 70 points				7 (seven) (D)
						71 - 80 poi			8 (eight) (C)
				_		81 - 90 poi			9 (nine) (B)
10		•••				91 - 100 poi			10 (ten) (A)
19.	-		for taking the final exam			ctivities 15.2 and 1	6.1		
20.	Langua	•				nglish			
21.	Course		ation		St	tudent questionnair	e		
22.	Textboo	oks			_				
	22.1	Instr	uction materials						
		No.	Author			Title	Publis	sher	Year
		1.	K. Annamalai, I. K. Pu	ri,	A	dvanced	CRC Pre	ess,	2011
			M. A. Jog,			hermodynamics ngineering	2nd editi	ion	
		2.	I. D. Holclajtner			eneral course of	ZUNS,		2000
			Antunovic			hysical chemistry	Universi Belgrade	-	

	3.	Baukal C.E. et al.	CFD in Industrial Combustion	CRC Press	2001
22.2	Supp Mate	lemental Instruction rials			
	No.	Author	Title	Publisher	Year
	1.	Baukal C.E. et al.	Heat Transfer in Industrial Combustion	CRC Press	2000
	2.	Filkoski R.	Modelling of energy conversion processes	Faculty of Mechanical Eng., Skopje	2011
	3.	Petrovski K.	Termodinamics, 3rd edition		1999

Add	. 3	Course program for t	he second	l level (second c	cycle	- postgraduate) of	fstudies		
1.	Course ti	tle	ſ	Transport and the	e env	ironment			
2.	Code		1	1M5SEE03					
3.	Study gro	oup(s)	Ε	E					
4.		nizer of the study program (department)		•		lius" University in l Engineering - Sko			
5.	Level (fir	st, second, third degree)	S	Second					
6.	Academi	c year / semester	V	/ / winter	7.	ECTS credits	6		
8.	Professor		F	Prof.d-r Mile Dimitrovski					
				Doc.d-r Dame Di	imitr	ovski			
9.		ites for enrolling the course		None					
10.	. Course objectives (competences): Analytical approach to combustion in IC engines, modeling IC engines and technologies for reduction of exhaust emissions. Calculation of real cycles, measuring performance and pollution.								
11.		ontent: Learning the real pro e, pollutant behavior after c							
12.		thods: Interactive lectures, project assignments, selfrur			y pra	ctice, selfrunning a	nd/or team		
13.	Total hou		0	6 ECTS x 30 =	= 180	hours			
14.	Hours all	ocation per activity:		30+30+30+30-	+60 =	= 180 hours			
15.	Lectures/	Lab	15.1.	Lectures (15we	eek x	(2)	30 hours		
			15.2.	Lab (student w	ork)		30 hours		
16.	Project W	Vork/Assignments	16.1.	Project assignment	nents	5	30 hours		
			16.2.	Individual assi	gnm	ents	30 hours		
			16.3.	Self-study			60 hours		
17.	Points/M	arks:	I	1					

	17.1.	I	Exams			50
	17.2.	P	Projects			45
	17.3.	Α	Attendance			5
18.	Grading	g scale	1	Under 50		5 (five) (F)
				51 - 60 poir	nts	6 (six) (E)
				61 - 70 poir	nts	7 (seven) (D)
				71 - 80 poin	nts	8 (eight) (C)
				81 - 90 poin		9 (nine) (B)
				91 - 100 poin Presented projects	nts	10 (ten) (A)
19.	Prerequ	isites	for taking the final exam			
20.	Langua	ge of l	Instruction	Macedonian		
21.	Course	evalua	ation	Student questionnair	e	
22.	Textboo	oks				
	22.1 Instruction materials					
		No.	Author	Title	Publisher	Year
		1.	Mile Dimitrovski, Dame Dimitrovski	ECOGAS software	Internal issue	2010
		2.	Jeremy Colls	Air polution	ISBN 0203- 4762-6	2007
	22.2	Supp Mate	ental Instruction			
		No.	Author	Title	Publisher	Year
		1.	Handbook of Air Pollution from Internal Combustion Engines: Pollutant Formation and Control	Eran Sher	Academic Press	1998
		2.	Transport and the environment	R. E. Hester, R. M. Harrison	RS.C advanced chenical science	2006

Add	I. 3 Course program for the sec	cond level (second cycle - postgraduate) of studies						
1.	Course title	Fluid Mechanics in Env	Fluid Mechanics in Environmental Engineering					
2.	Code	1M5SEE04						
3.	Study group(s)	SEE						
4.	The organizer of the study program (unit,	"Ss. Cyril and Methodius" University in Skopje,						
	institute, department)	Faculty of Mechanical H	Engir	eering - Skop	oje			
5.	Level (first, second, third)	Second						
6.	Academic year / semester	V / winter	7.	ECTS	6			
				credits				

8.	Profes	sor(s)				dr. Valentino Stojko			
	D	• •				c. prof. dr. Zoran Ma	arkov		
9.		uisites			None				
10.			ves (competences):		4 1	· · · · · · · · · · · · · · · · · · ·	a	1.	,· ,
			nalyze fluid flows in boundary layer prob		mental e	ngineering, Simulate	enows	and inve	siigate
11.		e content							
11.			iid properties, viscou	s flow ar	nalvsis t	urbulence boundary	/ lavers	compute	ational
		lynamics	na properties, viscou	5 110 W U	iaiy 515, t	urburence, boundary	iuyers,	, comput	ational
12.			: lectures, lab, projec	t assignr	nents, in	dividual assignment	s, self-s	study.	
13.	Total l		······································	0	,	6 ECTS x 30 hours			
14.	Hours	Hours allocation per activity: $30 + 15 + 40 + 30 + 65 = 180$ hours							
15.		ectures/Lab 15.1. Lectures (15weeks x 2) 30 hours							
					15.2.	Lab (student work))	1	5 hours
16.	Projec	t Work/A	Assignments		16.1.	Project assignment	ts	2	40 hours
		16.2. Individual assignments			nents	3	30 hours		
					16.3.	Self-study		6	55 hours
17.	Points	/Marks:							
17.	17.1.								
	17.2.	Projects							50
	17.3.	Attenda							10
18.	Gradir	ng scale				Und	er 50	5 (1	five) (F)
		e				51 - 60 p	oints	<u>`</u>	(six)(E)
						61 - 70 p	oints		ven) (D)
						71 - 80 p	oints	8 (ei	ght) (C)
						81 - 90 p	oints	9 (n	ine) (B)
						91 - 100 p	oints	10 (ten) (A)
19.			or taking the final exa	am		ty 16.1			
20.	Langu	age			Englis	h			
21.	Course	e evaluat	ion		Studer	nt questionnaire			
22.	Textbo	ooks							
	22.1.	Instruct	ion materials						
		No.	Author		,	Title	Pub	lisher	Year
		1.	Rubin H.,	Enviro	nmental	Fluid Mechanics	Marce	el	2001
			Atkinson J.				Dekke	er Inc.	
		2.	Hirsch C.			nputation of		worth-	2007
						ternal Flows: The	Heine	mann	
						of Computational			
				Fluid Dynamics					

22.2.	Supple	Supplemental Instruction Materials						
	No.	Author	Title	Publisher	Year			
	1.	White F. M.	Fluid Mechanics	Mc-Graw Hill	2008			

Add	I. 3 Course program for the	e second l	evel (second	cycle - postgrad	duate) of studies			
1.	Course title			leasurement me				
		Mo	onitoring Syste	ems				
2.	Code	1M	1M5SEE05					
3.	Study group(s)	SE	Е					
4.	The organizer of the study program (un	it, "Ss	. Cyril and M	ethodius" Univ	ersity in Skopje,			
	institute, department)			anical Engineeri				
5.	Level (first, second, third)		cond	0	<u> </u>			
6.	Academic year / semester	V /	winter	7.	ECTS 6 credits			
8.	Professor(s)	Pro	of. dr. Valentii	no Stojkovski				
			s. Prof dr. Dar					
9.	Prerequisites	No	ne					
10.	Course objectives (competences):	•						
	Learn to implement of the dimensional analysis and theory of similarity, to implement							
	of the measurement instrumentation, accuracy of measurements, presentation of the results,							
	Methods and instrumentation for the pressure, flow direction and velocity, discharge,							
	temperature, movement, force and power.							
	Data acquisition hardware & software s	systems ir	n environment	al engineering				
	Software packages for monitoring and	control of	environmenta	al engineering p	rocesses.			
11.	Course content:							
	Implementation dimensional analysis.	Implement	ntation the the	eory of similari	ty. Implementation			
	of the measurement instrumentation.							
	results. Pressure measurement. Measurement.							
	Discharge measurement. Temperature			ment of concen	tration and particle			
	size distribution of granular materials, f							
	Analysis of the advantages and di							
	Comparison of sensors and instrume			-				
	Analysis of the systems for continuous							
	Monitoring of municipal and industria			•	sis and techniques.			
	Automatic monitoring stations for mun							
	Air monitoring: air pollution monitor	-	esting equipn	nent, ambient a	ir monitoring, and			
	automatic air pollution monitoring syst							
12.	Study methods: lectures, lab, project as	signment	1	U (t-study.			
13.	Total hours		6 ECTS x 30 = 180 hours					
14.	Hours allocation per activity:			30+65=180 hou				
15.	Lectures/Lab 15			5 weeks x 2)	30 hours			
		15.2.	Lab (studen	/	15 hours			
16.	Project Work/Assignments	16.1.	Project assig	gnments	40 hours			
	<u> </u>							

Second cycle university studies

				16.2.	Individual assi	gnments	30 hours			
				16.3.	Self-study		65 hours			
17.	Points	/Mark	XS:							
	17.1.	H	Exams				40			
	17.2.	F	Projects				50			
	17.3.	A	Attendance				10			
18.	Gradi	ng sca	le		Under :	50	5 (five) (F)			
		-			51 - 60 poir					
					61 - 70 poir		7 (seven) (D)			
					71 - 80 poir		8 (eight) (C)			
					81 - 90 poir		9 (nine) (B)			
1.0	-	<u> </u>	<u> </u>		91 - 100 poir	its	10 (ten) (A)			
19.		-	s for taking the final exam	1	Activity 16.1					
20.	Langu	-			English					
21.	Cours	e eval	uation		Student questionn	aire				
22.	Textbooks									
	22.1.	Instruction materials								
		No.	Author		Title	Publisher	Year			
		1.	Randy D. Down,	Enviror	nmental	Wiley	2005			
			Jay H. Lehr		entation and	Interscience,				
					is Handbook	Hoboken, NJ				
		2.	Doebelin E. O.:		ement Systems -	McGraw-Hill,	2002			
		3.	E D Dourdon D	Enviror	ation and Design	NY McGraw Hill	2004			
		5.	F. R. Bourden, D. Donnert,		ring Handbook		2004			
			T. Godish, I.	WIOIIIIO						
			McKelvie							
	22.2.	Supp	elemental Instruction Mate	erials		1	L			
		No.			Title	Publisher	Year			
		1.	G. Bruce Wiersma		ironmental nitoring	CRC Press	2004			
		2.	Janick Artiola, Ian		ironmental	Elsevier	2004			
			Pepper, Mark Brusseau		nitoring and	Academic Press				
				Cha	racterization					

Add	.3	Course program for the	second	l level (second cycle - postgr	aduate) of studies				
1.	Course tit			Environmental Systems Analy					
2.	Code			1M5SEE06					
3.	Study gro	oup(s)	S	SEE					
4.	The organ	nizer of the study program (un	nit, "	Ss. Cyril and Methodius" Un	iversity in Skopje,				
	institute,	department)	F	Faculty of Mechanical Engine	ering – Skopje				
5.	Level (fir	rst, second, third)	S	Second					
6.	Academic	c year / semester		/ / winter 7. ECTS of	credits 6				
8.	Professor		P	rof. dr. Atanasko Tuneski					
9.	Prerequis	ites	Ν	Vone					
10.	Course of	ojectives (competences):							
	Acquire k	nowledge of:							
11.	DESCRIPTION OF THE ENVIRONMENTAL SYSTEMS ANALYSIS TOOLS. Selecting								
	 questions and tools. Environmental Impact Assessment (EIA). Strategic Environmental Assessment (SEA).Life Cycle Assessment (LCA). Positional Analysis (PA). Cost-Benefit Analysis (CBA).Material Intensity per Unit Service (MIPS). Total Material Requirement (TMR). Ecological Footprint (EF).Exergy analysis.Emergy analysis. Risk Assessment (RA) CASE STUDY. Introduction to the case study. Inventory data.Environmental systems analysis (Choice of tools, LCA calculations.MIPS calculations.Ecological footprint calculations. Exergy calculations. Discussion of the case study results DISCUSSION AND CONCLUSION. Natural resource use. Environmental impacts.Natural resource use and environmental impacts.Usability. Integration .Conclusions 								
12.	Study me	thods: lectures, lab, project as	ssignme	ents, individual assignments,	self-study.				
13.	Total hou			6 ECTS x 30 = 180 hours					
14.		ocation per activity:	1	30 + 15 + 40 + 30 + 65 = 18					
15.	Lectures/	Lab	15.1.	Lectures (15 weeks x 2)	30 hours				
			15.2.	Lab (student work)	15 hours				
16.	Project W	ork/Assignments	16.1.	Project assignments	40 hours				
			16.2.	Individual assignments	30 hours				
			16.3.	Self-study	65 hours				
17.	Points/Ma	arks:							

	17.1.	F	Exams			40			
	17.2.		Projects			50			
	17.3.		Attendance			10			
18.	Grading			Under	50	5 (five) (F)			
10.	Grading	scare		51 - 60 poin		$\frac{5 (\text{IIVe})(1)}{6 (\text{six})(E)}$			
				61 - 70 poin		7 (seven) (D)			
				71 - 80 poi		8 (eight) (C)			
				81 - 90 poi		9 (nine) (B)			
				91 - 100 poi	nts	10 (ten) (A)			
19.	Prerequ	isites	for taking the final exam	Activity 16.1					
20.	Langua	-		English					
21.	Course	evalua	ation	Student questionnair	e				
22.	Textbo	ctbooks							
	22.1	Instr	uction materials						
		No.	Author	Title	Publisher	Year			
		1.	Charles H. Eclleston	Environmental	CRC Press	2011			
				Impact					
				Assessment: A					
				Guide to Best					
				Professional Practices					
		2.	John Glasson, Riki	Introduction To	Routledge	2012			
			Therivel, Andrew	Environmental	110 0010 080	_01_			
			Chadwick	Impact Assessment					
				(Natural and Built					
				Environment					
				Series)		2014			
		3.	Walter Klopffer, Birgit Grahl	Life Cycle Assessment (LCA)	Wiley-VCH	2014			
	22.2	Supr	lemental Instruction Materia						
	22.2	No.	Author	Title	Publisher	Year			
		1.	Glasson J., Therivel R.	Introduction to	The Natural	1999			
		1.	and Chadwick A.	Environmental	and Built	1777			
				Impact	Environment				
				Assessment.	Series. T.J.				
				Principles and	International				
				procedures,	Ltd, Padstow,				
				process, practice	UK				
				and prospects.	Laber W7'1 0	1007			
		2.	Odum, H.T.	Environmental	John Wiley &	1996			
	<u> </u>			Accounting -	Sons, Inc.,				

		Emergy and	New York.	
		environmental		
		decision making		

Add	I. 3 Course program for t	he secon	d level (second cycle - p	ostgraduate) of studies						
1.	Course title		In Introduction to Eco-in							
2.	Code	1	1M5SEE07							
3.	Study group(s)	S	SEE							
4.	The organizer of the study program (unit, "	Ss. Cyril and Methodius'	' University in Skopje,						
	institute, department)	F	aculty of Mechanical Eng	gineering - Skopje						
5.	Level (first, second, third degree)		Second							
6.	Academic year / semester	1	/ winter 7. EC	TS credits 6						
8.	Professor	P	rof. dr Atanas Kochov							
9.	Prerequisites for enrolling the course	• N	Jone							
10.	Course objectives (competences):									
	This course will contribute toward r	etains the	e invaluable core messag	e that eco-innovation and						
	technologies which will contribute to									
	debates about environment and economic development. Containing a substantial number of new									
	boxed case studies, learning outcome	es, chapte	er summaries, discussion	questions, further reading						
	and websites, studying and analyz									
	business models for implementation, this course will provide an essential introduction for									
	students and their competences for	or develo	pping projects and case	e studies for sustainable						
	development.									
11.	Course content:									
	This course places stronger emph									
	technologies, resource efficiency and									
	innovation approach, business mode									
	students toward new consideration		e e	1 5						
	introducing eco-innovation technolo									
10	the lower carbon growth, climate ada									
12.	Study methods: Interactive lectures,			e, selfrunning and/or team						
10	work on project assignments, selfrun	ning assi								
13.	Total hours		6 ECTS x 30 = 180 hou							
14.	Hours allocation per activity:	15 1	30+30+30+30+60=180							
15.	Lectures/Lab	15.1.	Lectures (15 weeks x 2)							
1.0			Lab (student work)	30 hours						
16.	Project Work/Assignments	16.1.	Project assignments	30 hours						
		16.2.	Individual assignments	30 hours						
				60 hours						
		16.3.	16.3. Self-study 60							
17.	Points/Marks:									
	17.1. Exams			60 points						

	17.2.	P	Projects			30 points		
	17.3.	A	Attendance			10 points		
18.	Grading	g scale	;	Under	50	5 (five) (F)		
		-		51 - 60 points		6 (six) (E)		
				61 - 70 poin	nts	7 (seven) (D)		
				71 - 80 poin		8 (eight) (C)		
				81 - 90 poin		9 (nine) (B)		
				91 - 100 poir		10 (ten) (A)		
19.	Prerequ	isites	for taking the final exam	Seminar work delive	red and approve	d		
20.	Langua	ge		English				
21.	Course	evalua	ation	Student questionnaire				
22.	Textboo	oks						
	22.1	Instr	uction materials					
		No.	Author	Title	Publisher	Year		
		1.	Sperber B.	Environmental Sound Technologies for Sustainable Development	Springer- Verlag	2008		
		2.	Luken R., Rompaey F.	Environment and Industry in Developing Countries: Assessing the Adoption of Environmentally Sound Technology	Unido Press	2007		
		3.	Hermiosilla J., Gonzales P.	Eco-innovation: Sustainability and Competitiveness	MacMillan Bubl.	2009		
	22.2	Supp	lemental Instruction Material	S				
		No.	Author	Title	Publisher	Year		
	1. David R. Godschalk			Sustainable Development Projects: Integrating Design, Development, and Regulation	APA Planners Press;	1 edition (April 7, 2014)		

Add	. 3		Course program	m for	• th	e first, second	and	third l	evel (cycle) a	of studie	es
1.	Course	title			No	n-conventional	pow	er plan	ts		
2.	Code				1M6SEE01						
3.	Study g	group(s	s)		SEE						
4.	The or	ganize	r of the study progra	am	"Ss	s. Cyril and Met	thodi	us" Ur	niversity in Sk	kopje,	
	(unit, i	nstitute	e, department)		Faculty of Mechanical Engineering – Skopje						
5.	Level (first, s	econd, third)		Sec	cond					
6.	Acade	nic ye	ar / semester			/ Summer	7.		5 credits		6
8.	Profess				Pro	of. dr. Slave Arr	nens	ki			
9.	Prerequ	uisites		-	No	one					
10.			tives (competences)):							
11.	Profound knowledge about unconventional - modern plants to analyze, design, analysis and selection of advanced equipment, technical control, supervision and inspection during construction, exploitation and maintenance, environmental protection Course content:										
	Introducing the unconventional modern plants for electricity (solar, geothermal, biomass, solid municipal waste); gaseous fuel plants: thermal cycling: heat balance and heat processes: efficiency coefficient: Equipment: economic and environmental aspects										
12.	Study 1	nethod	ls:								
13.	Total h	ours				6 ECTS x 30 h	ours	= 180	hours		
14.	Hours	allocat	ion per activity:			30+45+40+30-	+35 =	= 180 h	ours		
15.	Lecture	es/Lab		15.1	1.	Lectures (15 w	eeks	x 2)		3	0 hours
		15				Lab (student w	ork)			4	5 hours
16.	Project	Work	/Assignments	16.1	6.1. Project assignments 4				0 hours		
				16.2	2. Individual assignments			30 hours			
				16.3	3.	Self study				3	5 hours
17.	Points/	Marks	:								
	17.1.	Tests								5	0 points
	17.2.	Projec	ets							5	0 points
	17.3.	Attend	lance								
18.	Gradin	g scale	e				der 5				five) (F)
						51 - 60	poin	ts		6 ((six)(E)
						61 - 70	poin	ts		7 (sev	/en) (D)
						71 - 80	poin	ts		8 (ei	ght) (C)
						81 - 90				9 (n	ine) (B)
						91 - 100				10 (ten) (A)
19.	Prerequisites for taking the final exam					ccomplished 16	6.1 ar	nd 16.2			
20.	Langua	age			E	nglish					
21.	Course		ation			tudent question	naire				
22.	Textbo				•	*					
	22.1.	No.	Author			Title			Publish	er	Year
		1.	B.W.Wilkinson,		(Cogeneration of	•		CRC Press, I	nc,	

		R.W.Barnes	Electricity and Useful Heat"	Boca Raton, Florida	
22.2.	Suppl	emental Instruction Mater	rials		
	No.	Author	Title	Publisher	Year
	1.	P.K.Nag	"Power Plant	Tata McGray-Hill	2008
			Engineering", Third Publishin		
			Edition	Company Limited,	
				New Delhi	

Ado	1. 3	Course program for	the secon	d level (second cycle - po	stgraduate	e) of studies				
1.	Course	title	Wa	ater and Waste Water Trea	tment					
2.	Code		1M	1M6SEE02						
3.	Study g	roup(s)	SE	E						
4.		anizer of the study progr		s. Cyril and Methodius" U		15				
		stitute, department)		culty of Mechanical Engin	eering - Sk	opje				
5.		first, second, third)		cond	I					
6.		nic year / semester			ECTS cre	edits 6				
8.	Profess			soc. prof. dr. Zoran Marko	V					
9.	Prerequ		No	ne						
10.		Course objectives (competences):								
		Learn how to water treatment works, operation in municipal and industrial treatment plant								
11.										
	Water treatment technologies, water quality parameters, waste water treatment, activated sludge processes, water quality laws and regulations									
12.				nments, individual assignn	ante colf	atudu				
$\frac{12.}{13.}$	Total he		Sjeet assig	6 ECTS x 30 = 180 hour		study.				
14.		llocation per activity:		30 + 15 + 40 + 30 + 65 = 180 hours						
15.	Lecture	i	15.1.							
10.	Leeture	5/ Luo	15.2.	Lectures (15 weeks x 2)30Lab (student work)15						
16.	Project	Work/Assignments	16.1.	Project assignments		40 hours				
			16.2.	Individual assignments		30 hours				
			16.3.	Self-study		65 hours				
17.	Points/N	Marks:								
	17.1.	Exams				40				
	17.2.	Projects				50				
	17.3.	Attendance				10				
		rscale		Under 5	0	5 (five) (F)				
18.	Grading	s scale								
18.	Grading	s scale		51 - 60 poin	ts	6 (six) (E)				

						=1 00	•				
						71 - 80		8 (eight) (C)			
						81 - 90		9 (nine) (B)			
						91 - 100 points 10 (ten) (A					
19.	Prerequ	uisites fo	r taking the final	exam	Activity 16	.1					
20.	Langua	guage			English						
21.	Course	evaluati	on		Student questionnaire						
22.	Textbooks										
	22.1.	Instruct	tion materials								
		No.	Author		Title	Publisher		Year			
		1.	Lee C.C.	Envir Engin	book of onmental leering lations	Mc-Graw Hill	2007				
		2.	Kemer F.N.	The a Hand	lco Water book	Mc-Graw Hill					
	22.2.	Supple	mental Instructio	n Mate	rials						
		No.	Author		Title	Publisher		Year			
		1.	WEF Manual		trial waste	WEF		2008			
			of Practice No. FD-3		gment, nent and	Press					

Add	. 3	Course program for the sec	ond level (second	cycle	e - postgraduate) of	studies		
1.	Course title	e	Energy efficiency					
2.	Code		1M6SEE03					
3.	Study grou	ıp(s)	SEE					
4.	The organi	zer of the study program (unit,	"Ss. Cyril and M	ethoo	lius" University in S	kopje,		
	institute, de	epartment)	Faculty of Mecha	nica	l Engineering - Skop	oje		
5.	Level (first	t, second, third)	Second					
6.	Academic	year / semester	V / winter	7.	ECTS credits	6		
8.	Professor		Prof. dr. Done Tashevski					
9.	Prerequisit	es	None					
10.	Course obj	ectives (competences):						
	Candidates	s are competent for analysis, mod	leling, optimization	1 and	l implementation of o	different		
	systems for	r energy efficiency in different a	reas such as buildir	ıgs, i	industry, agriculture	and		
	forestry, ar	nd transport with introducing a co	omplete energy ma	nage	ment in these areas.			
11.	11. Course content:							
		or analyzing modern systems for						
	Introdusing	g the existing models for the calc	ulation of processe	es ano	d systems for energy			

	efficien	ICV.							
	Ways f	or opti	mization and selection of	f paran	ne	ters in which optin	nizes the s	system i	n order to
			gy efficiency criteria.						
10			on of analyzed, modeled						
12. 13.	Total h		is: lectures, lab, project as	ssignm	hments, individual assignments, self-study. 6 ECTS x 30 = 180 hours				
14.			ion per activity:		30 + 15 + 40 + 30 + 65 = 180 hours				1
15.	Lecture			15.1.	_	Lectures (15 week			30 hours
				15.2.		Lab (student work	/		15 hours
16.	Project	Work	Assignments	16.1.		Project assignmen	ts		40 hours
				16.2.		Individual assignn	nents		30 hours
				16.3.		Self-study			65 hours
17.	17. Points/Marks:								
	17.1. Exams								40
	17.2.	P	Projects						50
	17.3.	A	Attendance					10	
18.	. Grading scale					Under			5 (five) (F)
						51 - 60 poir			6 (six) (E)
						<u>61 - 70 poin</u>			7 (seven) (D)
						71 - 80 poin 81 - 90 poin			8 (eight) (C) 9 (nine) (B)
						91 - 100 poin		$\frac{9 \text{ (mme) (B)}}{10 \text{ (ten) (A)}}$	
19.	Prerequ	isites	for taking the final exam		Activity 16.1				
20.	Langua					nglish			
21.	Course	-	ation			udent questionnair	e		
22.	Textbo	oks				1			
	22.1	Instr	uction materials						
		No.	Author			Title	Publis	sher	Year
		1.	D. Tashevski]	Er	nergy efficiency	Selected		2014
							lectures		
							handout	S	
		2.	D.R. Wulfinghoff		Er	nergy efficiency	Energy institute	press	1999
		3.	P. Bertoldi]	Er	nergy efficiency	Springer		2007
	22.2	Supp	lemental Instruction Mat	erials					
		No.	Author			Title	Publis	sher	Year
		1.	D. R. Wulfinghoff			nergy Efficiency anual	Ener institute		2000

Add	.3	Course program for	the seco	ond level (second cycle	- postgradua	ate) of studies			
1.	Course title			Eco engines		,			
2.	Code			1M6SEE04					
3.	Study group	$\mathbf{b}(\mathbf{s})$		SEE					
4.		er of the study program (unit,	"Ss. Cyril and Methodi	us" Universit	y in Skopje,			
	institute, de			Faculty of Mechanical Engineering - Skopje					
5.		second, third degree)		Second		* *			
6.	Academic y	ear / semester		V / summer 7. ECTS credits 6					
8.	Professor			Prof. d-r Mile Dimitrov	/ski				
9.	Prerequisite	s for enrolling the course		None					
10.	performance fuels for IC	ctives (competences): An es of engines, measuring engines end characteristic	in engin cs.	es. Understanding hybr	rid technologi	es, alternative			
11.	engines on gaseous fuels, bio fuels and new fuels. Interaction between engine construction and alternative fuels.								
12.	Study methods: Interactive lectures, auditory and/or laboratory practice, selfrunning and/or team work on project assignments, selfrunning assignments								
13.	Total hours	<i>, , , , , , , , , , , , , , , , , , , </i>	<u> </u>	6 ECTS x 30 = 180 hours					
14.	Hours alloc	ation per activity:		30 + 30 + 30 + 30 + 30 +	60 =180 hour	S			
15.	Lectures/La		15.1.			30			
			15.2.	<u>``</u>		30			
16.	Project Wor	k/Assignments	16.1.	Project assignments		30			
			16.2.	Individual assignmen	nts	30			
			16.3.	Self-study		60			
17.	Points/Mark	XS:							
	17.1.	Exams				50			
	17.2.	Projects				45			
	17.3.	Attendance				5			
18.	Grading sca			Und	ler 50	5 (five) (F)			
10.	Grading sea		-	51 - 60 p		$\frac{5(\text{IVC})(\text{F})}{6(\text{six})(\text{E})}$			
			-			7 (seven) (D)			
			F	· · · · · · · · · · · · · · · · · · ·					
			┝		8 (eight) (C) 9 (nine) (B)				
			┝	81 - 90 points 9 (nine) 91 - 100 points 10 (ten)					
19.	1	s for taking the final exar		Presented projects					
20.	Language			English					
21.	Course eval	uation		Student questionnaire					
22.	Textbooks								
	22.1 Instruction materials								

	No.	Author	Title	Publisher	Year
1. Mile Dimitrovski		ECO Engines	Internal issue	2008	
	2.	Handbook of Air Pollution	Eran Sher	Academic	1998
		from Internal Combustion		Press	
		Engines: Pollutant			
		Formation and Control			
	3.	Transport and the	R. E. Hester, R. M.	RS.C	2006
		environment	Harrison	advanced	
				chenical	
				science	
22.2	Supp	lemental Instruction Materials	5		
	No.	Author	Title	Publisher	Year
	1.	The biodiesel handbook	Van Gerpen,	AOCS Press,	2005
			Knothe and others	Illinois	

Add	. 3	Course program for the	second	l level (second	cycle	- postgr	aduate) of	studies
1.	Course title		Γ	Design of fluid c	convey	ying and	hydro pow	er system
2.	Code		1	1M6SEE05				
3.	Study group	(s)	S	EE				
4.	institute, dep		F	Ss. Cyril and M aculty of Mech				
5.	Level (first, second, third)			econd				
6.	Academic year / semester			/ / winter		ECTS c	credits	6
8.	Professor(s)			rof. dr. Valentin Assoc. prof. dr. Z				
9.	Prerequisites	5	N	lone				
11.	 Course objectives (competences): Introduction to systems for hydraulic and pneumatic convey of fluids. Developing mathematical models for hydraulic calculation of the systems and their components. Introduction to systems for hydro power. Developing mathematical models for hydraulic calculation of the systems and their components. 						systems tems and	
12.	Study metho	ods: lectures, lab, project as	ssignme	ents, individual	assigr	nments, s	self-study.	
13.	Total hours			6 ECTS x 30 = 180 hours				
14.	Hours allocation per activity:			30 + 15 + 40 +	+30+	65 = 18	0 hours	
15.	Lectures/Lal	b	15.1.	Lectures (15 v	veeks	x 2)		30 hours

Second cycle university studies

				15.2.	Lab (student work	c)	1:	5 hours	
16.	Project	Work	/Assignments	16.1.	Project assignmen	nts	40) hours	
				16.2.	Individual assignr	nents	30) hours	
				16.3.	Self-study		6:	5 hours	
17.	Points/	Marks							
	17.1.	I	Exams					40	
	17.2.	I	Projects				50		
	17.3. Attendance							10	
18.	Grading	g scale	2		Under	50	5 (fi	ve)(F)	
					51 - 60 poi		· · · · · · · · · · · · · · · · · · ·	six)(E)	
					61 - 70 poi		,	en) (D)	
					71 - 80 poi			$\frac{ht}{C}$	
					81 - 90 poi 91 - 100 poi		``````````````````````````````````````	$\frac{\text{ne}}{(B)}$	
19.	Drorogi	icitos	for taking the final even		<u>91 - 100 poi</u> Activity 16.1	nts	10 (0	en) (A)	
20.	Prerequisites for taking the final exam Language				English				
21.	Course evaluation				Student questionnair	re			
22.	Textbo				questionnun				
	22.1	-	uction materials						
		No.	Author		Title	p ₁	ublisher	Year	
		1.	Speight J.G.		1110	Gulf Pul		2007	
		1.	Speight 3.0.		Natural Gas – A Basic Handbook		iy, Houston	2007	
		2.	Oneil A. Williams]	Pneumatic and Hydraulic Conveying of Solids	CRC Pro	ess	1983	
		3.	G.I.Krivcenko]	Hydraulic machines-turbiner and pumps	Lewis p	ublisher	1994	
	22.2	Supp	olemental Instruction Mat						
		No.	Author		Title	P	ublisher	Year	
		1.	Wang X., Economides M.		Advanced Natural Gas Engineering	Compa	Publishing my, Houston, Texas	2009	
		2.	David Mills,	(Pneumatic Conveying Design Guide		SEVIER	2004	
		3.	Frank Yeaple		Fluid Power	CH	RC Press	1995	
		1	1			1		1	

Design Handbook				
			Design Handbook	

Add									
1.	Course	title			Waste manageme	ent			
2.	Code				IM6SEE06				
3.	Study g				SEE				
4.			zer of the study program (ur				iversity in Skopje,		
			partment)]	Faculty of Mecha	inical Engine	ering - Skopje		
5.			, second, third degree)		Second				
6.			/ear / semester		V / summer 7. ECTS credits 6				
8.	Professo				Ass. Prof. d-r Dai	me Dimitrovs	ski		
9.			es for enrolling the course		None				
10.	econom waste m Underst to a raw	ical nana and ma	ectives (competences): Able ly) system for waste manag gement system of a produc ing the applicable technolog terial for further processes.	gement t or a s gies fo	in industry. Und olution for the in r reducing waste,	erstanding th dustry or con , reusing was	e chain of actions for nmunity. te or turning waste in		
11.	manage waste m to energ	mer nana 3y ef		gement te redu	t in communities to the ction. Examples to	and industry. for reusing w	Cain of actions in aste, turning waste in		
12.	Study m	neth	ods: Interactive lectures, au	ditory	and/or laboratory	y practice, sel	frunning and/or team		
			oject assignments, selfrunni	ng assi					
13.	Total ho				6 ECTS x 30 =				
14.			ation per activity:		30 + 15 + 45 +				
15.	Lecture	s/La	ıb	15.1.	Lectures (15 w	30			
				15.2.	Lab (student w	/	15		
16.	Project	Wo	rk/Assignments	16.1.	Project assignn	nents	45		
				16.2.	Individual assig	gnments	45		
				16.3.	Self-study		45		
17.	Points/N	Marl	KS:		1		1		
	17.1.		Exams				30		
	17.2.		Projects				60		
	17.3. Attendance 10								
18.	Grading	g sca	ale			Under 50	5 (five) (F)		
		-			51	1 - 60 points	6 (six) (E)		
						1 - 70 points	7 (seven) (D)		
					71	1 - 80 points	8 (eight) (C)		
					8	1 - 90 points	9 (nine) (B)		
					91	- 100 points	10 (ten) (A)		

19.	Prerequ	isites	for taking the final exam	Presented projects				
20.	Langua	ge		English				
21.	Course evaluation			Student questionnair	e			
22.	Textboo	oks						
	22.1	Instru	action materials					
		No. Author		Title	Publisher	Year		
	1		Waste management options	EC	2001			
		2.	Nicholas P. Chermisinoff	Handbook of solid waste management and waste minimization technologies	Butterworth Heinemann	2003		
	22.2	Supp	lemental Instruction Materials	S				
	No. Author		Author	Title	Publisher	Year		
		1.	George Tchobanoglous, Frank Kraith	Handbook of solid waste management	McGraw Hill	2002		

Add	. 3 Course program for the sec	ond level (second cycle -	post	graduate) of stud	ies		
1.	Course title	Energy vs	. Sustainable D)evel	opment: Concepts	and		
		Aspects						
2.	Code	1M6SEE07						
3.	Study group(s)	SEE						
4.	The organizer of the study program	"Ss. Cyril	and Methodius	s" Ur	niversity in Skopje	,		
	(unit, institute, department)	Faculty of	Mechanical E	ngine	eering - Skopje			
5.	Level (first, second, third degree)	Second						
6.	Academic year / semester	V / summ	er	7.	ECTS credits	6		
8.	Professor	vska						
9.	Prerequisites for enrolling the	None						
	course							
10.	Course objectives (competences):							
	Introduction to the sustainability con	cept and asp	pects implement	ted c	on energy systems	, both on		
	the demand and the supply side.							
11.	Course content:							
	Introduction to the concept of Sustain	nable Devel	opment (SD), l	ndica	ators of SD			
	Implementing the SD concept to energy	rgy systems	. Modeling and	l asse	essment.			
12.	Study methods: Interactive lectures,				e, work on project	Ţ		
	assignments/case studies (team work), selfrunnir	ng assignments					
13.	Total hours	6 ECTS x 30 = 180 hours						
14.	Hours allocation per activity:		30 + 15 + 40 +	30 +	- 65 =180 hours			
15.	Lectures/Lab	15.1.	Lectures (15	week	s x 2)	30		
		15.2.	Lab (student	work)	15		

16.	Proje	ct Worl	x/Assignments	16	5.1.	Project assign	ments		40
				16	5.2.	Individual ass	signmen	ts	30
				16	5.3.	Self-study			65
17.	Point	s/Marks	S:						
	17.1.		Exams						40
	17.2.		Projects						50
	17.3.		Attendance						10
18.	Gradi	ng scal	e			Un	der 50	5	(five) (F)
		C				51 - 60		(5(six)(E)
						61 - 70		`	even) (D)
						71 - 80		`	eight) (C)
						<u>81 - 90</u> 91 - 100			(nine) (B) (ten) (A)
19.	Prerequisites for taking the final exam							16.1. and 16.2 (
20.	Lang	uage of	Instruction			nglish			
21.		Course evaluation			S	tudent question	naire		
22.	Textb	ooks							
	22.1	Instru	ction materials						
		No.	Author		Т	itle]	Publisher	Year
		1.	S. Bell, S. Morse	Sustainal	oility	y Indicators:	EarthS	can	2000
				Measurin			Publications. Ltd.		
				immeasu			D		2002
		2.	T.E. Graedel, B. R. Allenby	Industria	I EC	ology	Pearso Inc.	n Education	2003
	22.2	Suppl	emental Instruction	Materials			me.		
		No.	Author		Т	itle	1	Publisher	Year
		1.	UN CSD	Sustainal		Development		UN	
				Knowled	lge p	olatform			
		2	Economic Co– operation and Development (OECD) Environment.		Reviews". A ort by the e State of the	Paris: 1	39	1993	
		3	Golay, M., Field, R., Green, Jr. W., Wright, J.C.	Introduct Energy (course-m	Onli	-	ourses, engine	ocw.mit.edu/c /nuclear- ering/22-081j- uction-to-	2010

				sustainable-energy- fall-2010/)	
	4	D. A. Vallero, P.	Socially Responsible	John Wiley & Sons	2007
		A. Vesilind	Engineering: Justice in	Inc.,	
			Risk Management		

Add	I. 3 Course program for the	second level (second cycle - postgraduate) of studies					
1.	Course title	Automation of environmental processes					
2.	Code	1M6SEE08					
3.	Study group(s)	SEE					
4.	The organizer of the study program	"Ss. Cyril and Methodius" University in Skopje,					
	(unit, institute, department)	Faculty of Mechanical Engineering – Skopje					
5.	Level (first, second, third)	Second					
6.	Academic year / semester	V / summer 7. ECTS credits 6					
8.	Professor(s)	Ass. prof. dr. Emil Zaev					
		Ass. prof. dr. Darko Babunski					
9.	Prerequisites	None					
10.	Course objectives (competences):						
	Acquire knowledge of:						
	Analysis and design of automation systems for river monitoring and water and wastewater treatment processes. Acquire programming skills in the Matlab platform. Analysis, design and implementation of SCADA systems – Supervisory Control and Data Acquisition and Programmable Logic Controllers (PLC). Functionality and characteristics of environmental measurement systems to monitor and control environmental processes;						
11.	 Course content: Introduction to the most commonly used types of control algorithms (sequential, continuous, On-Off and Feedforward control, feedback (P, PI and PID Control) Advanced control algorithms: adaptive, nonlinear, model control) Examples of implementation of control algorithms in facilities for treatment of drinking water (Basic plant model: Control of pumps, coagulation dosing, pH, purification and sedimentation, filtration and chlorination) plants for wastewater treatment (Control of dissolved oxygen, depth of the sludge refiner) and general control algorithms in the plant, Control system architecture. Supervisory Control and Data Acquisition (SCADA) and DCS systems (Introduction, SCADA / DCS software, hardware management system (PLC, RTU, Networks), OPC), Programming and configure the Programmable Logic Controllers (PLC) control subsystem (PLC programming) Basic instrumentation (instrumentation for measuring flow, temperature, level, pressure and 						
12.	analytical instrumentation).	nments, individual assignments, self-study.					
12.	Total hours	6 ECTS x 30 = 180 hours					
14.	Hours allocation per activity:	30 + 15 + 40 + 30 + 65 = 180 hours					
	really anotation per activity.						

15.	Lecture	es/Lab		15.1.	Lectures (15 week	ks x 2)	30 hours	
				15.2.			15 hours	
16.	Project	Work	/Assignments	16.1.		· · · · · · · · · · · · · · · · · · ·	40 hours	
				16.2	Individual assign	ments	30 hours	
				16.3	Self-study	65 hou		
17.	Points/	Marks						
	17.1.	E	Exams				40	
	17.2.	P	Projects				50	
	17.3.	A	Attendance				10	
18.	Gradin	g scale			Unde	er 50	5 (five) (F)	
		C			51 - 60 pc	oints	6 (six) (E)	
					61 - 70 pc	oints	7 (seven) (D)	
					71 - 80 pe		8 (eight) (C)	
					81 - 90 po		9 (nine) (B)	
					<u>91 - 100 p</u> Activity 16.1	oints 10 (ten) (A		
19.			for taking the final exa					
20.	Langua	ıge			English			
21.	Course	evalua	ation		Student questionnai	re		
22.	Textbo	oks						
	22.1	Instr	uction materials					
		No.	Author		Title	Publisher	Year	
		1.	AWWA		Water treatment plant design	McGraw-Hill	1990	
		2.	G. Tchobanoblous		Wastewater Engineering Treatment and Reuse	McGraw-Hill	2003	
		3.	M.L. Davis		Water and Wastewater Engineering	McGraw Hill	2010.	
	22.2	Supp	elemental Instruction M			•		
		No.	Author		Title	Publisher	Year	
		1.	S.A.Boyer		SCADA: Supervisory Control and Data Acquisition	ISA - The Instrumentation, Systems, and Automation	1999	
		2.	W. Bolton		Programmable Logic Controllers	Society Elsevier	2009	

Add	1. 3	Course program for the	esecond	d level (second cycle	- postgrad	uate) of s	tudies	
1.	Course title			Clean fossil and altern				
2.	Code		1	M6SEE09		0,		
3.	Study group	(S)	S	SEE				
4.	The organiz	er of the study program (un	nit, "	Ss. Cyril and Method	lius" Univer	sity in Sk	copje,	
	institute, de			aculty of Mechanical				
5.	Level (first,	second, third degree)	S	lecond		*		
6.		ear / semester	V	/ summer 7.	ECTS cred	lits	6	
8.	Professor		A	ssoc. prof. dr. Risto I	Filkoski			
9.	Prerequisite	s for enrolling the course	N	lone				
10.	Course obje	ctives (competences):						
11.	protection th combustion heat transfer Course cont Properties o	f fossil and alternative fuel	ants. Ar mulatio s (boiler s. Energ	nalysis, calculation an n techniques of aerod rs, combustors, furnac gy transformations of	d optimal p lynamics, co ces, heat exo fuels: com	erforman ombustion changers bustion, p	ce of n and etc.).	
	gasification, liquefaction. Mass and energy balance of combustion process. Kinetics and dynamics of fuels combustion.Processing and handling of solid fuels. Methods and techniques for combustion of solid fuels, examples of application.							
	-	and handling of liquid and examples of application.	gaseous	s fuels. Methods and t	techniques f	for combu	istion of	
	Environmental considerations. Classification of pollutants, sources of plant emissions and discharges. Air pollution control. Techniques for reduction of solid particles emission. Thermodynamics and kinetics of SO ₂ formation. Methods and techniques for SO ₂ emission reduction. Thermodynamics and kinetics of NO _x formation. Methods and techniques for No emission reduction. Methods and techniques for combined deSO ₂ /deNO _x . Methods for CO emission reduction. Greenhouse gases emission. Methods and techniques for reduction of CO emission.							
		simulation and optimisation aces, thermal energy facilit						
12.		ods: Interactive lectures, au ject assignments, selfrunni		51	ctice, selfrui	nning and	/or team	
13.	Total hours			6 ECTS x 30 hours	= 180 hours	5		
14.	Hours alloca	ation per activity:		30+30+40+30+				
14.			15.1.	Lasturas				
14.	Lectures/La	b	13.1.	Lectures			30 hours	
	Lectures/La	b	15.1.	Lab (student work)			30 hours 30 hours	

Second cycle university studies

				16.2.	Individual assignm	nents	30 hours
				16.3.	Self-study		50 hours
17.	Points/	Marks					
	17.1.	I	Exams		50 pc		50 points
	17.2.	I	Projects				45 points
	17.3.	I	Attendance				5 points
18.	Grading	g scale	;		Under	50	5 (five) (F)
		-		Γ	51 - 60 poir	nts	6 (six) (E)
					61 - 70 poir	nts	7 (seven) (D)
					71 - 80 poir		8 (eight) (C)
					81 - 90 poir		9 (nine) (B)
					91 - 100 poin	nts	10 (ten) (A)
19.			for taking the final exam		Activities 15.2 and 1	6.1	
20.	Langua	ige]	English		
21.	Course	evalu	ation	;	Student questionnaire		
22.	Textbo	oks					
	22.1	Instr	uction materials				
		No.	Author		Title	Publisher	Year
		1.	Edited by J.B. Kitto and	1 3	Steam, It's	The Babcock	2005
			S.C. Stultz		generation and use,	& Wilcox	
					Ed. 41	Compaany	
		2.	Baukal C.E. et al.		CFD in Industrial	CRC Press	2001
					Combustion		
		3.	Group of authors		IPPC, Ref.	European	2006
					Document on BAT	Commission,	
					for Large Combustion Plants	Seville	
	22.2	Supr	l olemental Instruction Mate		Compussion Flants	<u> </u>	<u> </u>
		No.			Title	Publisher	Year
		1.	Warner, Davis and War	ŀ	Air Pollution: Its	Addison-	2003
		1.	warner, Davis and war		Origin and Control,	Wesley-	2005
					3 rd Edition	Longman	
		2.	Petrovski I. J.		Steam Boilers, 2nd	UKIM	2009
					ed.		
		3.	Baukal C.E. et al.		Heat Transfer in	CRC Press	2000
					Industrial		
				(Combustion		

Add	1. 3	Course program f	for the	second level (second c studies	cycle - postgraduate)	of		
1.	Course title		F	Experts in Teamwork (H	EiT)			
2.	Code			M6SEE10)			
3.	Study group	(s)		SEE				
4.		er of the study program (ur		Ss. Cyril and Methodiu	us" University in Skor	oje.		
	institute, dep			faculty of Mechanical H		J		
5.		second, third degree)		Second	0 0 13			
6.		ear / semester		VI / winter 7. H	ECTS credits	10		
8.	Professor		A	Assoc. prof. dr. Zoran M	Aarkov			
			A	Ass. prof. dr. Dame Dimitrovski				
9.	Prerequisites for enrolling the course None							
10. Course objectives (competences):Experts in Teamwork is a course in which students apply their academic competence								
11.	and the stude the project th the group. Students dev situations in facilitation, n Course conte Students in H interdisciplin group superv challenges fi The group m recipients of	Relevant issues from societ ent teams should work tog- nat the team members choo- velop teamwork skills by re- their project work. Reflect reflection writings, interac- ent: EiT are divided into groups hary teams of five to six str- visor. Each group has a bro- rom working life. This ther hay have external partners the students' work. The de- cified as a guide to help str	ether w ose, to s eflectin, tions ar tion exe s of stue udents. oad ove me form that rep esired c	ith external partners. T suit their combined con g on and learning from e shared by the team an ercises, and feedback to dents, and each group i Each group is headed l rall academic theme re- ns the basis for the stud- present the theme, and t ombination of academi	the student team must npetence and the them specific cooperative nd are stimulated by b each other. s divided into by a professor, called lated to societal issues dent team's project wo that may be advisers a	adapt he of the s or rk. nd		
12.		ds: team work on project a			nments			
13.	Total hours		0	10 ECTS x 30 hour				
14.	Hours alloca	tion per activity:		45+45+45+45+120				
15.	Lectures/Lat)	15.1.	Lectures	45	hours		
			15.2.	Lab (student work)	45	hours		
16.	Project Worl	k/Assignments	16.1.	Project assignments	45	hours		
			16.2.	. Individual assignments		hours		
			16.3.	Self-study	120) hours		
17.	Points/Mark	s:	•		•			
		Exams				40		
						40		

	17.3.	A	Attendance			10			
18.	Gradin	g scale		Unde	r 50	5 (five) (F)			
				51 - 60 po	ints	6 (six) (E)			
				61 - 70 ро	ints	7 (seven) (D)			
				71 - 80 po	ints	8 (eight) (C)			
				81 - 90 po	ints	9 (nine) (B)			
				91 - 100 points 10 (ten)					
19.	Prerequ	isites	for taking the final exam	Activity 16.1 and 1	6.2				
20.	Langua	ige of l	Instruction	English	English				
21.	Course	evalua	ation	Student questionnaire					
22.	Textbo	oks		·					
	22.1	Instr	uction materials						
		No.	Author	Title	Publisher	Year			
		1.	Bjørn Sortland, http://www.ntnu.edu/eit	Course materials 2014, NTNU, Norway	NTNU	2014			
		2.							
		3.							
	22.2	Supp Mate	blemental Instruction erials						
		No.	Author	Title	Publisher	Year			
		1.							

17. List of teaching staff with information specified in Article 5 of the Regulation for obligatory components should own study programs from the first, second and third cycle of studies (Official Gazzete of the Republic of Macedonia" no. 25/2011 and 154/2011)

In implementation of teaching at faculty of Mechanical engineering Skopje there are 59 teachers, 38 of them are full professors, 8 are associate professors and 13 are assistant professors. Here is a list of the teaching staff:

- 1. Professor Armenski Slave
- 2. Professor Angusev Koco
- 3. Professor Bogatinovski Zoran
- 4. Professor Gocev Jovan
- 5. Professor Gavriloski Marjan
- 6. Professor Gecevska Valentina
- 7. Professor Lazo Dimov
- 8. Professor Dimitrovski Mile

- 9. Professor Donev Vanco
- 10. Professor Dudeski Ljuben
- 11. Professor Jakimovski Slave
- 12. Professor Jancevski Janko
- 13. Professor Kocov Atanas
- 14. Professor Korunoski Dame
- 15. Professor Kandikjan Tatjana
- 16. Professor Kostik Zvonimir
- 17. Professor Kuzinovski Mikolaj
- 18. Professor Mickoski Ivan
- 19. Professor Minovski Robert
- 20. Professor Malceski Aleksa
- 21. Professor Polenakovik Radmil
- 22. Professor Pandilov Zoran
- 23. Professor Runcev Dobre
- 24. Professor Stojkovski Valentino
- 25. Professor Sidorenko Sofija
- 26. Professor Tuneski Atanasko
- 27. Professor Trajkovski Laze
- 28. Professor Tasevski Risto
- 29. Professor Kosevski Milan
- 30. Professor Ciconkov Risto
- 31. Professor Caloska Jasmina
- 32. Professor Cakmakov Dusan
- 33. Professor Sarevski Milan
- 34. Professor Vrtanovski Gligorce
- 35. Professor Kozinakov Dimitri
- 36. Professor Tuneski Nikola
- 37. Professor Petreski Zlatko
- 38. Professor Simonovski Petar
- 39. Associate professor Gavriloski Viktor
- 40. Associate professor Danev Darko
- 41. Associate professor Gurkov Igor
- 42. Associate professor Markov Zoran
- 43. Associate professor Stojmanovski Viktor
- 44. Associate professor Tasevski Done
- 45. Associate professor Filkoski Risto
- 46. Associate professor Mickoski Hristijan
- 47. Assistant Professor Babunski Darko

- 48. Assistant Professor Dimitrovski Dame
- 49. Assistant Professor Lazarevska Ana
- 50. Assistant Professor Kostik Aleksandar
- 51. Assistant Professor Mojsovski Filip
- 52. Assistant Professor Celakoska Emilija
- 53. Assistant Professor Sarevski Vasko
- 54. Assistant Professor Zaev Emil
- 55. Assistant Professor Tomov Mite
- 56. Assistant Professor Prangoski Bojan
- 57. Assistant Professor Jovanoski D.Bojan
- 58. Assistant Professor Ile Mircevski
- 59. Assistant Professor Kristina Jakimovska

In a realization of the study program Sustainable energy and environment the following teachers take place:

- 1. Professor Armenski Slave
- 2. Professor Dimitrovski Mile
- 3. Professor Chakmakov Dusan
- 4. Professor Tuneski Atanasko
- 5. Professor Malcheski Aleksa
- 6. Professor Stojkovski Valentino
- 7. Professor Tuneski Nikola
- 8. Professor Atanas Kochov
- 9. Associate professor Tashevski Done
- 10. Associate professor Filkoski Risto
- 11. Associate professor Markov Zoran
- 12. Assistant professor Lazarevska Ana
- 13. Assistant professor Dimitrovski Dame
- 14. Assistant professor Babunski Darko
- 15. Assistant professor Zaev Emil
- 16. Assistant professor Celakoska Emilija
- 17. Assistant professor Prangoski Bojan

If there is needed, teachers from other organizational units (institute, district) at faculty of Mechanical engineering – Skopje and from other high educative institutions are included in realization of this program in order with the legal procedure for selection of course programs and engaging teachers in the course program.

Add	1. 4	Iı		the teachers that lec gram and are mento		-	e e
1.	Name	(First,		Slave Armenski	rs on the doe		10315
2.		of birth	Lusty	04.02.1950			
3.			gree / Title	Ph.D.			
4.			cientific degree	Ph.D. in Technical S	ciences		
5.			itution of the	Education	Year		Institution
	scient	ific deg	ree	BSc	1974		Faculty of Mechanical Engineering-Skopje
				MSc	1980		University of Belgrade
				PhD	1987		University of Skopje Faculty of Mechanical Engineering
6.	Area,	field an	d particular	Area	Field		Specialty
	specia	specialty of master of science degree		Technical Sciences	Thermal Power Plant		Thermal Energy
7.	Area,	, field and area of		Area Field			Specialty
	doctor	ral degr	ee	Technical Sciences	Non- Conventio TPP	nal	Thermal Energy
8.			state the	Institution		Title a	ind area
	works		here he/she e title and area in ed	University "Ss Kiril Metodius"Faculty of Engineering Skopje		Full p	rofessor
9.	List o	f course	es that the teacher	is lecturing separately	for first, seco	nd and	third cycle
	9.1.			eacher is lecturing in t			2
		No.	Course	0	Study progra	am/insti	itution
		1.	Thermo-technic Devices	al Machines and	PI, MZKI and MHT academic		
		2.	Thermo-technic Devices	al Machines and	IND, ZDK, studies	HA and	PINF professional
		3	Thermal Machir	nes and Devices	PI, TML, HIMV, MSKI, IIM, MV, MHT,		
		4	Fundamental of	Renewable Energy	PI, TML, HIMV, MSKI, IIM, MV, MHT,		
		5	Thermal Power	Plants	EE		
		6	Non-Convention	nal Energy sources	EE		
	9.2.	List o	f courses that the t	eacher is lecturing in t	the second cy	cle	
		No.	Course		Study progra	am/insti	itution

		1.	Combined Heat and Power	Plant	Full time-TI	
		2.	Geothermal Heat Pump	1 Iuni	Full time-TI	
		3	Non-conventional Thermal	Plant	Full time-TI and EE	
		4	Modern Power Systems	1 Iunit	Full time-EE	
		-				
	9.3.	List o	f courses that the teacher is le	ecturing in	the third cycle	
		No.	Course	0	Study program/insti	tution
		1.	Non-conventional Thermal	Plant	TI	
		2.	Rnewable Energy-thermal		TI	
			transformation			
	~ 4	3.	Modern Power Systems		TI	
10.			k in the past five years			
	10.1.		vant scientific printed paper (u			D1111 /
		No.	Author	Title	(F	Publisher/year
		1.	S. Armenski		on of Energy	"ENERGETICS
					of Waste Biomass iculture and	2010, Ohrid, 07- 09.10.2010, Book
				Livestock		2, pp.665-672
				Macedon		2, pp.005-072
		2.	V. Stojanov, S.Armenski	"Solar an		"ENERGETICS
			·· · · · · · · · · · · · · · · · · · ·		tivePower Plant for	2010, Ohrid, 07-
				U	y and Heat Energy	09.10.2010, Book
					n"	2, pp.691-700
		3.	S. Armenski	Available	Biomass Potential	Kochani 27-28
				-	y Production in	November 2013
				Kochani		
		4.	S. Armenski, R.Filkoski		al Energy-	Bulletin "Presing",
					e, renewable,	No 3, pp. 3-15,
		5.	S. Armenski		and receptional"	June 2011 "ENERGETICS
		Э.	5. AIIIICIISKI	0.7 1	otential of waste he Sout-West	2014, Struga, 16-
				planning		18.10.2014, Book
				R.Macedo		1, pp.429-440
	10.2.	Partic	pipation in scientific national			
		No.	Author	Title		Publisher/year
		1.	S. Armenski, K. Dimitrov,	"Municip	al solid waste as	Ministry of
			K. Davkova, D. Tasevski	energy so	urce in R. of	Education and
			and O. Dimitrov	Macedon	ia"	Science of R, of
						Macedonia, Skopje,
			~			September 2004
		2.	S. Armenski		ssurance and	TEMPUS project
					tion System	Брошура 2007
	10.2	D			QAASNet	
	10.3.	Printe	ed books in the last five years	(up to 5)		

	NI.	A	T:41-	Dellistenten
				Publisher/year
	1.	S. Armenski		NIP "Studentski
			Power Plant"	Zbor", pp. 493 стр,
				Skopje, October
				2001
	2.	S. Armenski	Biomass Energy	Alfa-94, pp.241,
				Skopje April 2009
	3.	S. Armenski	Thermo-technical machines	Alfa-94, Skopje,
			and devices-second edition	2010, pp.354
	4.	S. Armenski	Solar Energy-thermal	second edition
				book, Publisher
				"Jofi-sken"-Skopje,
				pp. 293, Skopje,
				May 2012
	5	S Armenski	Renewable – Sustainable	third edition, book,
	5.	S. Thinkiski		University "Ss
			Energy Sources	Ciryl and
				Methodius",
				Publisher "Boro-
				grafica"-Skopje,
				pp. 390, Skopje,
10.4	Drint	d profossional papars in the	lost 5 years (up to 5)	February 2013
10.4.		* * *		Publisher/year
	1.	S. Almenski. D. Lasevski		Norsk Energy", NGO "Center for
				climate changes",
				Skopje, September
				2009
	2.	S.Armenski, K.Popovski		FP7 Grand
			R. of Macedonia	Agriment No
				213417, 2008-2010
	3.	R.Filkoski, D.Tashevski,	Professional expertise for the	213417, 2008-2010 Skopje, December
	3.	R.Filkoski, D.Tashevski, S.Armenski. Z. Markov	Professional expertise for the inability for hot start,	213417, 2008-2010
	3.		Professional expertise for the inability for hot start, constructive problem of the	213417, 2008-2010 Skopje, December
	3.		Professional expertise for the inability for hot start,	213417, 2008-2010 Skopje, December
	3.		Professional expertise for the inability for hot start, constructive problem of the	213417, 2008-2010 Skopje, December
	3.		Professional expertise for the inability for hot start, constructive problem of the gas turbine, latent and other	213417, 2008-2010 Skopje, December
	3.		Professional expertise for the inability for hot start, constructive problem of the gas turbine, latent and other non-overhaul defects during installation and	213417, 2008-2010 Skopje, December
	3.		Professional expertise for the inability for hot start, constructive problem of the gas turbine, latent and other non-overhaul defects during	213417, 2008-2010 Skopje, December
Superv		S.Armenski. Z. Markov	Professional expertise for the inability for hot start, constructive problem of the gas turbine, latent and other non-overhaul defects during installation and commissioning of TE-TO AD Skopje	213417, 2008-2010 Skopje, December 2013
Superv 11.1.	vision	S.Armenski. Z. Markov (mentorship) of undergradua	Professional expertise for the inability for hot start, constructive problem of the gas turbine, latent and other non-overhaul defects during installation and commissioning of TE-TO AD	213417, 2008-2010 Skopje, December 2013
	vision	S.Armenski. Z. Markov (mentorship) of undergradua rgraduate	Professional expertise for the inability for hot start, constructive problem of the gas turbine, latent and other non-overhaul defects during installation and commissioning of TE-TO AD Skopje te, master and doctoral studies stu	213417, 2008-2010 Skopje, December 2013
	10.4.	3. 4. 5.	1. S. Armenski 2. S. Armenski 3. S. Armenski 4. S. Armenski 5. S. Armenski 5. S. Armenski 10.4. Printed professional papers in the No. Author 1. S. Armenski: D.Tasevski	1. S. Armenski Non-conventional Thermal Power Plant" 2. S. Armenski Biomass Energy 3. S. Armenski Thermo-technical machines and devices-second edition 4. S. Armenski Solar Energy-thermal transformation 5. S. Armenski Renewable -Sustainable Energy Sources 10.4. Printed professional papers in the last 5 years (up to 5) No. Author Title 1. S. Armenski: D.Tasevski REPLACEMENT OF THE FOSSIL FUEL WITH GRAPE RESIDUES IN KAVADARCI MUNICIPALITY 2. S.Armenski, K.Popovski Biomass energy potential in

12.	For me	entors of	f doctoral thesis, selected	wor	k for the last four / fi	ve years		
	12.1.		of printed scientific pape				or internati	onal
		publica	ations in the related field	(up	to 6) in the past five	years		
		No.	Author		Title		Publisher/	'year
		1.						
	12.2.	Proof	of at least two printed sci	entif	ic papers in internati	onal scienti	ific journals	s that
		have in	npact factor in the relate	d fie	ld in the past five yea	urs		
		No.	Author		Title		Publisher/	'year
		1.						
	12.3.	Proof	of at least three internation	onal 1	meetings' participation	on in the pa	st four year	ſS
		No.	Author	Titl	e	Internatio	nal	year
						meeting/c	onference	-
		1.						

Add	I. 4	Information abou	t the teachers that lect	ture at the	first, second	and third study
		pr	ogram and are mento	rs on the do	octoral thesi	S
1.	Name (Fi	rst, Last)	Mile Dimitrovski			
2.	Date of b	irth	27.05.1950			
3.	Scientific	e degree / Title	Ph.D.			
4.	Title of the	ne scientific degree	Ph.D. in Technical Sc	iences		
5.	Year and	institution of the	Education	Year	Ins	stitution
	scientific	degree	PhD.	1988	UI	KIM, Faculty of
					Μ	echanical
					en	gineering
			Magister of	1986	UI	KIM, Faculty of
			technical sciences		Μ	echanical
					en	gineering
			Mechanical engineer	1975		KIM, Faculty of
					Μ	echanical
					en	gineering
6.	Area, fiel	d and particular	Area	Field	Sp	ecialty
	specialty	of master of science	Energetic,	ICE Engir	ies IC	engines and
	degree		Mechanical		en	vironment
			engineering			
7.	Area, fiel	d and area of	Area	Field	-	oecialty
	doctoral of	degree	Energetic,	ICE Engir		engines and
			Mechanical		en	vironment
			engineering			
8.		ved, state the	Institution		Title and area	
	institution	n where he/she	University of St. Cyri	l and	Professor: Thermal energy	

	works	and the	e title and area	Methodiu	s in Skopje	e, Faculty of	product	ion department	
	in wh	ich is na	amed		al engineer	-		•	
9.	List o	f course	es that the teacher	is lecturing	g separately	y for first, sec	ond and	third cycle	
	9.1.	List o	f courses that the	teacher is l	ecturing in	the first cycle	9		
		No.	Course			Study progra	am/instit	ution	
		1.	Design and tuni		ngines	TI, MFS			
		2.	Fuels and engin	es		All, MFS			
		3.	ICE Engines	esign 7		EE, MFS			
		4.	ICE engines des			TI, MFS			
	9.2.	6 3							
		No.	Course			Study progra	am/instit	ution	
		1.	Advanced cours od ICE Engines I		EE, MFS				
		2.		Advanced couse of ICE Engine II		BZPR, MFS			
	3.IC engines advanced technology9.3.List of courses that the teacher is lecture			TI, MFS					
			ecturing in	, j					
		No. Course			Study program/institution				
10	<u> </u>	1.	· .1						
10.	Selected work in the past five years 10.1. Relevant scientific printed paper (up to 5)								
	10.1.			ted paper (Dalilial and an an	
		No.	Author Mile Dimitrovsk	: at all	Title	turata any fam Da	had	Publisher/year Combustion	
		1.	Mile Dimitrovsk	i al all.		strategy for Road afety in Rep. Of		Institute, Western	
						· ·		States, USA, 2008,	
					Widecuoli	la 2007 - 201-	т	University of	
								Southern California	
		2.	Mile Dimitrovsk	i at all	Second na	ationa strateg	v for	Parlament of Rep Of	
						ffic Safety in		Macedonia	
					Maceonia	a 2015 -2020	1		
		3.	Mile Dimitrovsk	i	Regulatio	ons of Air Poll	ution	ME, MTC	
					fromRoad	l Transport ar	nd Its		
					Implemen	ntation in the			
					Macedon	ia			
		4.	Mile Dimitrovsk	i, Zpran	Decentral	ization and it	s inpact	JEPE	
			Shapuric,			affic safety a	nd		
						ent			
		5.	Mile Dimitrovsk	i,		s for connecti			
						of Macedoni			
					South Eas	st gas stream	8		

10.2.	Partic	cipation in scientific national	and international projects (up to	5)				
	No.	Author	Title	Publisher/year				
	1.	Mile Dimitrovski,	Adjustment of the car park -	Ministry of				
		Vanco Donev,	buses JSP and the use of eco	education and				
		Elenior Nikolov,	fuels, natural gas,	science, Skopje				
		Dame Dimitrovski	development project	2003				
	2.	Dame M. Dimitrovski	Using of Biogas for	Project for World				
			cogenerative systems at	Scientific				
			sanitary landfill - Drisla	Organization pages				
			Skopje	6+52				
	3.	Dame Dimitrovski,	Lowering the influence of	National Agency for				
		Sonja Filipovska,	using day lights and a mean to	Traffic Safety on th				
			reduce the emission from	roads in 2009, Stud				
			small vehicles					
	4.	Dame Dimitrovski,	Emissions and Imissions in	National Agency for				
			the city of Tetovo, traffic	Traffic Safety on th				
			development influence on the	roads in 2008, Stud				
			imissions					
10.3.	Printed books in the last five years (up to 5)							
	No.	Author	Title	Publisher/year				
	1.	Mile Dimitrovski	Publication: Agro Energy	Study Agro, Energy				
		Dame Dimitrovski	study possibilities for the use	Study nr. 008/2009				
			of renewable energy sources	– Biogas 2009				
			in rural areas in the country					
10.4.	Print	ed professional papers in the	last 5 years (up to 5)					
	No.	Author	Title	Publisher/year				
	1.	Mile Dimitrovski	Awarded labor original	International Gas				
		Dame Dimitrovski	research results published in	conference,				
			scientific reference /	Beograd, Serbia,				
			professional journal with an	2007				
			international editorial board:					
			Ecological benefits of NG					
			buses in Skopje, Awarded					
			article					
	2.	Z. Markov,	Development of Gas	Proceedings of the				
		D.Dimitrovski, V.Aleksic	Distribution Network for the	Institute of Gas				
			city of Kumanovo –	Technology				
	1		Challenges and Solutions,	1				

11. Supervision (mentorship) of undergraduate, master and doctoral students 112 11. Supervision (mentorship) of undergraduate, master and doctoral students 112 11.1. Undergraduate 112 11.2. Master 15 11.3. Doctoral 4 12.4. For mentors of doctoral thesis, selected work for the last four / five years 112 11.1. Undergraduate 112 11.2. Master 15 11.3. Doctoral 4 12.4. For mentors of doctoral thesis, selected work for the last four / five years 12 12.1. Puodoctoral the sis, selected work for the last four / five years 12 12.1. Poroof of printed scientific papers in international scientific journals or international scientific journals or voltamical work scientific journal vol 32-1, 2014 12.1. Poroof of at least two printed scientific papers in international scientific journal scientific journal vol 32-1, 2014 12.1. Port of at least two printed scientific papers in international scientific journal vol 32-1, 2014 12.2. Proof of at least two printed scientific papers in international scientific journal vol 32-1, 2014 12.2.						
3. D. Dimitrovski, M. Stojanovska, D. Stojanovska Virtual pipelines – short cut to natural gas utilization, International Gas Conference of South Eastern Europe International Gas Conference, Sarajevo 2012 4. Dame Dimitrovski Why biogas from agriculture and livestock, haven't became the basis for rural development in Macedonia Zemak, Ohrid, 2010 5. Done Tashevski, Dame Dimitrovski Optimization of binary co- generative thermal power plants with SOFC on solid fuel JETP 11. Undergraduate 112 JETP 11.1. Undergraduate 112 11.2. Master 15 11.3. Doctoral 4 12. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years Mechanical engineering – Sientific journal vol 32-1, 2014 12. Proof of at least two printed scientific papers in international scientific journal vol 32-1, 2014 Vol 32-1, 2014 12.2. Proof of at least two printed scientific papers in international scientific journal vol 32-1, 2014 SAPURIC, D. SAPURIC, D. SAPURIC, D. DA Author Title Publisher/year 2. M. DIMITROVSKI, Z. SAPURIC, D. DA OF Road Transport Air POllution and Its POLUCIO and Its POLUCIO and Its POLUCIO and Its Protection and e					International Gas Conference	
Image: stojanovski, D. Stojanovska natural gas utilization, International Gas Conference of South Eastern Europe Conference, Sarajevo 2012 4. Dame Dimitrovski Why biogas from agriculture and livestock, haven't became the basis for rural development in Macedonia Zemak, Ohrid, 2010 5. Done Tashevski, Dame Dimitrovski Optimization of binary co- generative thermal power plants with SOFC on solid fuel JETP 11. Undergraduate 112 International scientific pursus International generative thermal power 11.1. Undergraduate 112 International fuel International generative thermal power 11.2. Master 15 International scientific pursus International generative thermal power 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years Indechanical engineering – Scientific journal vol 32-1, 2014 12.2. Proof of at least two printed scientific papers in international scientific journals or international publications in the related field in the past five years Mechanical engineering – Scientific journal vol 32-1, 2014 12.1. Portor of at least two printed scientific papers in international scientific journals or in Macedonia Journal of engineering – Scientific journal vol 32-1, 2014 <th></th> <th></th> <td></td> <td></td> <td>1</td> <td></td>					1	
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11.3. Doctoral 4 12. For mentors of doctoral thesis, selected work for the last four / five years iternational scientific journals or international publications in the related field (up to 6) in the past five years No. Author Title Publisher/year 1. Dame Dimitrovski, Mile Pollution from diesel engine Mechanical engineering – 1. Dame Dimitrovski, Mile Pollution from diesel engine Mechanical engineering – 1. Dame Dimitrovski, Elena with emphasis on pollution engineering – Scientific journal 12.1. Proof of at least two printed scientific papers in international scientific journal that have impact factor in the related field in the past five years Vol 32-1, 2014 12.2. Proof of at least two printed scientific papers in international scientific journal sthat have impact factor in the related field in the past five years Vol 32-1, 2014 12.2. M. DIMITROVSKI, Z. European Union Regulations Journal of SAPURIC, D. of Road Transport Air environmental DIMITROVSKI, D. DIMITROVSKI, C., M. Macedonia p.813 vol.3A vol.3A 3 Done Tashevski, Dame Optimization		11.1.	Under	graduate	112	
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No.AuthorTitlePublisher/year1.Dame Dimitrovski, Mile Dimitrovski, Elena Kitanovska, Done TashevskiPollution from diesel engine with emphasis on pollution in MacedoniaMechanical engineering – Scientific journal vol 32-1, 201412.2.Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five yearsPublisher/yearNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z. SAPURIC, D. DIMITROVSKI, CA, M. KOCHUBOVSKI.European Union Regulations of Road Transport Air Pollution and Its Implementation in the FYR Macedonia p.813Journal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791	12.	For me	entors c	of doctoral thesis, selected wo	ork for the last four / five years	
No.AuthorTitlePublisher/year1.Dame Dimitrovski, Mile Dimitrovski, Elena Kitanovska, Done TashevskiPollution from diesel engine with emphasis on pollution in MacedoniaMechanical engineering – Scientific journal vol 32-1, 201412.2.Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five yearsPublisher/yearNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z. SAPURIC, D. DIMITROVSKI CA, M. KOCHUBOVSKI.European Union Regulations of Road Transport Air Pollution and Its Implementation in the FYR Macedonia p.813Journal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791		12.1.	Proof	of printed scientific papers in	n international scientific journals	or international
1.Dame Dimitrovski, Mile Dimitrovski, Elena Kitanovska, Done TashevskiPollution from diesel engine with emphasis on pollution in MacedoniaMechanical engineering – Scientific journal vol 32-1, 201412.2.Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five yearsPublisher/yearNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z. SAPURIC, D. DIMITROVSKI CA, M. KOCHUBOVSKI.European Union Regulations of Road Transport Air Pollution and Its Implementation in the FYR Macedonia p.813Journal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791			public	cations in the related field (up	to 6) in the past five years	
Dimitrovski, Elena Kitanovska, Done Tashevskiwith emphasis on pollution in Macedoniaengineering - Scientific journal vol 32-1, 201412.2.Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five yearsPublisher/yearNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z. SAPURIC, D. DIMITROVSKI CA, M. KOCHUBOVSKI.European Union Regulations of Road Transport Air Pollution and ItsJournal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791			No.	Author	Title	Publisher/year
Kitanovska, Done Tashevskiin MacedoniaScientific journal vol 32-1, 201412.2.Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five yearsPublisher/yearNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z. SAPURIC, D. DIMITROVSKI CA, M. KOCHUBOVSKI.European Union Regulations of Road Transport Air Pollution and Its Implementation in the FYR Macedonia p.813Journal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791			1.	Dame Dimitrovski, Mile	Pollution from diesel engine	Mechanical
Image: Image: TashevskiTashevskivol 32-1, 201412.2.Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five yearsPublisher/yearNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z.European Union Regulations of Road Transport AirJournal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering 				Dimitrovski, Elena	with emphasis on pollution	engineering –
12.2. Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five years No. Author Title Publisher/year 2. M. DIMITROVSKI, Z. European Union Regulations of Road Transport Air Journal of environmental protection and lts DIMITROVSKI CA, M. Pollution and Its protection and ecology, 2013, Macedonia p.813 vol.3A 3 Done Tashevski, Dame Optimization of binary cogenerative thermal power plants with SOFC on solid Chemical Engineering Transactions, Journal ISSN: 19749791				Kitanovska, Done	in Macedonia	Scientific journal
impact factor in the related field in the past five yearsNo.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z.European Union RegulationsJournal of2.M. DIMITROVSKI, Z.European Union RegulationsJournal ofaSAPURIC, D.of Road Transport AirenvironmentalDIMITROVSKI CA, M.Pollution and Itsprotection andKOCHUBOVSKI.Implementation in the FYRecology, 2013,Macedonia p.813vol.3Avol.3A3Done Tashevski, DameOptimization of binary co- generative thermal powerChemical Engineering Transactions, Journal ISSN: 19749791				Tashevski		vol 32-1, 2014
No.AuthorTitlePublisher/year2.M. DIMITROVSKI, Z.European Union Regulations of Road Transport AirJournal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791		12.2.	Proof	of at least two printed scient	ific papers in international scient	ific journals that have
2.M. DIMITROVSKI, Z. SAPURIC, D. DIMITROVSKI CA, M. KOCHUBOVSKI.European Union Regulations of Road Transport Air Pollution and Its Implementation in the FYR Macedonia p.813Journal of environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791			impac	et factor in the related field in	the past five years	
SAPURIC, D. DIMITROVSKI CA, M. KOCHUBOVSKI.of Road Transport Air Pollution and Its Implementation in the FYR Macedonia p.813environmental protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791			No.	Author	Title	Publisher/year
DIMITROVSKI CA, M. KOCHUBOVSKI.Pollution and Its Implementation in the FYR Macedonia p.813protection and ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791			2.	M. DIMITROVSKI, Z.	European Union Regulations	Journal of
KOCHUBOVSKI.Implementation in the FYR Macedonia p.813ecology, 2013, vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791				SAPURIC, D.	of Road Transport Air	environmental
Macedonia p.813vol.3A3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791				DIMITROVSKI CA, M.	Pollution and Its	protection and
3Done Tashevski, Dame DimitrovskiOptimization of binary co- generative thermal power plants with SOFC on solidChemical Engineering Transactions, Journal ISSN: 19749791				KOCHUBOVSKI.	Implementation in the FYR	ecology, 2013,
Dimitrovskigenerative thermal power plants with SOFC on solidTransactions, Journal ISSN: 19749791					Macedonia p.813	vol.3A
plants with SOFC on solid ISSN: 19749791			3	Done Tashevski, Dame	Optimization of binary co-	
plants with 501 C on solid				Dimitrovski	generative thermal power	
fuel					plants with SOFC on solid	ISSN: 19749791
					fuel	

	4.	Dame Dimitrovski, Mi	le	Model for calculate	ion of	JEPE, 20	14,
		Dimitrovski, Antonio		NOx from public the	ransport in	accepted	for
		Jovanovski		the city of Skopje		publishin	ig, vol 4
12.3.	Proof	of at least three internati	onal	meetings' participat	ion in the pa	st four ye	ars
	No.	Author	Titl	e	Internation	al	year
					meeting/co	onference	
	1.	D. Dimitrovski,	Pol	lution from Diesel	1 st Internat	ional	12-14
		M. Dimitrovski,	Eng	gines to Increase of	Medical		September
		E. Kitanovska,	Imp	orted Vehicles in	Conference	e	2014.
		D. Tashevski:	FY	R-Macedonia.	"Environm	nent and	
			(IO	C - 2^{nd} Award)	Public Hea	ılth"	
					MED ENV	/ 2014,	
					Mamaia, R	lomania,	
	2.	D. Dimitrovski,	Bio	gas – Overview of	16 th Sympo	osium on	22-25
		M. Dimitrovski,	the	Possibilities for	Thermal S	cience	October,
		G. Popsimonova,	Imp	elementation in the	and Engine	eering of	2013.
		D. Tashevski	Ma	cedonian	Serbia –		
			Ag	ricultural Sector.	SIMTERN	1 2013,	
			(IO	C)	p. 11, Soko	obanja,	
					Serbia,		

Ado	1. 4	Information ab	out the teachers that program and are me		rst, second and third study toral thesis
1.	Name (Fi	irst, Last)	Dushan Chakmakov		
2.	Date of b	irth	18.02.1959		
3.	Scientific	e degree / Title	Ph.D.		
4.	Title of the degree	ne scientific	Ph.D. in Technical S	ciences/Compute	er Science
5.	Year and	institution of the	Education	Year	Institution
	scientific	degree	B.S. in Mathematics and Informatics	1982	Faculty of Mathematics, University Ss. Cyril and Methodius, Skopje
			M.S. in Computer Science	1988	Faculty of Electrical Engineering and Computer Science, Skopje
			Ph.D. in Computer Science	1992	Faculty of Electrical Engineering and Computer Science, Skopje
6.		d and particular	Area	Field	Specialty
	specialty science d	of master of egree	Informatics	Programming Languages	Compilers

7.	Area,	field a	nd area of	Area		Field	Specialty	
	-	ral deg		Informat	ics	Information	Searching in Multimedia	
						Systems	Information	
8.			state the	Institutio	n		Title and area	
			here he/she	Faculty of	of Mechani	cal Engineering,	Professor	
			e title and		Mathemati			
	area 11	n which	h is named			sity "Ss. Cyril		
				and Meth	nodius"			
9.	List o	f cours	es that the teac	her is lectu	ring separa	tely for first, seco	nd and third cycle	
	9.1.	List o	of courses that t	he teacher	is lecturing	g in the first cycle		
		No.	Course			Study program/in	stitution	
		1.	Data Bases			Production Inform	natics/Fac. of Mechanical	
						Eng.		
		2.	Probability a	nd Statistic	cs	Industrial Engine	ering and Management/ Fac.	
						of Mechanical Er		
		3.	Programming	g Language	es	Production Inform	natics/Fac. of Mechanical	
						Eng.		
	9.2.			he teacher	is lecturing	g in the second cycle		
		No.	Course			Study program/in		
		1.	-		cs in Informatics All/ Fac. of Mech		6	
		2.	System Softw				c. of Mechanical Eng.	
	9.3.			he teacher	is lecturing	g in the third cycle		
		No.	Course			Study program/in		
		1.	Advanced Co	-		All/ Fac. of Mechanical Eng.		
			Programmin					
	~ .	2.	Artificial Int	<u> </u>	nd	All/ Fac. of Mech	nanical Eng.	
10.	-	1	k in the past fiv					
	10.1.		vant scientific p	orinted pape				
		No.	Author		Title	· 1 D 11 1	Publisher/year	
		1.	Celakoska E.,			Link Problem and	Proceedings of the Fourth	
			Cakmakov D.		Solutions		Int. Scientific Conference	
							<i>FMNS</i> , <i>Blagoevgrad</i> ,	
	10.2	Dent	ination in a - : -	ntifia nati-			Vol.1, 2011, 16-21.	
	10.2.		· ·	minc natio		ernational projects	1 · · · · · · · · · · · · · · · · · · ·	
		No.	Author		Title		Publisher/year	
	10.3.		ed books in the	last five ve	ears (up to	5)		
	10.5.	No.	Author		Title	5)	Publisher/year	
		1.	Chakmakov I)		ty and Statistics	University Ss. Cyril and	
		1.			for Engin		Methodius, Skopje, (in	
					TOT Engli		Print)	
	10.4.	Print	ed professional	naners in t	he last 5 v	ears (up to 5)	111111	
	10.4.	No.	Author	papers in t	Title	uis (up to <i>5)</i>	Publisher/year	
	L	110.	1 uuioi		11110		i uonsnen/year	

		1.						
11.	Super	vision (mentorship) of underg	radu	uate, master and doctora	ıl stu	dies students	
	11.1.	Under	graduate		/			
	11.2.	Master	r		/			
	11.3.	Doctor	ral		/			
12.	For me	entors o	ors of doctoral thesis, selected work for the last four / five years					
	12.1.		Proof of printed scientific papers in international scientific journals or international					
		public	lications in the related field (up to 6) in the past five years					
		No.	Author		Title		Publisher/year	
		1.						
	12.2.				entific papers in internat	iona	l scientific journal	s that have
		impac	t factor in the related	field	in the past five years			
		No.	Author		Title		Publisher/year	
		1.						
	12.3.	Proof	of at least three intern	atio	nal meetings' participati			rs
		No.	Author	Tit	le		ernational	year
						me	eting/conference	
		1.						

Add	1. 4		ut the teachers the rogram and are		e first, second and third study doctoral thesis			
1.	Name (Fi	irst, Last)	Atanasko Tunes	ki				
2.	Date of b	irth	22.01.1965					
3.	Scientific	e degree / Title	Ph.D./ Professor	-				
4.	Title of the	he scientific degree	Ph.D. in Technie	cal Sciences				
5.	Year and	institution of the	Education	Year	Institution			
	scientific	degree	Ph.D	1997	Faculty of Mechanical			
					Engineering - Skopje			
			M.Sc	1993	Faculty of Mechanical			
					Engineering - Skopje			
			B.Sc	1989	Faculty of Mechanical			
					Engineering - Skopje			
6.	Area, fiel	d and particular	Area	Field	Specialty			
	specialty	of master of	Technical	Mechanical	Control Systems			
	science d	egree	Sciences	Engineering				
7.	Area, fiel	d and area of	Area	Field	Specialty			
	doctoral o	degree	Technical	Mechanical	Control Systems			
			Sciences	Engineering				
8.	1 0	ved, state the	Institution		Title and area			
		n where he/she d the title and area is named	Faculty of Mech Engineering –Sl		Full Professor, Automation			
9.	List of co	ourses that the teache	r is lecturing sepa	rately for first, so	econd and third cycle			

	9.1.	Listo	of courses that the teacher is	lecturing	in the first cyc	le
	<i>J</i> .1.	No.	Course	leetuning		um/institution
		1.	Systems and Control		<u> </u>	s at the Faculty of Mechanical
					Engineering	
		2.	Optimal Energetic System	ns		nd Ecology/ Faculty of
						Engineering – Skopje
		3.	Environmental Monitorin	ig and	Environment	tal and Resources Engineering
			Control		Studies	
		4.	Automatic Control System	ns		and Control Systems, Faculty of
						Engineering – Skopje
		5.	Digital Control Systems			and Control Systems, Faculty of
	0.0	.				Engineering – Skopje
	9.2.		of courses that the teacher is	lecturing		
		No.	Course			m/institution
		1.	Control of Dynamic Syste	eins		and Control Systems, Faculty of Engineering – Skopje
		2.	Environmental Systems A	Inalycic		tal and Resources Engineering
		2.		anary 515	Studies	tar and Resources Engineering
	9.3.	List o	f courses that the teacher is	lecturing		cle
		No.	Course	U		am/institution
		1.	Advanced Control of Dyr	namic		engineering/Faculty of
			Systems		Mechanical	Engineering
		2		<u> </u>		· · · /E · · · C
		2.	Advanced Computer Com Systems and Processes		Mechanical Mechanical	engineering/Faculty of
10.	Select	ed worl	k in the past five years		Weenanical	Engineering
10.	10.1.		ant scientific printed paper	(up to 5)		
	10.1.	No.	Author	Title		Publisher/year
		1.	Babunski D, Tuneski A.,		on of load	IEEE Conference on
			Zaev E.	rejection		Embedded Computing
				nonlinear		(MECO), June 2012, Bar,
					ant model	Monte Negro
				with mix		
				nonlinear	controller	
		2	A.Tuneski et al.	Davalana	want of ou	SEFI 42 nd Annual Conference,
		2.	A. I uneski et al.	1	nent of an nental and	September 2014,
				Resource		Birmingham, United Kingdom
				Engineer		Dimingham, Oniced Kingdom
				Learning	-	
		3.	A.Tuneski et al.	Environn	nental	SEFI 41 st Annual Conference,
				-	ng curricula	September 2013, Leuven,
				developn	nent	Belgium

	1		I	Γ	
		4.	Emil Zaev, Gerhard	HPP Simulator for	6th Annual SEE Conference:
			Rath, Atanasko Tuneski	Real-Time Simulation	Infusing Research and
			et al.	and SCADA Software	Knowledge in South-East
				Testing	Europe, September, 2011,
				6	Thessaloniki, Greece
		5.	A.Tuneski et al.	Development of an	SEFI 40 th Annual Conference,
				Environmental and	September 2012, Thessaloniki,
				Resources	Greece
				Engineering	
				Education Framework	
	10.2.	Partic	cipation in scientific nation		ects (up to 5)
		No.	Author	Title	Publisher/year
		1.	A.Tuneski (Coordinator)	Development of	EU Directorate for Education
			, , , , , , , , , , , , , , , , , , ,	Environmental and	and Science, TEMPUS IV
				Resources	
				Engineering Learning	
		2.	A.Tuneski (Coordinator)	Monitoring and	NATO Science for Peace
		2.	A. Tuneski (Coordinator)	Improving Rivers in	Project, 2006-2010, SfP
				Vardar/Axios	981877
					981877
	10.3.	Drint	ed books in the last five yea	Watershed	
	10.5.			Title	Dublish on/woon
		No.	Author		Publisher/year
		1.	A. Tuneski, E. Caporali	Towards a New	Firenze University Press, 2009
				Curriculum: The	
	10.4	D		DEREC Experience	
	10.4.		ed professional papers in the		
		No.	Author	Title	Publisher/year
		1.			
11.			(mentorship) of undergradu		studies students
	11.1.	Under	rgraduate	more than 20	
	11.2.	Maste	er	3 (three)	
	11.3.	Docto	oral	2 (two)	
	For me	entors of	of doctoral thesis, selected v		/e years
12.	12.1.		f of printed scientific papers		-
		publi	cations in the related field (ears
		No.	Author	Title	Publisher/year
		1.	A.Tuneski et al.	Design of Robust	Journal of Energetics, Journal
				Control Law for	of Association of Energy
				Hydroturbine and	Sector, No.2, year XIII, March
				SCADA Simulation	2011, ISSN 0354-8651, UDC:
					621.224.011:62-5, pp.85-89.
		2.	A.Tuneski	Adaptive Control of	ROBOMAC publication,
	1			1	1
1				Multiple Robots	published by IEEE Branch

				Manipulation on Dynamic Environment		Macedonia and H of Students of Te 2009	echnology,
12.2.		of at least two printed a first factor in the related fact				nal scientific journ	hals that have
	No.	Author		Title		Publisher/year	
12.3.	1. Proof	f of at least three interna	tions	l meetings' particin	atio	h in the past four y	vears
12.3.	No.	Author	Tit	* * *	Int	ernational eting/conference	Year
	1.	Babunski D, Tuneski A., Zaev E.	reje nor Pov wit	nulation of load ection on a nlinear Hydro wer Plant model h mixed mode nlinear controller	IE on Co (M	EE Conference Embedded omputing IECO), June 12,Monte Negro	2012
	2.	A.Tuneski et al.	Env Res Eng	velopment of an vironmental and sources gineering arning	Co Se Bi	FI 42 nd Annual onference, ptember 2014, rmingham, nited Kingdom	2014
	3.	A.Tuneski et al.	eng	vironmental gineering curricula velopment	Co Se	EFI 41 st Annual onference, ptember 2013, uven, Belgium	2013
	4.	Emil Zaev, Gerhard Rath, Atanasko Tuneski et al.	Rea and	P Simulator for al-Time Simulation l SCADA Software sting	Cc Inf and So 20	Annual SEE onference: fusing Research d Knowledge in uth-East Europe, 11, Thessaloniki, eece	2011

Add					second and third study		
	-	pro	ogram and are mentor	s on the doctora	l thesis		
1.	Name (Fi	irst, Last)	Aleksa Malcheski				
2.	Date of b	irth	12.03.1964				
3.	Scientific	e degree / Title	Ph.D.				
4.	Title of th	ne scientific degree	Ph.D. in mathematical sciences				
5.	Year and	institution of the	Education	Year	Institution		
	scientific	degree	B.S. in Mathematics	1988	Faculty of Science,		
					University Ss. Cyril		
					and Methodius,		

								Skopje
				M.Sc. in	Theoretical	1996		Faculty of Science,
				Mathema				University Ss. Cyril
								and Methodius,
								Skopje
				Ph.D. in	Theoretical	2002		Faculty of Science,
				Mathema				University of Novi
								Sad, Novi Sad,
								Serbia
6.	Area,	field ar	nd particular	Area		Field		Specialty
			naster of science	Mathema	tics	Complex		Bounded analytic
	degree					Analysis		functions
7.	Area, field and area of		Area		Field		Specialty	
	doctor	loctoral degree Mathematics Functional		1	Banal spaces, n-			
		-				analysis		normed spaces
8.			state the			Title a	nd area	
			nere he/she works	Faculty o	Faculty of Mechanical Full			rofessor,
			and area in which	Engineer				matics
	is nan	ned			Mathematics	s and		
					ics, Universi			
					Methodius'	•		
9.	List of	f course	es that the teacher i				nd and	third cycle
	9.1.		f courses that the t					2
		No.	Course			Study progr		itution
		1.	Mathematics 1			All on MFS		
		2.	Mathematics 2			All on MFS		
	9.2.	List o	f courses that the t	eacher is le	cturing in th	ne second cy	cle	
		No.	Course			Study progr	am/insti	itution
		1.	Numerical mathe	ematics		All on MFS		
		2.	Methods of optim	nization		All on MFS		
	9.3.	List o	f courses that the t	eacher is le	ecturing in th	ne third cycle	e	
		No.	Course			Study progr	am/insti	itution
		1.	/			/		
10.	Select		in the past five ye					
	10.1.	Relev	ant scientific printe	ed paper (u	p to 5)			
		No.	Author		Title			Publisher/year
		1.	Aleksa Malchesk	,	A character	rization of <i>n</i>	-semi	Mathematica
			Manova Erakovik	2	norm			Balkanica,New
								series, Vol.25,2011,
								Fasc.4, Bulgaria
		2.	Aleksa Malchesk		Some 2-sul	bspaces of 2	-space	Mathematicki Bilten,
			Manova Erakovik	Σ				Математички
								Билтен, 35 (LXI),

				Македонија, 2011					
	3.	Aleksa Malcheski, Vesna	An extend of the type of	Математички					
		Manova Erakovik	Hanh-Banach for skew-	Билтен, 35 (LXI),					
			symmetric linear forms	Македонија, 2011					
	4.	Aleksa Malcheski	Hahn Banach Theorem for	Proceedings of the 5					
			branch 2-subspaces	congres of					
			1	mathmaticinas of					
				Macedonia, 23-					
				27.09.2014					
	5.	Aleksa Malcheski, Vesna	Hahn Banach Theorem for	Proceedings of the 5					
		Manova Erakovik	cyclic 2-subspaces	congres of					
			- J	mathmaticinas of					
				Macedonia, 23-					
				27.09.2014					
10.2.	Participation in scientific national and international projects (up to 5)								
	No.	Author	Title	Publisher/year					
	1.	Aleksa Malcheski, Donco	Students' Institute of	2013, (MANU)					
		Dimoski, Gjorgji	Mathematics and Informatics						
		Markoski, Jasmina							
		Markoska, Marija Mihova							
	2.	Vesna Manova Erakovik,	"The boundary values of the	2006-2009, Institute					
		Aleksa Malcheski and	analytic functions and	of mathematics,					
		other	distributions and	Faculty of Natural					
			approximations in the sense	sciences and					
			of distributions"	Mathematics					
10.3.	Printe	ed books in the last five years							
	No.	Author	Title	Publisher/year					
	1.	Aleksa Malcehski and	Competitions in mathematics	SMM, 2014					
	1.	Aleksa Malcehski and other	Competitions in mathematics in primary education 2006-	SMM, 2014					
	1.		-	SMM, 2014					
	1. 2.		in primary education 2006-2013	SMM, 2014 SMM, 2012					
		other	in primary education 2006- 2013 Sigma-Mails, Preparatory	, , ,					
		other Aleksa Malcheski, Risto	in primary education 2006- 2013 Sigma-Mails, Preparatory	, , ,					
		other Aleksa Malcheski, Risto Malcheski, Vesna Manova	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical	, 					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box	SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions	SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box	SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box	SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji Markoski Aleksa Malcheski, Risto	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box competition tasks 1006-1260 Sigma-Mails, Box	SMM, 2012 SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box competition tasks 1006-1260	SMM, 2012 SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box competition tasks 1006-1260 Sigma-Mails, Box	SMM, 2012 SMM, 2012					
	2. 3. 4.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji Markoski	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box competition tasks 1006-1260 Sigma-Mails, Box competition tasks, 1-192	SMM, 2012 SMM, 2012 SMM, 2012					
	2.	other Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic,Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji Markoski Aleksa Malcheski, Risto Malcheski, Vesna Manova Erakovic, Gjorgji	in primary education 2006- 2013 Sigma-Mails, Preparatory tasks for mathematical competitions Sigma-Mails, Box competition tasks 1006-1260 Sigma-Mails, Box	SMM, 2012 SMM, 2012					

					1978-2012					
	10.4.	Printe	d professional papers in t	he las	st 5 years (up to 5)					
		No. Author		r	Title		Publisher/	year		
		1.								
11.	Super	vision (mentorship) of undergrad	luate,	master and doctoral	studies stu	idents			
	11.1.	Under	Jndergraduate /							
	11.2.	Master 1								
	11.3.	Docto	ral		/					
12.	For me	entors c	of doctoral thesis, selected	l worl	k for the last four / fi	ve years				
	12.1.		of printed scientific pape				or internati	onal		
		public	cations in the related field	(up t	o 6) in the past five	years				
		No.	Author		Title		Publisher/	year		
		1.								
	12.2.		of at least two printed sci			onal scient	ific journals	s that have		
			t factor in the related field	d in th	é					
		No.	Author		Title		Publisher/	year		
		1.								
	12.3.		of at least three internation	1				S		
		No.	Author			International year		year		
						meeting/c	conference			
		1.								

Add	. 4				second and third study
		pr	ogram and are mentor	s on the doctora	l thesis
1.	Name (Fi	irst, Last)	Valentino Stojkovski		
2.	Date of b	irth	14.10.1964		
3.	Scientific	e degree / Title	Ph.D.		
4.	Title of the	ne scientific degree	Ph.D. in Technical Sci	ences	
5.	Year and	institution of the	Education	Year	Institution
	scientific	degree	Ph.D in Mechanical	2001	Faculty of
		-	Engineering		Mechanical
					engineering - Skopje
			M. Sc. in Mechanical	1995	Faculty of
			Engineering		Mechanical
					engineering - Skopje
			B. Sc. in Mechanical	1989	Faculty of
			Engineering		Mechanical
					engineering - Skopje
6.	Area, fiel	d and particular	Area	Field	Specialty
	specialty	of master of science	Technical-	Mechanical	Fluid mechanic and
	degree		technological		fluid flow systems
			sciences		

7.	Area,	field a	nd area of	Area		Field		Specialty	
	-	ral degi			Technical- technological		al	Fluid mechanic and fluid flow systems	
8.	If em	ployed,	state the	Institution	1		Title a	nd area	
	institu works which	institution where he/she works and the title and area in which is named			y of Ss Cyril s, faculty of al engineeri	ng	hydrau	sor, Fluid flow and llic machines	
9.			es that the teacher					third cycle	
	9.1.		of courses that the t	teacher is le	ecturing in th			·, ,•	
		No.	Course			Study progr			
		1.	Fluid mechanics			, , ,		A,MHT,AUS/ FME	
		2.	Fluid dynamics			HIMV / FM			
		3.	Fluid flow meas	urement		HIMV,AUS	6/FME		
		4.	Gas systems	1. 1.	1	EE/FME HIMV/FME	-		
		5.	Design of hydra systems	Design of hydraulic machines and					
	9.2.	List c	Courses that the teacher is lecturing in the second cycle						
		No.	Course		Study program/institution				
		1.	Modeling and simulation in			AFI/FME			
			automation and fluid engineering						
		2.	Measuring, monitoring and data base			AFI / FME			
		3.	Selected chapter	nechanics	AFI /FME				
		4.	Fluid conveying		AFI/FME				
		5.	Pumps and pum	Pumps and pumps stations					
		6.	Engineering exp	on	EE/FME				
		7.	Design of hydro power plant			EE/FME			
		8.	Protection and s plants and system	dropower	BZR/FME				
	9.3.	List c	of courses that the t		ecturing in th	ne third cycle	e		
		No.	Course			Study progr		itution	
		1.	Experimental re	search in fl	uid	HIA / FME			
			mechanics and h						
		2.	Modeling and si dynamic	mulation in	n fluid	HIA / FME			
		3.	Advance topics	of fluid me	chanics	HIA / FME			
		4.	Norms for prote			HIA / FME			
			environmental						
10.	Select	ed wor	k in the past five y	ears					
	10.1.	Relev	ant scientific print	ted paper (u	(p to 5)				
		No.	Author		Title	Publisher/year			
		1.	Valentino Stojko	ovski, Empirilie		al correlation for		Thermal Science,	
			Zvonimir Kostic		prediction of the elutria				

			rate constant	58, 2003						
	2.	V.Stojkovski, Z.Kostic,	Dependence of the total	Thermal Science,						
		A.Nospal	entrainment flux upon the	Vol.4, No.1, pp.65-						
		I.	apparent and the total	73, 2008						
			fluidization number	,						
10.2.	Participation in scientific national and international projects (up to 5)									
	No.	Author	Title	Publisher/year						
	1.	Noshpal A., Stojkovski V.,	Application of CAD and	Ministry of education						
		Markov Z.	CAX technologies in	and science of						
			electrical technique processes	Republic Macedonia						
			in energy and ecology	2006-2009						
	2.	M. Kosevski (Project	Numerical Simulation	Tempus CARDS						
		coord.), V.Stojkovski et al.	Program in Mechanical	JEP-19017, 2006-						
			Engineering,	2009						
	3.	I.Petrovski, R.Filkovski,	Research and optimization of	Ministry of education						
		A.Nospal, V.Stojkovski et	thermal processes in thermo	and science of						
		at.	energetic equipment with	Republic Macedonia						
			numerical analyses	2006-2009						
10.3.										
	No.	Author	Title	Publisher/year						
	1.									
10.4.	Printed professional papers in the last 5 years (up to 5)									
	No.	Author	Title	Publisher/year						
	1.	R.Filkovski, I.Petrovski,	Energy eficiencyand energy	14 THERMAL						
		A.Nospal, V.Stojkovski	saving in industry and	SYMPOSIUM						
			services	SERBIA, 2009						
	2.	V.Stojkovski, Z.Kostic,	Criteria for assessing the	INTERNATIONAL						
		A.Nospal, D.Tanurkov:	feasibility of small hydro	CONFERENCE:						
			power plant	ENERGY,2008						
	3.	V.Fustic, V.Stojkovski	EXPERTS' ANALYSIS OF	International council						
		et.al.	THE EQUIPMENT IN THE	on large electric						
			SMALL HYDRO POWER	systems Macedonian						
			PLANTS IN THE	national committee-						
			"TRANSFER" PHASE OF	Conference 2013						
	L		THE ROT PROJECT	th						
	4.	R.Filkovski, F.Stojkovski,	A CFD study of a solar	6 th International						
		V.Stojkovski	chimney power plant	conference on						
			operation	sustainable energy &						
				environmental						
				protection SEEP						
				2013, Maribor,						
				Slovenia						
	5.	P.Popovski, V.Stojkovski,	Method for measuring the	Macedonian energy						
	1	K.Najdenkovski	guaranteed energy	association						

				nor	rformance of smal	1 hudro	Internation	nal	
				-		i iiyulo			
				po	wer plant		symposiur		
								s 2014	
11.	Super	vision (1	mentorship) of undergrad	duate, m	aster and doctoral	studies stu	idents		
	11.1.	Underg	graduate						
	11.2.	Master	•						
	11.3.	Doctor	al		/				
12.	For me	entors o	f doctoral thesis, selected	d work f	or the last four / fi	ve years			
	12.1.	Proof	of printed scientific pape	ers in int	ernational scientif	ic journals	or internati	onal	
		public	ations in the related field	l (up to 6	6) in the past five	years			
		No.	Author	T	itle		Publisher/year		
		1.							
	12.2.	Proof	of at least two printed sc	ientific p	papers in internation	onal scient	ific journals	s that have	
		impac	t factor in the related fiel	ld in the	past five years		5		
		No.	Author	T	itle		Publisher/	year	
		1.						2	
	12.3.	Proof	of at least three internation	onal mee	etings' participation	on in the pa	ast four year	rs	
		No.	Author	Title		Internatio			
						meeting/c	conference	-	
		1.				Ŭ			

Add	Add. 4 Information about the teachers that lecture at the first, second and third study									
		program and	d are mentors on the doctoral t	hesis						
1.	Name	(First, Last)	Nikola Tuneski							
2.	Date o	of birth	16.07.1971							
3.	Scient Title	ific degree /	Ph.D.							
4.	Title o	f the fic degree	Ph.D. in mathematical sciences							
5.	Year a	ind	Education	Year	Institution					
		tion of the	Ph.D. in mathematics	1994	University of					
	scienti	fic degree			Belgrade,					
					Serbia					
			M. Sc. in mathematics	1997	UKIM,					
					Macedonia					
			B. Sc. In Engineering	1999	UKIM,					
					Macedonia					
6.	Area,	field and	Area	Field	Specialty					
	particu	lar specialty	Mathematics	Probability	Random					
	of master of				processes					
	scienc	e degree								

7.	Area.	field a	nd	Area		1	Field		Specialty		
	-	f docto		Mathema	itics		Complex		Geometric		
	degree						analysis	function theory			
8.	If emp		state	Institutio	n		JJ		Title and area		
		stitutio									
	where	he/she	e						Full Professor,		
	works	and th	ne title	Faculty o	f Mechanical Enginee	ring			Mathematics		
	and ar	ea in v	vhich	-	-	-	konie		and informatics		
-	is nam			-	and Methodius University in Skopje						
9.		f courses that the teacher is lecturing separately for first, second and third cycle List of courses that the teacher is lecturing in the first cycle									
	9.1.				teacher is lecturing in						
		No.		ourse	1		orogram/ins	stitutior	1		
		1.		athematics		all on N					
	0.2	2.			Mathematics	all on N					
	9.2.				teacher is lecturing in			atitati			
		No.		ourse	ad Statistics		orogram/ins	stitutior	1		
		1. 2.			nd Statistics	all on N					
	9.3.				nalysis for Engineersall on MFSteacher is lecturing in the third cycle						
	9.5.	No.		ourse	Study program/ins		stitutior				
		1.		neory and Application of		Mathematical sciences and application					
		1.			fferential Subordinations		water in the second sec				
		2.					natical scie	ences ar	nd application		
				d its Application		withtin		nees ui	la application		
10.	Select	ed wor		past five y							
	10.1.	Relev	vant scie	entific prin	ted paper (up to 5)						
		No.	Author		Title			Publis	her/year		
		1.	E. Alia	aga	Some connections be	etween cl	ass U		wi Publishing		
			N. Tur		and α -convex function			Corpo	ration		
					Applied Analysis, Volume			ume 2014, 2014			
					Article ID 692327, 4	pages.			IMPACT		
								FACT	OR 1.102)		
			NT		On formation (1.)	T 1	· · · · · 1'1	II. ()	tana Thuina 🤺		
		2.		neski, M.	On functions that are				tepe University		
			Darus		with respect to N-sy	-		2012	IMPACT		
					Hacettepe Journal of Statistics, Vol. 41 (2)			 	OR 0.385)		
					275.) (2012),	271-	FACT	OK 0.383)		
		3.	Obrad	ovic M.,	Radius of univalence	e of certai	n	Malay	sian		
				samy S.,	combination of univa				ematical Sciences		
			Tunes		functions, <i>Bulletin of</i>			Societ			
					Mathematical Science		•	2012	~		
					35(2) (2012), 325–33		~ ~ < /		IMPACT		
									OR 0.696)		

5. Irmak H., Bulboaca T., Tuneski N. Certain relations between α-convex type functions and Bazilevië type functions, Applied Mathematics Letters, Vol. 24 (12) Elsewier 2011 (2010 IMPACT FACTOR 1.155) 10.2. Participation in scientific national and international projects (up to 5) Publisher/ year 10.3. Printed books in the last five years (up to 5) Publisher/ year 10.3. Printed books in the last five years (up to 5) Title Publisher/ year 1. Tuneski, N., Jolevska-Tuneska B. Differential calculus UKIM, 2011 2. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 3. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 10.4. Printed professional papers in the last 5 years (up to 5) No. Author 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 11. Undergraduate / 11. Undergraduate 2010 11. Undergraduate / 11. Publisher/ year 2012 11. Undergraduate / 11. 11. 2 students in progress			4.	4.Tuneski N., Obradovic M.Some properties of certain expression of analytic functions, Computers and Mathematics with Applications, 62 (2011), 3438–3445.Elsevier 2011 (IMPACT 2.069)				FACTOR			
No. Author Title Publisher/ year 10.3. Printed books in the last five years (up to 5) Title Publisher/ year 10.3. Printed books in the last five years (up to 5) Differential calculus UKIM, 2011 2. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 3. Tuneski, N., Georgieva-Celakoska E. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 11. Supervision (mentorship) of undergraduate, master and doctoral studies students 11. 11.1. Undergraduate / 11.2. Master 1 11.3. Doctoral 2 students in progress 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 12.1. Obradovic M., Ponnusamy Radius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy 2012 No. Author Title Publisher/ year 2012			5.	Bulboaca T.,	functions and Baz Applied Mathemat	tilevid <i>tics L</i>	č type functions,	2011 (2010 IMP			
1. year 10.3. Printed books in the last five years (up to 5) No. Author 10.3. Tuneski, N., Jolevska-Tuneska B. 1. Tuneski, N., Georgieva-Celakoska E. 1. No. Author Title Publisher/ year 1. Undergraduate 1. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) No. Author Title Publisher/ year 1 11.3. Doctoral 11.3. Doctoral 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (u		10.2.									
10.3. Printed books in the last five years (up to 5) Title Publisher/ year No. Author Title Publisher/ year 1. Tuneski, N., Jolevska-Tuneska B. Differential calculus UKIM, 2011 2. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 3. Tuneski, N., Georgieva-Celakoska E. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students 11.1. 11.2. Master 1 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years Publisher/ year 12. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years Publisher/ year 12. Obradovic M., Ponnusamy Radius of univalence of certain combination of univalent and analytic functions, <i>Bulletin of the Malaysian Mathematical Sciences Society</i> , (2) 35(2) (2012), 325–334. (2010 IMPACT FACTOR N. 2012											
No. Author Title Publisher/ year 1. Tuneski, N., Jolevska-Tuneska B. Differential calculus UKIM, 2011 2. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 3. Tuneski, N., Georgieva-Celakoska E. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 11. Supervision (mentorship) of undergraduate, master and doctoral studies students 11.1. Undergraduate 11. Undergraduate / 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years Publisher/ year 12. Obradovic Radius of univalence of certain combination of univalent and analytic functions, <i>Bulletin of the</i> <i>Malaysian Mathematical Sciences Society</i> , (2) S., Tuneski 2012 No. Nu 0.696 http://www.emis.de/journals/BMMSS/vol35_2.htm		10.0	-								
1. Tuneski, N., Jolevska-Tuneska B. Differential calculus UKIM, 2011 2. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 3. Tuneski, N., Georgieva-Celakoska E. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 2010 11. Supervision (mentorship) of undergraduate, master and doctoral studies students 11.1. Undergraduate 11. Undergraduate / 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years Publisher/ year 12. Obradovic Radius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy S., Tuneski 3.5(2) (2012), 325–334. (2010 IMPACT FACTOR 0. 0.696) No. Nueski 0.69(6) http://www.emis.de/journals/BMMSS/vol35_2.htm 10.12		10.3.			st five years (up to	5)	m: 1		D 11:1 /		
1 2. Tuneski, N., Jolevska-Tuneska B. Integral calculus UKIM, 2011 3. Tuneski, N., Georgieva-Celakoska E. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students Publisher/ year 11. Undergraduate / 1 12. Master 1 1 13. Doctoral 2 students in progress 1 12. For mentors of doctoral thesis, selected work for the last four / five years 1 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 2012 12.1. Obradovic Radius of univalence of certain combination of 2012 2012 No. Author Title Publisher/ year 1. Obradovic Radius of univalence of certain combination of the Ponnusamy 2012 No. Author Title 2012 No. Muhor											
10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students Publisher/ year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students 11. 11. Undergraduate / 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 12. For mentors of doctoral thesis, selected work for univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy No. Author Title Ponnusamy Malaysian Mathematical Sciences Society, (2) 2012 N. N. 35(2) (2012), 325–334. (2010 IMPACT FACTOR N. 0.696) N. N. 0.696) http://www.emis.de/journals/BMMSS/vol35_2.htm			1.	Tuneski, N., Jol	evska-Tuneska B.		Differential calcul	us	· · · · · ·		
3. Tuneski, N., Georgieva-Celakoska E. Introduction to MATLAB the authors, 2010 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/ year 11. No. Author Title Publisher/ year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students Publisher/ year 11. Undergraduate / / 11.2. Master 1 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 12.1. Obradovic Radius of univalence of certain combination of univalent and analytic functions, <i>Bulletin of the</i> year 1. Obradovic S., Tuneski, N., 0.696) 35(2) (2012), 325–334. (2010 IMPACT FACTOR N., 0.696) No. N. D.696) http://www.emis.de/journals/BMMSS/vol35_2.htm			2.	Tuneski, N., Jol	evska-Tuneska B.		Integral calculus		· · ·		
No. Author Title Publisher/ year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students 1 11. Undergraduate / 11.1. Undergraduate / 11.2. Master 1 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years No. Author Title 1. Obradovic Radius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy Malaysian Mathematical Sciences Society, (2) S., Tuneski 35(2) (2012), 325–334. (2010 IMPACT FACTOR N. N. 0.696) http://www.emis.de/journals/BMMSS/vol35_2.htm 1			3.	Tuneski, N., Ge	orgieva-Celakoska	E.	Introduction to M.	the authors,			
Image:		10.4.	Printe	ed professional pa	pers in the last 5 y	ears	(up to 5)		•		
11. Supervision (mentorship) of undergraduate, master and doctoral studies students 11.1. Undergraduate / 11.2. Master 1 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years No. Author Title Publisher/ year 1. Obradovic Radius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy 2012 Malaysian Mathematical Sciences Society, (2) S., Tuneski 35(2) (2012), 325–334. (2010 IMPACT FACTOR N. 0.696) Nttp://www.emis.de/journals/BMMSS/vol35_2.htm Nol Mater 10.0590			No.	Author	Title						
11.1. Undergraduate / 11.2. Master 1 11.3. Doctoral 2 students in progress 12. For mentors of doctoral thesis, selected work for the last four / five years 1 12. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years Publisher/ year 1. Obradovic Radius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy S., Tuneski Malaysian Mathematical Sciences Society, (2) S., Tuneski N. 0.696) http://www.emis.de/journals/BMMSS/vol35_2.htm 2.htm			-								
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No. Author Title Publisher/year 1. Obradovic Radius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy 2012 M., Univalent and analytic functions, Bulletin of the Ponnusamy Malaysian Mathematical Sciences Society, (2) S., Tuneski 35(2) (2012), 325–334. (2010 IMPACT FACTOR N. 0.696) http://www.emis.de/journals/BMMSS/vol35_2.htm		12.1.		1	1 1		2		nonai		
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1.Obradovic M., PonnusamyRadius of univalence of certain combination of univalent and analytic functions, Bulletin of the Ponnusamy S., Tuneski N.20121.M., Ponnusamy S., Tuneski N.Malaysian Mathematical Sciences Society, (2) 35(2) (2012), 325–334. (2010 IMPACT FACTOR 0.696) http://www.emis.de/journals/BMMSS/vol35_2.htm2012											
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			2.	Irmak H.,					2011		

		Dulhaaaa	and Devilouis true functions A 1 - 1 March	
		Bulboaca	and Bazilevič type functions, <i>Applied Mathematics</i>	
		T., Tuneski	<i>Letters</i> , Vol. 24 (12) (2011), 2010–2014. (2010	
		N.	IMPACT FACTOR 1.155)	
			http://www.sciencedirect.com/science/journal/0893	
			<u>9659/24</u>	
	3.	Tuneski N.,	Some properties of certain expression of analytic	2011
		Obradovic	functions, Computers and Mathematics with	
		M.	Applications, 62 9 (2011), 3438–3445. (IMPACT	
			FACTOR 2.069)	
			http://www.sciencedirect.com/science/journal/0898	
			1221/62/9	
	4.	H. M.	Some Distortion and Other Properties Associated	2012
		Srivastava,	with a Family of the <i>n</i> –Fold Symmetric Koebe	_ 0 1 _
		N. Tuneski,	Type Functions, Australian Journal of	
		Emilija	Mathematical Analysis and Applications, Vol. 9,	
		Georgieva-	Issue 2, Article 1, (2012) 1-17.	
		Celakoska	http://ajmaa.org/Volumes/Volume%209%20Issue	
		CEIaKUSKa		
	5	Turne altri N	<u>%202%202012.php</u>	2011
	5.	Tuneski, N.	On a Class of Functions Defined by Takahashi and	2011
			Nunokawa, <i>Mathematica Balkanica</i> , Vol. 25 (1–2)	
			00110 203_209	
			(2011), 203–209.	
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12.2.	impact fa No. 1. 2.	Author E. Aliaga, N. Tuneski N. Tuneski, M. Darus	http://www.mathbalkanica.info/toc/cont2512.pdf inted scientific papers in international scientific journal ated field in the past five years Title Some connections between class U and α-convex functions, <i>Abstract and Applied Analysis</i> , Volume 2014, Article ID 692327, 4 pages, http://dx.doi.org/10.1155/2014/692327 . (2013 IMPACT FACTOR 1.102) http://www.hindawi.com/journals/aaa/2014/69232 7/ On functions that are Janowski starlike with respect to N–symmetric points, <i>Hacettepe Journal of Mathematics and Statistics</i> , Vol. 41 (2) (2012), 271 – 275. (2010 IMPACT FACTOR 0.385) http://www.hjms.hacettepe.edu.tr/issues/vol41_2.ht	Publisher/ year 2014 2012
	impact fa No. 1. 2.	Author E. Aliaga, N. Tuneski N. Tuneski, M. Darus	http://www.mathbalkanica.info/toc/cont2512.pdf inted scientific papers in international scientific journalised field in the past five years Title Some connections between class U and α-convex functions, Abstract and Applied Analysis, Volume 2014, Article ID 692327, 4 pages, http://dx.doi.org/10.1155/2014/692327. (2013 IMPACT FACTOR 1.102) http://www.hindawi.com/journals/aaa/2014/69232 7/ On functions that are Janowski starlike with respect to N–symmetric points, Hacettepe Journal of Mathematics and Statistics, Vol. 41 (2) (2012), 271 – 275. (2010 IMPACT FACTOR 0.385) http://www.hjms.hacettepe.edu.tr/issues/vol41_2.html	Publisher/ year 2014 2012

				meeting/conference	
	1.	N. Tuneski	Functions of bounded	International Short	2013
			turning	Joint Research	
			_	Workshop "Some	
				inequalities concerned	
				with the geometric	
				function theory", The	
				Research Institute for	
				Mathematical Sciences,	
				Kyoto University,	
				Kyoto, Japan, May 22 –	
				24, 2013.	
	2.	N. Tuneski, M.	Simple criteria for	"Geometric Function	2012
		Darus, E.	bounded turning of an	Theory and	
		Gelova	analytic function.	Applications'2012",	
				Ohrid, R. Macedonia,	
				August 27 – 31, 2012.	
	3	N. Tuneski	From inequalities to	13th Serbian	2014
			subordinations and back	Mathematical	
				Congress, Vrnjačka	
				Banja, May 22 - 25,	
				2014.	

Add	l. 4				second and third study
			rogram and are ment	ors on the doctor	al thesis
1.	Name (Fi	rst, Last)	Atanas Kochov		
2.	Date of b	irth	March 8, 1966		
3.	Scientific	e degree / Title	Ph.D.		
4.	Title of th	ne scientific degree	Ph.D. in Technical Sc	eiences	
5.	Year and	institution of the	Education	Year	Institution
	scientific	degree	Ph.D in Mechanical	2001	Faculty of Mechanical
			Engineering		engineering - Skopje
			M. Sc. in	1994	Faculty of Mechanical
			Mechanical		engineering - Skopje
			Engineering		
			B. Sc. in	1990	Faculty of Mechanical
			Mechanical		engineering - Skopje
			Engineering		
6.	Area, fiel	d and particular	Area	Field	Specialty
	specialty	of master of science	Technical sciences	Mechanical	FEA in metalforming
	degree			engineering	processes
7.	Area, fiel	d and area of	Area	Field	Specialty

	doctor	al degr	ree	Technica	l sciences	Mechcanic		Composite materials	
8.	If emp	oloyed,	state the	Institutio	tion Title and area			d area	
	institu	tion wh	here he/she	UKIM, Faculty of Mechanical Full tim		ne professor			
			e title and area in				nical engineering		
		is nam		Ũ	Ū.			<u> </u>	
9.			es that the teacher					third cycle	
	9.1.		f courses that the	teacher is l	ecturing in				
		No.	Course			Study progra			
		1.	Management of					g and management	
		2.	Computer aided		ng	Production e			
		3.	Production proc			Mechanical	-		
		4.	Technology of r			Mechanical		ing	
	9.2.	-	f courses that the	teacher is l	ecturing in				
		No.	Course			Study progra			
		1.	Management of		у			g and management	
		2.	Sustainable dev			Product life	cycle ma	inagement	
		3.	Cleaner product			Metrology			
		4.	Modeling and si		of plastic	Production engineering			
	0.0	T	injection moldin						
	9.3.		of courses that the t	teacher 15 l	ecturing in				
		No.	Course	1 (Study progra			
		1.	Sustainable deve	• •					
		2.	Managment of T	rechnology	У	Industrial en	gineerin	g and management	
10	C 1 4	1 1	innovation						
10.			k in the past five y						
	10.1.		ant scientific print	ted paper (Title			Dublish or/woor	
		No.	Author			I T 1	1	Publisher/year	
		1.	A.Kochov:			ic and Technons for Greater		Fulbright Academy, Cambridge University,	
						Revitalizatio		Boston, USA,	
					TIGER)",		л (S-	February, 2008.	
		2.	A.Kochov:					pg. 89, Joint Actions	
		۷.	A.KOCHOV.		"Macedonian SME's - achivements and future		future	on Climate Change	
						Competitve		Conference, Aalborg,	
						ough impleme		Danmark June 9-11,	
					of CP teh	•	cintation	2009.	
	3. A.Kochov:				ment of techn	ology -	European Roundtable		
			•	on technique	U .	for Sustainable			
					agro food	-		Consumption and	
								Production, Delft,	
								Netherland, October	
								28-31, 2010.	
		4.	A.Kochov, B.Du	njic:	Low-Cart	oon pro	duction	Regional Resource	

	5.	A.Kochov	concept in managing SME in WBC, Sustainable development supported by low carbon technologies in agro business sector	Efficient & Cleaner Production Net meeting of NVPCs and NCPPs from the European and Central Asian countries, 4th Nevsky International Ecological Congress, May 2011; St. Petersburg, Russia. ERSCP conference, Portoroz, Slovenia, October 2014
10.2.		*	l and international projects (up to	· · · · · · · · · · · · · · · · · · ·
	No.	Author	Title	Publisher/year
	1.	A. Kochov, at all. UNIDO	Cleaner production technologies	2007-2010
	2.	A. Kochov, at all UNIDO	Resource efficiency and cleaner production	2010-2012
	3.	A. Kochov, at all UNIDO	Low carbon technologies	2011-2014
10.3.	Printe	ed books in the last five years	s (up to 5)	1
	No.	Author	Title	Publisher/year
	1.			
10.4.		ed professional papers in the		1
	No.	Author	Title	Publisher/year
	1.	A.Kochov:	"CDM projects implementation in SME in Macedonia",	Regional Conference on financing energy efficiency & RES project, energy week, Skopje, Macedonia, 2009.
	2.	A.Kochov:	"Management of technology - Low Carbon techniques for agro food sector",	European Roundtable for Sustainable Consumption and Production, Delft, Netherland, October 28-31, 2010.
	3.	A.Kochov:	Sustainable industrial development in the context of Low Carbon Society concept,	UNIDO-PREPARE conference: "SCP: How to make it possible" Kaunas, Lithuania, September 2011.

			A TT 1		•	and cit i	137.1
		4.	A.Kochov:	"Green manufactu			al Network
				driving low carbon	, resource	Conferen	
				efficient and clean			e Efficient and
				industrialization in			Production
				and transition econ	omies"	(RECP –	2011), UN –
						Gigiri, N	airobi, Kenya,
							ctober 2011
		5.	A.Kochov	"Management of t	echnology -	3 rd Glob	al Network
				Low Carbon techni	ques for	Conferen	ice on
				agro food sector in	WBC"	Resource	Efficient and
						Cleaner I	Production
						(Swiss, L	Juzern,
						October 2	2013)
11.	Super	vision (mentorship) of undergrad	duate, master and doctor	ral studies stu	udents	
	11.1.	Under	graduate	Over 20			
	11.2.	Maste	r	Over 10			
	11.3.	Docto	ral	Over 5			
12.	For me	entors c	of doctoral thesis, selected	d work for the last four	five years		
	12.1.		of printed scientific pape			s or interna	tional
		public	cations in the related field	l (up to 6) in the past fiv	ve years		
		No.	Author	Title		Publisher	r/year
		1.					
	12.2.	Proof	of at least two printed sc	ientific papers in interna	ational scient	tific journa	ls that have
		impac	t factor in the related fiel	d in the past five years		-	
		No.	Author	Title		Publisher	r/year
		1.					
	12.3.	Proof	of at least three internati	onal meetings' participa	tion in the pa	ast four ye	ars
		No.	Author	Title	Internation		year
					meeting/co	onference	
		1.					

Add	l. 4				re at the first, second and third study on the doctoral thesis
1.	Name (F	irst, Last)	Done Tashev	vski	
2.	Date of b	oirth	04.08.1962		
3.	Scientifi	c degree / Title	Ph.D.		
4.	Title of t	he scientific degree	Ph.D. in Tec	hnical Scien	nces
5.	Year and	l institution of the	Education	Year	Institution
	scientific	e degree	PhD in	2004	UKIM Skopje Macedonia
			Technical		Faculty of Mechanical Engineering
			Sciences		
			MSc	1994	UKIM Skopje Macedonia
			Technical		Faculty of Mechanical Engineering
			Sciences		

				DC	1007	THAD	
				BSc	1985		kopje Macedonia
				Technical		Faculty of	of Mechanical Engineering
				Sciences –			
				Mechanical			
(C 11	1 (* 1	eng.	T ' 11	G . 1	
6.			nd particular	Area	Field	Specialty	
	-	-	master of science	Mechanical	Energetic	Energy a	nd ecology
7	degre		1 0	engineering	T ' 11	G 14	
7.			nd area of	Area	Field	Specialty	
	docto	ral deg	ree	Mechanical engineering	Energetic	Fuel cell	S
8.			, state the	Institution			Title and area
			here he/she	Faculty of M	Iechanical Eng	gineering	Professor / mechanical
			ne title and area in		versity Ss. Cy		engineering- thermal
	which	is nan	ned	Methodius in		in una	engineering
9.	List o	f cours	ses that the teacher		15	rst. second	
	9.1.		of courses that the t				
		No.	Course		Study progra	,	on
		1.	Steam and gas tu	rbines	TI/MFS		-
		2.	Exploitation and		TI/MFS		
			maintenance of p	ower plants			
			and systems	1			
		3.	Energy efficiency	V	EE/MFS		
		4.	Energy and ecolo		EE/MFS		
	9.2.	List o	of courses that the t		uring in the se	cond cycle	2
		No.	Course		Study progra		
		1.	General ecology		EE/MFS		
		2.	Modeling of proc	cesses of	TI/MFS		
			energy conversio				
	9.3.	List o	of courses that the t	eacher is lectu	uring in the thi	ird cycle	
		No.	Course		Study progra		on
		1.	Energy efficiency	y	TI/MFS		
		2.	Modern power pl		TI/MFS		
10.	Select	ed wor	k in the past five y				
	10.1.		vant scientific print		to 5)		
		No.	Author	Title		Publishe	r/year
		1.	D. Tashevski,	Analysis of	Parameters	Internati	onal Journal of Mechanical
			R. Filkoski,	Affecting the		Engineer	ring and Technology
			D. Dimitrovski,	Optimization		` /	, (ISSN 0976–6359 Online),
			I. Shesho	SOFC Co-ge	eneration	Volume	5, Issue 10, pp. 180-190,
				Power Plant	S.	India, 20	14
						(JIF 7,53	
		2.	D. Tashevski, R.	Optimization	n of Binary	Internati	onal Journal of Mechanical

				Engineering and Technology
		I. Shesho		(IJMET), (ISSN 0976–6359 Online),
			Oxide Fuel Cells on	Volume 5, Issue 1, pp. 122-131,
			Natural Gas.	India, 2014
				(JIF 5,77)
	3.	I. Shesho,	Simulation Application	International Journal of Engineering
		D. Tashevski:	for Optimization of Solar	Research and Applications (IJERA),
			Collector Array.	Volume 4, Issue 1, pp. 10-19, (ISSN:
				2248-9622), India, 2014
				(JIF 1,69)
	4.	D. Tashevski,	Optimization of Binary	Chemical engineering transaction,
		D. Dimitrovski	Co-generative Thermal	vol. 34, pp. 31-36, (DOI: 10.3303/
			Power Plants with SOFC	CET1334006), Italy, 2013
			on Solid Fuel.	(SJR Thomson Reuters 0,26)
	5	D. Tachevelri	Three generation Dewer	International Journal of Engineering
	5.		-	Research and Development, (e-
		1. 51165110	-	-
			-	ISSN: 2278-067X, p-ISSN: 2278-
			for Complex Building.	800X), Volume 6, Issue 5, pp. 46-52,
				India, 2013
10.2	Denti		 *	(JIF 1,131)
10.2.				
				Publisher/year
	1.			CeProSARD Skopje, Macedonia
				/2011-2012
		L. Karakasheva	-	
10.2	D : (11 1 1 1 .		
10.3.				D 11'1 /
				Publisher/year
	1.			Alfa 99 Skopje, ISBN 978-9998-936-
				36-4, Macedonia, 2010.
	2.	· · · ·	-	CeProSARD, ISBN 978-608-65330-
		,	-	6-9, Skopje, Macedonia, 2012.
			+	
	3.	D. Tashevski:	Maintenance and	UKIM in Skopje E-publication and
				digital libraries, Skopje, Macedonia,
			power plants and systems	2014 (No.03-187/2 from 11.2.2014).
10.4.	Print	ed professional pap	ers in the last 5 years (up to	5)
	No.	Author	Title	Publisher/year
	1	R Filkoski	Professional expertise	MFS Skopje / December 2013
	1.	IC. I IIRODRI	-	15
	1.	D. Tashevski,	for the inability of hot	15
	1.		-	
	1.	D. Tashevski,	for the inability of hot	
	10.2. 10.3.	4. 5. 10.2. Partia No. 1. 10.3. Print No. 1. 2. 3. 10.4. Print No. 1.	D. Tashevski: 4. D. Tashevski, D. Dimitrovski 5. D. Tashevski, 10.2. Participation in scientif No. Author 1. S. Armenski D. Tashevski L. Karakasheva 10.3. Printed books in the last No. Author 1. S. Armenski D. Tashevski L. Karakasheva 10.3. Printed books in the last No. Author 1. S. Armenski, D. Tashevski Z. S. Armenski, D. Tashevski 2. S. Armenski, D. Tashevski J. Tashevski 3. D. Tashevski 10.4. Printed professional paper	I. Shesho Power Plants with Solid Oxide Fuel Cells on Natural Gas. 3. I. Shesho, D. Tashevski; Simulation Application for Optimization of Solar Collector Array. 4. D. Tashevski, D. Dimitrovski Optimization of Binary Co-generative Thermal Power Plants with SOFC on Solid Fuel. 5. D. Tashevski, I. Shesho Three-generation Power Plant with High- temperature Fuel Cells for Complex Building. 10.2. Participation in scientific national and international No. Author Production of briquettes and pellets from agricultural waste – Agro Energy 10.3. Printed books in the last five years (up to 5) No. Author Title 1. S. Armenski, D. Tashevski, L. Karakasheva Thermal power plants – exercise, 300 p., 2. 2. S. Armenski, D. Tashevski, E. Tashevski, D. Tashevski; Maintenance and exploatation of energy power plants and systems (1 st publication), 298 p., 10.4. Printed professional papers in the last 5 years (up to No. Author Title

					defeate in install i	
					defects in installation	
					and commissioning of	
					TE-TO AD, No. 07-	
					3270/5.	
		2.	D. Tashev		Technical report of	MFS Skopje / December 2013
			R. Filkosk	-	explosion od hot water	
			D. Dimitro	ovski,	boiler on LPG located in	
			I. Shesho:		"Cevahir residence and	
					mall project" – Skopje	
					for Cevahir Gurup	
					Istanbul, Turkie,	
					subsidiary in R.	
					Macedonia, No. 07-	
					1983/4,	
		3.	D. Tashev	ski	Energy audit report of	MFS Skopje / January 2013
					JOUDG "Angel Shajce"	
					object "Buba Mara", No.	
					07-235/5,	
		4.	D. Tashev	ski,	Head project –	Bauer Skopje, / May 2012
			I. Shesho:		mechanical installation,	
					termotechnical	
					installation an facilities	
					for resindetial-bussines	
					object st. M. Apsotolski,	
					tech. No 226/2012,	
		5.	D. Tashev	ski	Energy audit of	MACEF Skopje / January 2001
					elementary school and	
					kinder gardens under the	
					authority of the local	
					government,	
					municipality G. Petrov	
					and M.A. Chento (5	
					kinder gardens and 1	
					elementary school),	
11.	Super	vision	(mentorship	. /	dergraduate, master and doc	
	11.1.		rgraduate		ntorship of undergraduate st	udents
	11.2.	Mast	er		ntorship of master students	
						management systems in Republic of
				Maced		
					-	r energy saving in buildings and use of
					able energy sources in urbar	n area
					n students in progress	
12.	11.3.	Docto			udent in progress	1.0
	L'an ma	antorg	of doctoral	thesis a	selected work for the last for	ur / five years

	12.1.	Proof	of printed scientif	ic papers in international sc	ientific journals or international
	12.1.			ed field (up to 6) in the past	
		No.	Author	Title	Publisher/year
		1.	D. Tashevski,	Analysis of Parameters	International Journal of Mechanical
			R. Filkoski,	Affecting the Efficiency	Engineering and Technology
			D. Dimitrovski,	Optimization of Binary	(IJMET), (ISSN 0976-6359 Online),
			I. Shesho	SOFC Co-generation	Volume 5, Issue 10, pp. 180-190,
				Power Plants.	India, 2014 (JIF 7,5377)
		2.	D. Tashevski,	Optimization of Binary	International Journal of Mechanical
			R. Filkoski,	Cogenerative Thermal	Engineering and Technology
			I. Shesho	Power Plants with Solid	(IJMET), (ISSN 0976–6359 Online),
				Oxide Fuel Cells on	Volume 5, Issue 1, pp. 122-131,
				Natural Gas.	India, 2014 (JIF 5,77)
		3.	I. Shesho,	Simulation Application	International Journal of Engineering
			D. Tashevski:	for Optimization of Solar	Research and Applications (IJERA),
				Collector Array.	Volume 4, Issue 1, pp. 10-19, (ISSN:
		4			2248-9622), India, 2014 (JIF 1,69)
		4.	D. Tashevski,	Optimization of Binary	Chemical engineering transaction,
			D. Dimitrovski	Co-generative Thermal Power Plants with SOFC	vol. 34, pp. 31-36, (DOI: 10.3303/
				on Solid Fuel.	CET1334006), Italy, 2013 (SJR Thomson Reuters 0,26)
		5.	D. Tashevski,	Three-generation Power	International Journal of Engineering
		5.	I. Shesho	Plant with High-	Research and Development, (e-
			1. 51105110	temperature Fuel Cells	ISSN: 2278-067X, p-ISSN: 2278-
				for Complex Building.	800X), Volume 6, Issue 5, pp. 46-52,
					India, 2013 (JIF 1,131)
		6.	D. Tashevski,	Energy and Ecology	1 st Internatinal U.O.C. – B.E.N.A. –
			D. Dimitrovski,	Benefits of Independent	Conference "The Sustainability of
			Z. Markov,	SOFC/Gas Turbine Co-	Pharmaceutical, Medical and
			I. Shesho:	generation Power Plant	Ecological Education and Research –
				on Natural Gas.	SPHAMEER – 2013", proceedings
					book p. 6, Constanca, Romania,
	10.0				
	12.2.			nted scientific papers in inte ted field in the past five yea	ernational scientific journals that have
		No.	Author	Title	Publisher/year
		1.	D. Tashevski,	Analysis of Parameters	International Journal of Mechanical
		1.	R. Filkoski,	Affecting the Efficiency	Engineering and Technology
			D. Dimitrovski,	Optimization of Binary	(IJMET), (ISSN 0976–6359 Online),
			I. Shesho	SOFC Co-generation	Volume 5, Issue 10, pp. 180-190,
				Power Plants.	India, 2014
					(JIF 7,5377)
		2.	D. Tashevski,	Optimization of Binary	International Journal of Mechanical
			R. Filkoski,	Cogenerative Thermal	Engineering and Technology

		I. Shesho	Power Plants with Solid Oxide Fuel Cells on Natural Gas.	(IJMET), (ISSN 0976–63: Volume 5, Issue 1, pp. 12: India, 2014 (JIF 5,77)	· · · · ·
	3.	I. Shesho, D. Tashevski:	Simulation Application for Optimization of Solar Collector Array.	International Journal of En Research and Application Volume 4, Issue 1, pp. 10- 2248-9622), India, 2014 (JIF 1,69)	s (IJERA),
	4.	D. Tashevski, D. Dimitrovski	Optimization of Binary Co-generative Thermal Power Plants with SOFC on Solid Fuel.	Chemical engineering tran vol. 34, pp. 31-36, (DOI: CET1334006), Italy, 2013 (SJR Thomson Reuters 0,	10.3303/ 3
10.0	5.	D. Tashevski, I. Shesho	Three-generation Power Plant with High- temperature Fuel Cells for Complex Building.	International Journal of En Research and Developmen ISSN: 2278-067X, p-ISSN 800X), Volume 6, Issue 5 India, 2013 (JIF 1,131)	nt, (e- N: 2278- , pp. 46-52,
12.3.			ternational meetings' partic		
	No.	Author	Title	International meeting/conference	year
	1.	D. Dimitrovski, M. Dimitrovski, E. Kitanovska, D. Tashevski:	Pollution from Diesel Engines do to Increase of Imported Vehicles in FYR-Macedonia. (IOC - 2 nd Award)	1 st International Medical Conference "Environment and Public Health" MED ENV 2014, Mamaia, Romania,	12-14 September 2014.
	2.	D. Dimitrovski, M. Dimitrovski, G. Popsimonova, D. Tashevski	Biogas – Overview of the Possibilities for Implementation in the Macedonian Agricultural Sector. (IOC)	16 th Symposium on Thermal Science and Engineering of Serbia – SIMTERM 2013, p. 11, Sokobanja, Serbia,	22-25 October, 2013.
	3.	D. Dimitrovski, K. Belcheska, D. Tashevski, M. Kocubovsk	Possible Scenarios for Achiving the Goal 20/20/20 in FYR- Macedonia.	1 st Internatinal U.O.C. – B.E.N.A. – Conference "The Sustainability of Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania. (IOC)	20-23 June, 2013.
	4.	D. Tashevski,	Energy and Ecology	1 st Internatinal U.O.C. –	20-23

	D. Dimitrovski, Z. Markov, I. Shesho:	Benefits of Independent SOFC/Gas Turbine Co- generation Power Plant on Natural Gas.	B.E.N.A. – Conference "The Sustainability of Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania,	June, 2013. (IOC)
5	D. Dimitrovski, M. Dimevska, D. Tashevski:	Strategic connection of Republic of Macedonia to the European natural gas streams. (IOC)	International gas conference of South Eastern Europe, Sarajevo, Bosnia and Herzegovina,	2012

Add	l. 4	Information about the te	achers that lecture a	t the first	, second	l and third study	
		program and are mentor	s on the doctoral the	esis			
1.	Name (Fi	rst, Last)	Risto Filkoski				
2.	Date of b	irth	29.04.2964				
3.	Scientific	degree / Title	Ph.D.				
4.	Title of the scientific degree		Ph.D. in Technical S	Sciences			
5.	Year and	institution of the scientific	Education	Year		Institution	
	degree		BSc (Dipl. Eng.)	1989		UKIM, Faculty of	
						Mech. Eng., Skopje	
			MSc	1997		UKIM, Faculty of	
						Mech. Eng., Skopje	
			PhD	2004		UKIM, Faculty of	
						Mech. Eng., Skopje	
6.	Area, field and particular specialty		Area	Field		Specialty	
	of master	of science degree	Technical sciences Power		Power and process		
				engineering		engineering	
7.	Area, fiel	d and area of doctoral	Area	Field		Specialty	
	degree		Technical sciences	Power		Mathematical	
				engineer	ing	modelling and	
						simulation of energy	
					1	processes	
8.		ed, state the institution	Institution		Title a	nd area	
	where he/she works and the title and area in which is named		University "Sts Cyri	il and	Assoc	. professor	
			Methodius", Faculty			1	
			Mechanical Enginee				
9.	List of co	urses that the teacher is lect	uring separately for fi	irst, second	and th	ird cycle	
		st of courses that the teacher					
	No	o. Course		Study pro	ogram/ir	nstitution	
	1.	Boiler plants		Thermal	enginee	ring	

		2	Dragona tashrigua		Thormal on ain as	wine a	
		2. 3.	Process technique		Thermal engineer		
			Thermodynamics		Power engineering and envitonment		
	0.2	4.	Energy management and resources		Power engineering and envitonment		
	9.2.		of courses that the teacher is lecturing in the	ne se			
		No.	Course		Study program/institution		
		1.	Modelling of energy conversion process	ses	Thermal engineering		
		2.	Steam generators - selected chapters		Thermal engineer		
	0.2	3.	Fuels use and environment	- (1		ng and envitonment	
	9.3.		of courses that the teacher is lecturing in the	ne th			
		No.	Course		Study program/ir		
		1.	Selected chapters from modelling of		Thermal engineer	ring	
		2.	energy conversion processes		Derren en ein eenin	a and annitannant	
		Ζ.	Modelling of energy conversion process	ses	Power engineerin	ng and envitonment	
10.	Salaat	ad we	and environmental impact rk in the past five years		1		
10.	10.1.		vant scientific printed paper (up to 5)				
	10.1.	No.	Author	Tit	10	Publisher/year	
		1.	R. V.Filkoski, L. Joleska Bureska, I. J.		sessment of the	Chemical Eng.	
		1.	Petrovski		pact of Under-	Transactions, AIDIC	
			I CHOVSKI		e Air	Publ., 2013, 34, 25-	
					roduction on the	30, DOI:	
					lverised Coal	10.3303/CET1334005	
					mbustion		
				Ef	ficiency		
		2.	Mikulcic H., Vujanovic M., Markovska		D_2 Emission	Chem. Eng. Trans.,	
		۷.	N., Filkoski R. V., Ban M., Duic N.		duction in the	AIDIC Publ., 2013,	
			IN., ITIKOSKI K. V., Dali IVI., Dule IV.		ment Industry	Vol. 35, p.703-708,	
					ment maastry	ISBN 978-88-95608-	
						26-6; ISSN 1974-	
						9791	
		2		•	(C 1		
		3.	V. Strezov, E. Popovic, R. V. Filkoski,		sessment of the	Energy and Fuels,	
			P. Shah, T. Evans		ermal Processing haviour of	ACS Publications,	
					bacco Waste	2012, 26, p.5930- 5935	
						3933	
		4.	R. V. Filkoski		lverised-Coal	The Open	
					mbustion with	Thermodynamics	
					aged Air	Journal, Vol. 4(2010),	
					roduction: CFD	Bentham Science	
					alysis with	Publ., 2010, p. 2-12.	
					fferent Radiation		
				Me	ethods		
		5.	R. V. Filkoski	Ra	diation Heat	Archives of	
						l	

Image: Petrovski, S. N. Oka, M. A. Sijerčić a Tool for Description of the Phenomena Occuring in Pulverised Coal Boilers Journal of Power a Energy, Vol. 221 (2007, p. 399-409. 7. R. V. Filkoski, I. J. Petrovski, P. Karaś Optimisation of Pulverised Coal Boilers (An International Journal of) Therma Science, Vol. 10 (3 2006, p. 161-179. 10.2. Participation in scientific national and international projects (up to 5) No. Author Title Publisher/year 10.3. Printed books in the last five years (up to 5) No. Author Title Publisher/year 1. R. V. Filkoski, I. J. Petrovski Air Pollution Green Science, Vol. 10 (3 2006, p. 161-179. Publisher/year 10.3. Printed books in the last five years (up to 5) Title Publisher/year 1. R. V. Filkoski Author Title Publisher/year 2. R. V. Filkoski, I. J. Petrovski Air Pollution Control, Textbook CD_JEP-19840-20 "Development of Environmental and Resources Engineering 2. R. V. Filkoski, I. J. Petrovski Air Pollution Control, Textbook CD_JEP-19840-20 "Development of Engineering 3. M. Azievska (coord.), R. V. Filkoski et al. Second National Communication on Communication on Clamate Change Skopje, 2008, ISB1 Gom <				Transfer Modelling and CFD Analysis of Pulverised-Coal Combustion with Staged Air Introduction	Thermodynamics, Vol. 30(2009), No. 4, IFFM Publishers, 2009, p. 97-118.
Pulverised Coal Combustion by Means of CFD/CTA ModellingJournal of) Therma Science, Vol. 10 (3 2006, p. 161-179.10.2.Participation in scientific national and international projects (up to 5)No.No.AuthorTitlePublisher/year1.III10.3.Printed books in the last five years (up to 5)Tempus CARDS J 1.10.4.R. V. FilkoskiModelling of energy conversion processesTempus CARDS J 19017 "Numerical Simulation Program in Mechanical Eng Faculty of Mech. Eng., Skopje, 20092.R. V. Filkoski, I. J. PetrovskiAir Pollution Control, TextbookDEREC Tempus J COntrol, Textbook2.R. V. Filkoski, I. J. PetrovskiAir Pollution Control, TextbookDEREC Tempus J Control, TextbookDEREC Tempus J Control, Textbook3.M. Azievska (coord.), R. V. Filkoski et al.Second National Communication on Climate ChangeMESP, MASA, Skopje, 2008, ISBI 978-989-110-68-510.4.Printed professional papers in the last 5 years (up to 5)Second Second		6.		a Tool for Description of the Phenomena Occuring in Pulverised Coal	Proc. ImechE Part A: Journal of Power and Energy, Vol. 221 (3), 2007, p. 399-409.
No.AuthorTitlePublisher/year1.Image: constraint of the second sec		7.	R. V. Filkoski, I. J. Petrovski, P. Karaś	Pulverised Coal Combustion by Means of CFD/CTA	Journal of) Thermal Science, Vol. 10 (3),
No.AuthorTitlePublisher/year1.Image: constraint of the second sec	10.2.	Parti	cipation in scientific national and internat	tional projects (up to 5)
1. Image: constraint of the second value					
No. Author Title Publisher/year 1. R. V. Filkoski Modelling of energy conversion processes Tempus CARDS J. 19017 "Numerical Simulation Program in Mechanical Eng Faculty of Mech. Eng., Skopje, 2009 2. R. V. Filkoski, I. J. Petrovski Air Pollution Control, Textbook DEREC Tempus J. CD_JEP-19840-20 "Development of Environmental and Resources 3. M. Azievska (coord.), R. V. Filkoski et al. Second National Communication on Climate Change MESP, MASA, Skopje, 2008. 10.4. Printed professional papers in the last 5 years (up to 5) Second National Second Second		1.			
1. R. V. Filkoski Modelling of energy conversion processes Tempus CARDS J. 19017 "Numerical Simulation Prograt in Mechanical Eng Faculty of Mech. Eng., Skopje, 2009 2. R. V. Filkoski, I. J. Petrovski Air Pollution Control, Textbook DEREC Tempus JI CD_JEP-19840-20 "Development of Environmental and Resources 3. M. Azievska (coord.), R. V. Filkoski et al. Second National Climate Change MESP, MASA, Skopje, 2008, ISBI 978-9989-110-68-9	10.3.	Print	ted books in the last five years (up to 5)	·	
10.4 Printed professional papers in the last 5 years (up to 5) Printed professional papers in the last 5 years (up to 5) 19017 "Numerical Simulation Program in Mechanical Eng Faculty of Mech. Eng., Skopje, 2009 10.4 Printed professional papers in the last 5 years (up to 5) Printed professional papers in the last 5 years (up to 5)		No.	Author	Title	Publisher/year
Image: Control definitionControl definitionCD_JEP-19840-20 "Development of Environmental and Resources Engineering Curriculum, Floren Skopje, 2008.3.M. Azievska (coord.), R. V. Filkoski et al.Second National Curriculum al.MESP, MASA, Skopje, 2008.10.4.Printed professional papers in the last 5 years (up to 5)Second Value of State		1.		energy conversion	Simulation Program in Mechanical Eng.",
al.Communication on Climate ChangeSkopje, 2008, ISBI10.4.Printed professional papers in the last 5 years (up to 5)978-9989-110-68-9				Control, Textbook	Environmental and Resources Engineering Curriculum, Florence- Skopje, 2008.
10.4. Printed professional papers in the last 5 years (up to 5)		3.		Communication on	MESP, MASA, Skopje, 2008, ISBN 978-9989-110-68-9
	10.4.	Print	ted professional papers in the last 5 years (
No. Author Title Publisher/year					Dublisher/weer

		•		Γ	. <u></u>
		1.	Filkoski R. V.	Experiences on the feasibility of the utilisation of vineyard and vine- culture residues for energy purposes	Symp. Biomass solutions for LCP and traffic in Adria region - R&D and application, Adria Section of Int. Combustion Institute, Sarajevo, 2014
		2.	Filkoski R., Tashevski D., Armenski S., Markov Z.	Expert report on the impossibility of hot start, technical problem on gas turbine, latent and other defects during installation and start-up of power plant TE-TO AD Skopje	Faculty of Mech. Engineering, Skopje, Dec. 2013 - Jan. 2014
		3.	I. J. Petrovski, R. V. Filkoski	Energy efficiency improvement and waste heat utilisation in bitumen processing	Technology development project co-fin. by the Ministry of Education and Science of RM, Skopje, 2011
		4.	R.V. Filkoski, I.J. Petrovski, M. Ginovska, H. Borchsenius	A Case Study of Energy Recovery in Ferro-Alloys Industry	II Reg. Conference IEEP '10, Zlatibor, Serbia, 2010.
		5.	R. V. Filkoski, I. J. Petrovski, I. Janev	A Case Study of Energy Management Improvement in Concrete Products Industry	II Conference "Sustainable Development and Climate Changes SUSTAINNIS 2010", Nis, Serbia, 2010.
11.	Super	vision	(mentorship) of undergraduate, master and	5	
	11.1.		rgraduate	50	
	11.2.	Maste		7	
	11.3.	Docto	oral	3	
12.			of doctoral thesis, selected work for the la		
	12.1.		f of printed scientific papers in internation cations in the related field (up to 6) in the	5	r international
		No.	Author	Title	Publisher/year
		1.	R. V.Filkoski, L. Joleska Bureska, I. J. Petrovski	Assessment of the Impact of Under-	Chemical Eng. Transactions, AIDIC
			1 000 0 5 1	impact of Onder-	Tansactions, ADIC

			Fire Air Introduction on the Pulverised Coal Combustion Efficiency	Publ., 2013, 34, 25- 30, DOI: 10.3303/CET1334005
	2.	Mikulcic H., Vujanovic M., Markovska N., Filkoski R. V., Ban M., Duic N.	CO ₂ Emission Reduction in the Cement Industry	Chem. Eng. Trans., AIDIC Publ., 2013, Vol. 35, p.703-708, ISBN 978-88-95608- 26-6; ISSN 1974- 9791
	3.	V. Strezov, E. Popovic, R. V. Filkoski, P. Shah, T. Evans	Assessment of the Thermal Processing Behaviour of Tobacco Waste	Energy and Fuels, ACS Publications, 2012, 26, p.5930- 5935
	4.	R. V. Filkoski	Pulverised-Coal Combustion with Staged Air Introduc-tion: CFD Analysis with Different Radiation Methods	The Open Thermodynamics Journal, Vol. 4(2010), Bentham Science Publ., 2010, p. 2-12.
	5.	R. V. Filkoski	Radiation Heat Transfer Modelling and CFD Analysis of Pulverised-Coal Com-bustion with Staged Air Introduction	Archives of Thermodynamics, Vol. 30(2009), No. 4, IFFM Publishers, 2009, p. 97-118.
	6.	R. V. Filkoski, S. V. Belošević, I. J. Petrovski, S. N. Oka, M. A. Sijerčić	CFD Technique as a Tool for Description of the Phenomena Occuring in Pulverised Coal Boilers	Proc. ImechE Part A: Journal of Power and Energy, Vol. 221 (3), 2007, p. 399-409.
12.2.		of at least two printed scientific papers in i of factor in the related field in the past five		c journals that have
	No. 1.	Author V. Strezov, E. Popovic, R. V. Filkoski, P. Shah, T. Evans	Title Assessment of the Thermal	Publisher/year Energy and Fuels, ACS Publications,

		http://pubs.acs.org/toc/enfuem/26/	/	Processir	ng	2012, 26, 1	p.5930-
		9#RenewableEnergy		Behaviou Tobacco		5935	
	2.	R.V. Filkoski, L. Joleska Bureska Petrovski http://www.aidic.it/cet/13/34/005.		Assessme Impact of Fire Air Introduct the Pulve Coal Cor Efficienc	f Under- ion on erised nbustion	Chemical ring Trans AIDIC Pu 34, p.25-3	actions, bl., 2013,
	3.	R. V. Filkoski http://www.benthamscience.com/ open/totherj/openaccess2.htm		Pulverise Combust Staged A Introduc- CFD Ana with Diff Radiation Methods	d-Coal ion with ir tion: alysis erent	Bentham S Publ., 201	ol. 4(2010), Science 0, pp. 2-12.
	4.	R. V. Filkoski, S. V. Belošević, I. Petrovski, S. N. Oka, M. A. Sijerč http://pia.sagepub.com/content/22	ić	CFD Tec as a Tool Descripti Phenome Occuring Pulve-ris Boilers	for on of the na in	J. of Powe	ol. 221 (3) ,
	5.	R. V. Filkoski, I. J. Petrovski, P. F http://thermalscience.vinca.rs/200		Optimisa Pulverise Combust Means of CFD/CT. Modellin	ed Coal ion by f A	(An Intern Journal of Science, V Belgrade, 161-179.) Thermal Vol. 10 (3) ,
12.3.	Proof	of at least three international meeti	ngs' par		-	four vears	
			Title		Internatio	onal conference	year
	1.	R. V. Filkoski, M. Chekerovska	study c plate so energy collecto perforr	merical of a flat- olar or nance	Proceedin SEEP 20	14	Dubai, 23- 25 November, 2014
	2.	R. V. Filkoski, I. J. Petrovski	Resear possibi using	ch on the lity of	Proceedir SEEP 20	•	Dubai, 23- 25 November,

	8.	Filkoski R. V., Bureska L.J.,	CFD as	5 th Int. Mechanical	Prague,
			with under-fire air introduction	Environment Systems SDEWES 2012	
	/.	Filkoski R.V., Bureska L.J., Petrovski I.J.	Improvement of combustion efficiency of pulverised coal	Sustainable Development of Energy, Water and	2012
	7.	Eilleachi D.V. Duracha I. I.	of using wine twigs for energy needs	Protection SEEP 2013 7 th Int. Conf. on	2013 Ohrid,
	6.	Filkoski R.V., Petrovski I.J., Stanojevska B.	Some observations on the possibility	6 th Int. Conf. on Sustainable Energy and Environmental	Maribor, 20-23 August
	5.	Filkoski R.V., Stojkovski F., Stojkovski V.	A CFD study of a solar chimney power plant operation	6 th Int. Conf. on Sustainable Energy and Environmental Protection SEEP 2013	Maribor, 20-23 August 2013
	4.	Filkoski R. V.	The smart energy concept: the demand side potential,	Workshop "Smart Grids and Power Highways for the Enlarged Europe: Assessing the Challenges", European Commission, JRC, Inst. for Energy and Transport, Petten	Antalya, 18-20 Sept., 2013
	3.	Filkoski R. V.	biomass residues for energy purposes Experiences on the feasibility of the utilisation of vineyard and vine-culture residues for energy purposes	Symp. Biomass solutions for LCP and traffic in Adria region - R&D and application, Adria Section of Int. Combustion Institute	Sarajevo, 2014
			agriculture		2014

	Petrovski I. J.	research, educational and design tool in energy and environmental engineering	Eng. Forum IMEF 2012	2012
9.	Filkoski R. V.	Past and present research activities on combustion at the Faculty of Mechani-cal Engineering in Skopje	ACH Combustion Meeting, 2012	Zagreb, 2012
10.	Filkoski R.V., Popovic E., Strezov V.	Experimental study of product composition during slow pyrolysis processing of tobacco residues	7 th International Conference on Biomass for Energy	Kyiv, Ukraine, 2011

Add	1. 4		n about the teacl 1d are mentors o		e at the first, second and third study chesis
1.	Name (F	irst, Last)	Zoran Markov		
2.	Date of b	oirth	23.06.1975		
3.	Scientifie Title	c degree /	Ph.D.		
4.	Title of t degree	he scientific	Ph.D. in Techni	cal Sciences	
5.	Year and	linstitution	Education	Year	Institution
	of the sci degree	ientific	Ph.D in Mechanical Engineering	2007	Faculty of Mechanical engineering - Skopje
			M. Sc. in Mechanical Engineering	2001	Faculty of Mechanical engineering - Skopje
			B. Sc. in Mechanical Engineering	1998	Faculty of Mechanical engineering - Skopje

Area	field a	nd	Area		Field		Specialty
-				1-		1	Fluid mechanic and fluid
						-	flow systems
degree	e			,			
		nd area			Field		Specialty
							Hydro energy
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	2.	Hydraul	ic turbines	and	AFI / FME		
		pumps					
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	1.				Mechanics /	FME	
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	2.	~	0.		Mechanics / FME		
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			7		tion and Utili	zing of	~
	1.						Protection and Ecology,
			-				p.1014-1022, Vol. 14, no.3
		Nenchev	-		inicipal Waste		(2013)
	1	TACHCHEV	л.			water	(2013)
				Treatm	ent Plant		
	2.	Iliev V	Popovski		ent Plant parison of nu	merical	Techniques, technologies,
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			dynamic behavior at transient	journal, Vol. 9, no.1 (2014)
			regimes of hydropower plant	
	3.	Markov Z.,	Manufacturing of a Centrifugal	International Virtual Journa
		Popovski P.,	Pump Using Integrated	Machines, Technologies,
		Talevski G.,	Computer Aided Approach	Materials, pp. 22-24, Issue
		Ristova E.		1, Year VII, 2013
	4.	Reskovski F.,	Numerical Prediction Of	Mechanical Engineering -
		Markov Z., Lipej	Karman Vortex Street	Scientific Journal, Faculty
		A., Sirok B.	Phenomenon In NACA 4421	of Mechanical Engineering
		.,	Aerofoil Wake	Skopje, Vol. 30, no. 1-2, pp 29-37, 2012
	5.	Iliev V., Popovski	Transient Phenomena Analysis	International Journal of
	5.	P., Markov Z.	in Hydroelectric Power Plants at	Engineering Research and
		1 ., Warko v 22.	Off-design Operating	Applications, Vol. 2, Issue
			Conditions	6, pp. 1480-1488, 2012
10.2.	Parti	cination in scientific	c national and international projects	**
10.2.	No.	Author	Title	Publisher/year
	1.	Noshpal A.,	Application of CAD and CAX	Ministry of education and
	1.	Stojkovski V.,	technologies in electrical	science of Republic
		Markov Z.		Macedonia
		Markov Z.	technique processes in energy	2006-2009
	2	Dag arealai D	and ecology	
	2.	Popovski P.,	Capacity Building of the	UNESCO project, 2012
		Markov Z.,	Secondary Education Teachers	
		Popovski B.	in the Field of Environmental	
			and Social Impact of Renewable	
			Energy	
	3.	Tuneski A.,	Monitoring and Improving the	NATO PfP project, 2006-
		Markov Z.	Rivers in the Vardar/ Axios	2008
			Watershed (MIRVAX)	
	4.	Tuneski A.,	Development of Environmental	EU TEMPUS project, 2005
		Markov Z.	and Resources Engineering	2008
			Curriculum (DEREC)	
	5.	Tuneski A.,	Development of Environmental	EU TEMPUS project, 2010
		Markov Z	and Resources Engineering	2014
			Learning (DEREL)	
10.3.	Print	ted books in the last f	five years (up to 5)	
	No.	Author	Title	Publisher/year
	1.			
10.4.	Print	ted professional pape	ers in the last 5 years (up to 5)	
	No.	Author	Title	Publisher/year
	1.	Markov Z.,	Development of gas distribution	5 th International gas
		Dimitrovski D.,	network for the city of	conference of Southeast
			2	1
		Aleksic V.	Kumanovo – challenges and	Europe, Sarajevo, Bosnia-

								_th
		2.	Popovski P.,		Development o		Proceedings of th	
			Markov Z.			of feed-in tariffs	Conference on su	
					in r. Macedonia	l	development of e	0
							water and enviror	
							systems, Dubrovr	
							Croatia, 2009, pp	. 407
		3.	Jovanoski I.,		Monitoring and		3 rd international C	
			Popovski P.		1	imanovo WWTP	challenges in the	
			Markov Z.,				sector in the EU a	accession
			Tuneski A.,			efficiency of the	process, Ministry	
			Nencev A.		aeration system	l	environment and	
							planning, Skopje,	
		4.	Jovanoski I.,		Quality of the e	excess sewage	International BEN	JA
			Markov Z.,		sludge from mu		Conference, SPH	AMEER,
			Dimitrovski D.,		wastewater trea	1 '	Constanta, Roman	nia, 2013
			Kochubovski M			use and disposal		
					in R. Macedoni			
11.				unde		er and doctoral stu	dies students	
	11.1.	Unde	rgraduate		23			
	11.2.	Maste			4			
	11.3.	Docto			1			
12.		entors	of doctoral thesis	s, sel	lected work for t	he last four / five	years	
	12.1.						ournals or internation	onal
				ated		n the past five year		
		No.	Author		Title		Publisher/year	
		1.						
	12.2.						l scientific journals	that have
			ct factor in the re	late		st five years		
		No.	Author		Title		Publisher/year	
	10.0	1.				<u> </u>		
	12.3.						n the past four year	
		No.	Author	Tit		International med	6	Year
		1.	Markov Z.,		Iethodology	South East Europ		2014
			Jovanoski I.,		r Selection Of	on Sustainable D		
					e Most	Energy, Water an		
			Shishovska		propriate	Systems - SEE S		
			М.,		chnology For	nttp://www.ohric	12014.sdewes.org/	
					unicipal			
					astewater			
					eatment Using			
					ulti-Criteria			
				Ar	nalysis"			

Ap	p. 4	Info	rmation about the teac					
				id are mentors o	n the doctoral	thesis		
1.	Name (I Last)	First,	Ana Lazarevska	Ana Lazarevska				
2.	Date of birth		11.12.1969					
3.	Scientif		Ph.D.					
	degree /							
4.	Title of scientifi degree		Ph.D. in Technical Sci	ence				
5.	Year an	d	Education	Year		Institution		
	institution the scient		Ph.d In Engineering	2008		Faculty of Mechanical engineering - Skopje		
	degree		M. Sc. In Engineering	2001		Faculty of Mechanical engineering - Skopje		
			B. Sc. In Engineering	1994		Faculty of Mechanical		
						engineering - Skopje		
6.	Area, fie		Area	Field		Specialty		
	particula		Technical-sciences	Mechanical		Fluid mechanics		
	specialt	,				Environmental		
	master of science					protection		
7.	Area, fie		Area	Field		Specialty		
	area of o	doctoral	Technical-sciences	Mechanical		Environmental		
	degree					protection		
8.	If emplo		Institution		Title and area			
	state the institution where he/she works and the title and area in which is named		University of Ss Cyril faculty of Mechanical		Assistant proprotection	fessor, Environmental		
9.	· · · · · · · · · · · · · · · · · · ·		at the teacher is lecturing			l third cycle		
			urses that the teacher is l	<u> </u>	2			
			urse	Study program/i				
		5	draulics and hydraulic	IND, PInf / FMI				
			chines					
			stems for hydraulic I pneumatic transport	EE/FME				
			draulic and pneumatic	AFI/FME				
			nsport					
	4		signing systems for	AFI/ FME				
		-	lraulic and pneumatic					
		uai	nsport					

				_		1	
		5.	Practice in the in		AFI, EE / FME		
			small and mediu	ım			
			enterprises				
	9.2.			teacher is	lecturing in the second cycle		
		Nr.	Course		Study program/institution		
		1.	Water protection		AFI / FME		
			sustainable deve	lopment			
		2.	Evaluation of		IZIS / Ss		
	0.0	Environmental Impact			1 . • • .1 .1 • 1 1		
	9.3.			teacher is	lecturing in the third cycle		
		Nr.	Course		Study program/institution		
		1.					
10	<u><u> </u></u>	2.	1				
10.			rk in the past five				
	10.1.		evant scientific prin		(up to 5)	D-11:-1 /	
		Nr.	Author	Title		Publisher/year	
		1.	Lazarevska, A.	"Carbon Emission Reduction Potential of the Gas-Fired Combined Cycle Heat and Power Plant "Energetika""		Proc. "Energetics	
			M, Mladanavalia			2010" International	
			Mladenovska,	and Powe	er Plant Energetika	Symposium, Ohrid, 07- 09 October, 2010.	
			D., Sørensen, Å. L., Glimsdal,			09 October, 2010.	
			A. I.,				
		2.	Lazarevska, A.	"Is Mode	rnization of Bitola Thermal	Proc. "Energetics	
		2.	M,	Power Plant feasible as a Clean		2010" International	
			Mladenovska,		nent Mechanism Project"	Symposium, Ohrid, 07-	
			D., Sørensen,	Develop		09 October, 2010.	
			Å. L., Glimsdal,				
			A. I.,				
		3.	Lazarevska, A.	"A Multi	-Criteria Decision Making	Published in NATO	
			M., Fischer, N.,		al Approach to optimal	Science for Peace and	
			Münnich, K.,		Monitoring"	Security Series – C:	
			Haarstrick, A		C C	Environmental Security	
						"GeoSpatial Visual	
						Analytics:	
						Geographical	
						Information Processing	
						and Visual Analytics	
						for Environmental	
						Security", (Eds. De	
						Amicis, R., Stojanovic,	
						R., Conti, G.), Springer	
						Science + Business	
1						Media, pp. 97–112,	
						2009	

		4.	Nospal, A., Lazarevska, A. M	"Environmental protection and industry: Parameters necessary for environmentally related decision making"	Published in NATO Science for Peace and Security Series – C: Environmental Security "GeoSpatial Visual Analytics: Geographical Information Processing and Visual Analytics for Environmental Security", (Eds. De Amicis, R., Stojanovic, R., Conti, G.), Springer Science + Business Media, pp. 97–112, 2009,
		5.	Lazarevska, A.M.	"Comparative Analysis of Parameters Obtained while Simulating an Air- Pollution Episode",	Mathematica Balkanica, New Series Vol. 20, 2006, Fasc. 1. pp. 49-62
1	10.2.		· ·	ific national and international projects (up to	· · · · · · · · · · · · · · · · · · ·
		Nr. 1.	Author Cosmo –	Title EUREM (European Energy Manager)	Publisher/year Co-funded by the
		1.	Innovative Center	Plus	Intelligent Energy Europe Programme of the EU, 2013 – 2015
		2.	Bilic, I Lazarevska, A.	Open Access to the Enterpreneuership Lifelong Learning (LLL) Education for Persons with Disabilities (PwDs) adjusted for Visually Impared Persons (VIPs), http://www.lll4business.org/	Alumni Engagement Innovation Fund (AEIF), US Department of State 2012 – 2014
		3.	Lazarevska, A.	Ensuring Equal Access through Service Learning for Persons with Disabilities, http://www.equalaccess4pwds.org/	AEIF, US Department of State 2011 – 2012. Macedonian-American Alumni Association (MAAA)
		4.	Lazarevska, A.M. Atanasovski, A.	"Regional JFDP Alumni Conference "Enhancing Accessibility of the Higher Education to the Disabled", Nov. 22-24, 2010 in Skopje/Ohrid, Macedonia": (http://www.maaa.com.mk/jfdp- conference-2010)	MAAA. Financed by the Junior Faculty Development Program (JFDP) Alumni Grant (JAG), under the auspices of the Alumni Local Initiative Grants Program, funded by the

	5.	Tuneski A.	Development of Environmental and Resources Engineering Learning	Bureau of Educational and Cultural Affairs of the US Department of State (ECA), administered by the American Councils for International Education: ACTR/ACCELS. (Aug 2010 – Dec 2010) EU TEMPUS проект, 2010 – 2014
	6.	Kochov, A.	(DEREL) Cleaner Production (CP) Training (CIRKO National Cleaner Production Center – Macedonia	UNIDO Funded, 2010 – 2011
	7.	A. Nospal et al.	Application of CFD and CAX Technologies in Fluid Flow Processes in Energetics and Ecology.	FME,Ss, financed by the Ministry of education and science, 2006–2009
10.3.	Prin	ted books in the la	st five years (up to 5)	
	Nr.	Author	Title	Publisher/year
	1.	Lazarevska, A. M., Bilić, I., Koçi, A. (Eds.),	"Book of Case Studies: Service Learning Success Stories in Macedonia and Croatia"	MAAA, 2012:
	2.	Lazarevska, A. M., et al.,	"Guidelines for Correct Attitude towards Persons with Disabilities or Limited Abilities in Higher Education" (Eds. Lazarevska, A. M., Trajkovski, V., Petrov, R.), in English (ISBN 978-608- 4700-01-2), Macedonian (ISBN 978- 608-4700-02-9), Croatian and Albanian	MAAA, 2012:
	3.	Ristovska M. 2012:	"Guidelines for Effective Introduction and Implementation of Service– Learning in Higher Education", (Eds. Lazarevska, A. M., Nikolov, A., Stankovic, M.), in Macedonian (ISBN 978-608-4700-03-6). (Eds. Lazarevska, A. M., Stankosky, M., Koçi, A.), in English (ISBN 978-608-4700-00-5),	MAAA, 2012:
	4.	Kochi, A., Reka, A., Lazarevska, A. M. (Eds.), 2011	"Model United Nations: A model for extracurricular Activity", pp. 43 (Eng.), (ISBN 978-608-65257-2-9).	MAAA, 2012:

		5.	Vaclav Smil	Ener	gy in Nature and Society	Datapons, 2013
			(translated book)			
	10.4.	Print	,	pers in	n the last 5 years (up to 5)	
		Nr.	Author	Title		Publisher/year
		1.	Mladenovska, D., Lazarevska, A. M	Deter Corre Mak	rmining Relevant Attributes and esponding Indicators in a Decision ing Concept for Site-Selection of Fired Thermal Power Plants	BALKANMINE 2013, Vth JUBILEE BALKAN MINING CONGRESS, 18 ÷ 21th September 2013 –
		2.	Peeva, L., Jovanovski, D., Lazarevska, A. M., Shushlevska, M.		ner Production Assessment Report EGA DOOEL Skopje	Ohrid, Macedonia 2010 – 2011 Cleaner Production (CP) Training (CIRKO National Cleaner Production Center – Macedonia – UNIDO Funded), 2011
		3.	Lazarevska, A., M.	Fired	t PDD for the CDM Project: "Gas- l Combined Cycle Heat and Power t "Energetika"	for AD ELEM, 2010, financed by project leaded by Norsk Energi, Norway
		4.	Lazarevska, A., M.		t PDD for the CDM Project: abilitation of Bitola Thermal Power	for AD ELEM, 2010, financed by project leaded by Norsk Energi, Norway
11.	Super	vision	(mentorship) of u	ndergr	aduate, master and doctoral studies st	tudents
	11.1.	Unde	ergraduate		2	
	11.2.	Mast	er		-	
	11.3.	Doct			-	
12.					ed work for the last four / five years	
	12.1.		-		pers in international scientific journal	s or international
				ted fie	eld (up to 6) in the past five years	D 11:1 /
		Nr.	Author		Title	Publisher/year
		1.	Lazarevska, A. I	М.,	"A Multi-Criteria Decision	Published in NATO
			Fischer, N., Münnich K		Making Conceptual Approach to	Science for Peace and
			Münnich, K., Haarstrick, A.		optimal Landfill Monitoring"	Security Series – C: Environmental Security "GeoSpatial Visual Analytics:
						Geographical Information Processing and Visual Analytics
						for Environmental

				Security", (Eds. De Amicis, R., Stojanovic, R., Conti, G.), Springer Science + Business Media, 2009
	2.	Nospal, A., Lazarevska, A. M.	"Environmental protection and industry: Parameters necessary for environmentally related decision making"	Published in NATO Science for Peace and Security Series – C: Environmental Security "GeoSpatial Visual Analytics: Geographical Information Processing and Visual Analytics for Environmental Security", (Eds. De Amicis, R., Stojanovic, R., Conti, G.), Springer Science + Business Media, 2009
12			scientific papers in international scier ield in the past five years	
	Nr.	Author	Title	Publisher/year
	1.	Lazarevska, A. M., Fischer, N., Münnich, K., Haarstrick, A.	"A Multi-Criteria Decision Making Conceptual Approach to optimal Landfill Monitoring"	Published in NATO Science for Peace and Security Series – C: Environmental Security
				"GeoSpatial Visual Analytics: Geographical Information Processing and Visual Analytics for Environmental Security", (Eds. De Amicis, R., Stojanovic, R., Conti, G.), Springer Science + Business Media, 2009

				Geographical Information Pro and Visual Ana for Environmen Security", (Eds Amicis, R., Sto R., Conti, G.), Springer Scier Business Medi	llytics ntal . De janovic, nce +
12.3.			ational meetings' participati	· · · ·	
	Nr.	Author	Title	International meeting/conference	year
	1.	Lazarevska, A. M, Mladenovska, D., Sørensen, Å. L., Glimsdal, A. I.,	"Carbon Emission Reduction Potential of the Gas-Fired Combined Cycle Heat and Power Plant "Energetika""	Proc. "Energetics 2010" International Symposium, Ohrid, 07- 09 October.	2010
	2.	Lazarevska, A. M, Mladenovska, D., Sørensen, Å. L., Glimsdal, A. I.,	"Is Modernization of Bitola Thermal Power Plant feasible as a Clean Development Mechanism Project"	Proc. "Energetics 2010" International Symposium, Ohrid, 07- 09 October.	2010
	3.	Mladenovska, D., Lazarevska, A. M	Determining Relevant Attributes and Corresponding Indicators in a Decision Making Concept for Site-Selection of Coal Fired Thermal Power Plants	BALKANMINE 2013, Vth JUBILEE BALKAN MINING CONGRESS, 18 ÷ 21th September 2013 – Ohrid, Macedonia	2013

Add	l. 4	Information about	the teachers that lec	ture at the firs	st, second and third study	
		program and are n	nentors on the doctor	al thesis		
1.	Name (Fi	irst, Last)	Dame Dimitrovski			
2.	Date of b	irth	21.11.1979			
3.	Scientific	e degree / Title	Ph.D.			
4.	Title of th	ne scientific degree	Ph.D. in Technical Sciences			
5.	Year and	institution of the	Education	Year	Institution	
	scientific degree		PhD.	2010	UKIM, Faculty of	
					Mechanical	
					engineering	

				Magister technical		2007		UKIM, Faculty of Mechanical engineering
				Mechanic engineer	cal	2003		UKIM, Faculty of Mechanical engineering
6.	Area,	field an	nd particular	Area		Field		Specialty
	specia degre	•	naster of science	Energetic Mechanic	-	Thermoen	ergy	IC engines and environment
				engineeri	ng			
7.	Area,	field an	nd area of	Area		Field		Specialty
	doctoral degree		Energetic Mechanic		Thermoen	ergy	IC engines and environment	
				engineeri	ng			
8.	If em	ployed,	state the	Institution	1	•	Title and	l area
	works	s and the	here he/she e title and area in	Methodiu	10	e, Faculty of	-	Thermotechnics and energetics
		is nam			al engineer	-		
9.			es that the teacher	-				nird cycle
	9.1.		f courses that the t	teacher 1s lo	ecturing in			
		No.	Course	610	•	Study progra	am/institu	tion
		1.	Design and tunin	-	gines	TI, MFS		
		2.	Energy from wa			EE, MFS		
		3.	Fuels and engine			All, MFS		
		4.	Environmental i from energy pro		ssment	EE, MFS		
	9.2.	List o	f courses that the t		ecturing in	the second cy	cle	
		No.	Course			Study progra		tion
		1.	Waste treatment	technolog	ies	EE, MFS		
		2.	Energy manager	ment		BZPR, MFS		
		3.	IC engines adva	nced techn	ology 1	TI, MFS		
	9.3.	List o	f courses that the t	teacher is le	ecturing in	the third cycl	e	
		No.	Course			Study progra	am/institu	tion
		1.						
10.			k in the past five y					
	10.1.		ant scientific print	ted paper (1	1 /			
		No.	Author		Title			Publisher/year
		1.	Dame Dimitrovsl	k1	Introducir	ng natural gas	as a	Combustion

			second fuel and reconstruction	Institute, Western				
			of a diesel engine to use dual	States, USA, 2008,				
			fuel technilogy – emissions,	University of				
			economy	Southern California				
	2.	Dame Dimitrovski	Using CNG and Diesel in the	Proceedings of the				
			City Bus Transport in Skopje	2008 Technical				
				Meeting of the				
				Central States				
				Section of The				
				Combustion				
				Institute, USA,				
				2008				
	3.	Dame Dimitrovski	Union Regulations of Road	JEPE				
			Transport Air Pollution and Its					
			Implementation in the					
			Macedonia					
	4.	Zoran Markov, Dame	Production and Utilising of	JEPE				
		Dimitrovski	Biogas and Other Measures for					
			Increasing Energy Efficiency					
			in the Municipal Wastewater					
			Treatment Plant					
	5.	Dame Dimitrovski,	Possible directions for strategic	Proceedings of the				
		Martina Dimeska	connection of Republic of	Institute of Gas				
			Macedonia to the European natural gas streams	Technology				
10.2.								
	No.	Author	Title	Publisher/year				
	1.	Mile Dimitrovski,	Adjustment of the car park -	Ministry of				
		Vanco Donev,	buses JSP and the use of eco	education and				
		Elenior Nikolov,	fuels, natural gas, development	science, Skopje				
		Dame Dimitrovski	project	2003				
	2.	Dame M. Dimitrovski	Using of Biogas for	Project for World				
			cogenerative systems at	Scientific				
			sanitary landfill - Drisla Skopje	Organization pages				
				6+52				
	3.	Dame Dimitrovski,	Lowering the influence of	National Agency for				
		Sonja Filipovska,	using day lights and a mean to	Traffic Safety on				
			reduce the emission from small	the roads in 2009,				

			vehicles	Study
	4.	Dame Dimitrovski,	Emissions and Imissions in the	National Agency for
			city of Tetovo, traffic	Traffic Safety on
			development influence on the	the roads in 2008,
			imissions,	Study
10.3.	Print	ed books in the last five years	s (up to 5)	
	No.	Author	Title	Publisher/year
	1.	Mile Dimitrovski	Publication: Agro Energy study	Study Agro, Energy
		Dame Dimitrovski	possibilities for the use of	Study nr. 008/2009
			renewable energy sources in	– Biogas 2009
			rural areas in the country	
	2.	Dame Dimitrovski	Monograph: Reducing air	2008, Institute of
			pollution in Skopje by	gaseous technique,
			replacing existing fossil fuels	Ministry of
			with natural gas, a candidate	education and
			for the award Gotse Delchev	science of the
			2008, Skopje, ISBN 978-9989-	Republic of
			9812-8-9	Macedonia
10.4.	Print	ed professional papers in the	last 5 years (up to 5)	
	No.	Author	Title	Publisher/year
	1.	Dame M. Dimitrovski	Awarded labor original	International Gas
			research results published in	conference,
			scientific reference /	Beograd, Serbia,
			professional journal with an	2007
			international editorial board:	
			Ecological benefits of NG	
			buses in Skopje, Awarded	
			article	
	2.	Z. Markov,	Development of Gas	Proceedings of the
		D.Dimitrovski, V.Aleksic	Distribution Network for the	Institute of Gas
			city of Kumanovo –	Technology
			Challenges and Solutions,	
			International Gas Conference	
			of South Eastern Europe	
	3.	D. Dimitrovski, M.	Virtual pipelines – short cut to	International Gas
		Stojanovski, D.	natural gas utilization,	Conference,
		Stojanovska	International Gas Conference	Sarajevo 2012
		Stojanovska	International Gas Conference	Dara 0 2012

		4.	Dame Dimitrovski	Why biogas from agriculture	Zemak, Ohrid, 2010
			Dunio Diniti Ovoki	and livestock, haven't became	2011un, 0111u, 2010
				the basis for rural development	
				in Macedonia	
		5. Done Tashevski, Dame		Optimization of binary co-	JETP
			Dimitrovski	generative thermal power	
				plants with SOFC on solid fuel	
11.	Super	vision (mentorship) of undergraduate	e, master and doctoral studies stud	dents
	11.1.		graduate	27	
	11.2.	Maste		5	
	11.3.	Docto	ral	/	
12.	For me	entors of	of doctoral thesis, selected wo	ork for the last four / five years	
	12.1.			n international scientific journals	or international
			cations in the related field (up	-	
		No.	Author	Title	Publisher/year
		1.	Gordana Popsimonova,	Greenhouse production in	MESJ
			Biljana Ristovska, Dame	Macedonia – challenges and	77–84, UDC 621,
			Dimitrovski (CA), Goce	opportunities	CODEN: MINSC5,
			Georgievski		ISSN 1857 – 5293
		2.	Dame Dimitrovski,	Review of printed scientific	Mechanical
			Blagojce Bogatinovski	paper in Mechanical	engineering -
				engineering up to date MESJ,	Scientific journal
				review	vol.30, 2012
			Dame Dimitrovski, Goran	Possibilities for pollution	Mechanical
			Dimeski	reduction from households by	engineering -
				implementing natural gas	Scientific journal
					vol 32-1, 2014
		4.	Dame Dimitrovski, Mile	Pollution from diesel engine	Mechanical
			Dimitrovski, Elena	with emphasis on pollution in	engineering -
			Kitanovska, Done	Macedonia	Scientific journal
			Tashevski		vol 32-1, 2014
	12.2.		-	fic papers in international scienti	fic journals that have
	impact factor in the related field in the		et factor in the related field in	the past five years	
		No.	Author	Title	Publisher/year
		1.	Z. MARKOV, D.	Production and Utilising of	Journal of
			DIMITROVSKI, I.	Biogas and Other Measures	environmental
			JOVANOSKI, A.	for Increasing Energy	protection and
			NENCHEV.	Efficiency in the Municipal	ecology, 2013, vol.3

				Wastewater Treatm	ant Dlant		
					ient Plant		
	2	M DIMITDOVICIZI 7		p.1014	1.4	т 1	6
	2.	M. DIMITROVSKI, Z	•	European Union Re		Journal o	
		SAPURIC, D.		of Road Transport	Air	environn	
		DIMITROVSKI CA, N	Л.	Pollution and Its		protectio	
		KOCHUBOVSKI.		Implementation in	the FYR	ecology,	2013,
			Macedonia p.813		vol.3A		
	3	Done Tashevski, Dame	e	Optimization of bir			Engineering
		Dimitrovski		generative thermal	-		ons, Journal
				plants with SOFC of	on solid	ISSN: 19	/49/91
				fuel			
	4	D. Tashevski,		Analysis of Parame		Internati	
		R. Filkoski,		Affecting the Efficient	•	Journal of	of
		D. Dimitrovski,		Optimization of Bir	nary SOFC	Mechanical	
		I. Shesho		Co-generation Pow	er Plants.	Engineer	ring and
						Technolo	ogy
							, (ISSN
					0976–63	59 Online),	
						Volume	5, Issue 10,
						pp. 180-	190, India,
						2014 (JI	F 7,5377)
	5	Dame Dimitrovski, Mi	le	Model for calculation of NOx		JEPE, 20)14,
		Dimitrovski, Antonio		from public transpo	ort in the	accepted	for
		Jovanovski		city of Skopje		publishir	ng, vol 4
12.3.	Proof	of at least three internati	onal	meetings' participati	ion in the pas	st four yea	rs
	No.	Author	Titl	e	Internationa	al	year
					meeting/con	nference	
	1.	D. Dimitrovski,	Pol	lution from Diesel	1 st Internati	onal	12-14
		M. Dimitrovski,	Eng	gines do to Increase	Medical		September
		E. Kitanovska,	of I	mported Vehicles	Conference	:	2014.
		D. Tashevski:	in F	FYR-Macedonia.	"Environm	ent and	
			(IO	C - 2 nd Award) Public Hea		lth"	
					MED ENV	2014,	
					Mamaia, R	omania,	
	2.	D. Dimitrovski,	Bio	gas – Overview of			22-25
		M. Dimitrovski,		Possibilities for	Thermal Sc		October,
		G. Popsimonova,	Imp	plementation in the	and Engine	ering of	2013.
		D. Tashevski	-	cedonian	Serbia –	÷	
	1	1	1		I		

Image: constraint of the constra	[Agricultural Sastar	SIMTERM 2012 -	
Serbia,Serbia,D. Dimitrovski, K. Belcheska, D. Tashevski,Possible Scenarios for Achiving the Goal 20/20 in FYR- M. Kocubovsk1st Internatinal U.O.C. – B.E.N.A. - Conference "The 2013.June, 2013.M. KocubovskMacedonia.Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania. (IOC)20-23D. Tashevski, D. Dimitrovski, I. Shesho:Energy and Ecology Benefits of I. Shesho:Ist Internatinal Pharmaceutical, Medical and Ecological Education and Research – SOFC/Gas Turbine Co-generation Power Plant on Natural Gas.20-23D. Dimitrovski, D. Dimitrovski, I. Shesho:Energy and Ecology Benefits of I. Shesho:1st Internatinal U.O.C. – B.E.N.A. U.O.C. – B.E.N.A. June, – Conference "The Sustainability of Sustainability of Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013.20-23D. Dimitrovski, D. Dimitrovski, D. Tashevski:Strategic connection of Republic of Macedonia to the European natural gas2012D. Dimitrovski, Macedonia to the European natural gas2012			Agricultural Sector.	SIMTERM 2013, p.	
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M. Kocubovsk Macedonia. Sustainability of Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania. (IOC) D. Tashevski, Energy and Ecology D. Dimitrovski, Benefits of I. Shesho: SOFC/Gas Turbine Co-generation Power Plant on Natural Gas. Medical and Ecological U.O.C. – B.E.N.A. June, 2013. U.O.C. – B.E.N.A. U.O.C. – B.E.N.A. U.O.C. – B.E.N.A. Sustainability of Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania, I. Shesho: Strategic connection M. Dimevska, D. Tashevski: Macedonia to the European natural gas Sarajevo, Bosnia		, ,	e		-
Pharmaceutical, Medical and Ecological Education and Research - SPHAMEER - 2013", p. 6, Constanca, Romania. (IOC)Pharmaceutical, Medical and Ecological Education and Research - SPHAMEER - 2013", p. 6, Constanca, Romania. (IOC)D. Tashevski, D. Dimitrovski, I. Shesho:Energy and Ecology Benefits of I. Shesho:Independent SOFC/Gas Turbine Co-generation Power Pharmaceutical, Medical and Ecological Education and Research - Sustainability of Pharmaceutical, Medical and Ecological Education and Research - SPHAMEER - 2013", p. 6, Constanca, Romania,20-23 20-23D. Dimitrovski, D. Dimitrovski, M. Dimevska, D. Tashevski:Energy and Ecology Benefits of Strategic connection of Republic of Macedonia to the European natural gasPharmaceutical, Medical and Ecological Education and Research - SPHAMEER - 2013", p. 6, Constanca, Romania,2012					2013.
Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania. (IOC)Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania. (IOC)D. Tashevski, D. Dimitrovski, Z. Markov,Energy and Ecology Benefits of1st Internatinal U.O.C. – B.E.N.A. 2013.20-23 2013.J. Shesho:SOFC/Gas Turbine Co-generation Power Plant on Natural Gas.Conference "The Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania,20-23 2013.D. Dimitrovski, M. Dimevska, D. Tashevski:Strategic connection of Republic of Macedonia to the European natural gasInternatinal conference of South Eastern Europe, Sarajevo, Bosnia2012		M. Kocubovsk	Macedonia.	•	
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D. Tashevski, D. Dimitrovski, I. Shesho:Energy and Ecology Benefits of SOFC/Gas Turbine Co-generation Power Plant on Natural Gas.1st Internatinal U.O.C. – B.E.N.A. June, O.Conference "The 2013.20-23 June, 2013.I. Shesho:SOFC/Gas Turbine Co-generation Power Plant on Natural Gas.Sustainability of Pharmaceutical, Medical and Ecological Education and Research – SPHAMEER – 2013", p. 6, Constanca, Romania,20-23 June, 2013.D. Dimitrovski, M. Dimevska, D. Tashevski:Strategic connection of Republic of Macedonia to the European natural gasInternational gas conference of South Eastern Europe, Sarajevo, Bosnia2012				Research –	
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Image: state of the state of			Plant on Natural Gas.	Medical and	
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D. Tashevski: Macedonia to the Eastern Europe, European natural gas Sarajevo, Bosnia			•	-	
European natural gas Sarajevo, Bosnia			-	Eastern Europe,	
			European natural gas		
			streams. (IOC)	and Herzegovina,	

Add. 4		Information about the teachers that lecture at the first, second and third study program and are mentors on the doctoral thesis			
1.	1. Name (First, Last)		Darko Babunski		

2. 3.		of birth					
	Scient	ific deg	ree / Title	04.10.1975 Ph.D./Assistant Professor			
4.		Ŭ	ientific degree	Ph.D. in Technical S			
5.			tution of the	Education Year			Institution
0.	scientific degree			Ph.D	2012		Faculty of
				1	2012		Mechanical
							Engineering - Skopje
				M.Sc	2006		Faculty of
							Mechanical
							Engineering - Skopje
				B.Sc	1999		Faculty of
							Mechanical
							Engineering - Skopje
6.	Area,	field and	d particular	Area	Field		Specialty
	specia	lty of m	aster of science	Technical Sciences	Mechanica	al	Control Systems
	degree				Engineering		
7.			d area of	Area	Field		Specialty
	doctor	ral degre	ee	Technical Sciences	Mechanica		Control Systems
				1	Engineerin		
8.		loyed, state the		Institution		Title a	nd area
			ere he/she works	Faculty of Mechanic	al Assista		ant Professor,
			nd area in which	Engineering –Skopj			-
0	is nan						
9.	9. List of courses that the tea						third cycle
	9.1.			eacher is lecturing in			, , .
		No.	Course	Study program/institution			
		1.	Programmable L	ogic Controllers	Automatics and Control Systems, Faculty		
		2	Control and auto		of Mechanical Engineering – Skopje		
		2.	Control and auto	mation of HEP	Energetics and Ecology/ Faculty of		
		3.	Dractice in the in	Mechanical Engineering – Skopje			
		5.	medium enterpri	dustry, small and	Automatics and Control Systems, Faculty of Mechanical Engineering – Skopje		
-	9.2.	I ist of		eacher is lecturing in the second cycle			
	9.2. List of courses that the teac		Study program/institution			tution	
		1.		ol of machines and	Automatics and Control Systems, Faculty		
		1.	processes	a or maoninos and	of Mechanical Engineering – Skopje		
		2.	Real – Time con	trol systems and	Automatics and Control Systems, Faculty		
			Hardware-in-the		of Mechanical Engineering – Skopje		
-	9.3.	List of		eacher is lecturing in			
	-	No.	Course		Study program/institution		
		1.					
10.	Select	ed work	in the past five ye	ears	1		
F	10.1.		ant scientific print				
		-	Author	Title			Publisher/year

	1		<u> </u>	
	1.	I. Mihajlovic, D. Babunski	"Comparison of Spectrolyser	Bulletin of
		et al.	Device Measurements with	Environmental
			Standard Analysis of	Contamination and
			Wastewater Samples in Novi	Toxicology,
			Sad, Serbia "	September 2014,
				Volume 93, Issue 3,
				pp 354-359
	2.	V. Iliev, D. Babunski, et	Direct Digital Control of	SCI=1.216 International Journal
	۷.	al.	HVAC System and CO2-	of Innovative
		a1.	Based Demand Controlled	Technology and
			Ventilation	Exploring
			Ventration	Engineering TM
				(IJITEE), p.12-17,
				Vol. 3, no.9 (2014),
				SCI=0,546
	3.	D. Babunski, E. Zaev, A.	Simulation of Load Rejection	proceedings of
		Tuneski	on a Nonlinear Hydro Power	MECO 2012
			Plant Model with Mixed	conference, Bar,
			Mode Nonlinear Controller	Monteenegro, pp.
				275-278
	4.	E. Zaev, D. Babunski et.	HPP Simulator for real-time	Proceedings of the 6-
		al	simulation and SCADA	th Annual South East
			software testing	European Doctoral
				Students Conference,
				Thessaloniki,
	5	D. Dahunghi E. Zazza A	SCADA simulation for	Greece, 2011
	5.	D. Babunski, E. Zaev, A. Tuneski	SCADA simulation for	Proceedings of the IX National
			monitoring and control of HPP using Robust Law	Conference With
			III I USING KUUUSI LAW	International
				Participation ETAI
				2009, Section A, pp
				90, Ohrid, R.
				Macedonia, 2009
10.2.	Parti	cipation in scientific national	and international projects (up to	,
	No.	Author	Title	Publisher/year
	1.	A. Tuneski, D. Babunski	Development of Environment	TEMPUS Joint
		et al.,	and	Project JP-511001-
			Resources Engineering	2010, 2010-2014
			Learning - DEREL	
	2.	A. Tuneski, D. Babunski	Development of	TEMPUS Joint
		et al.,	Environment and Resources	European Project
			Engineering Curriculum -	JEP-

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3. A. Tuneski, D. Babunski et al., "Monitoring and Improving the Rivers in the Vardat/Axios Watershed (MIRVAX)", NATO Partnership for Peace cofinanced project, SfP981877, 2006-2008 10.3. Printed books in the last five years (up to 5) Publisher/year 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/year 10.4. Printed professional papers in the last 5 years (up to 5) Publisher/year 11. Supervision (mentorship) of undergraduate, master and doctoral studies students Publisher/year 11. Undergraduate 7 11.2. Master 1 11.3. Doctoral 1 12. For mentors of doctoral thesis, selected work for the last four / five years 1 12.1. Proof of printed scientific papers in international scientific journals or international publications in the related field (up to 6) in the past five years 1 12.1. Proof of at least two printed scientific papers in international scientific journals that have impact factor in the related field in the past five years 1 12.3. Proof of at least three international meetings' participation in the past four years 1 12.3. Proof of at least three international meetings' participation in the past four years 1					DE	REC			042005-		
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						_ · ·					
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Арр	. 4			it lecture at the fir lentors on the doct	rst, second and third study toral thesis			
1.	Name (Fi	irst, Last)	Emil Zaev					
2.	Date of birth		13.02.1976					
3.	Scientific	e degree / Title	Ph.D./Assistant	Professor				
4.	Title of the	he scientific degree	Ph.D. in Technic	Ph.D. in Technical Sciences				
5.	Year and	institution of the	Education	Year	Institution			
	scientific	degree	Ph.D	2013	Faculty of			
					Mechanical			
					Engineering - Skopje			
			M.Sc	2006	Faculty of			
					Mechanical			
					Engineering - Skopje			

	1			DC		1000			
				B.Sc		1999		Faculty of	
								Mechanical	
								Engineering - Skopje	
6.			nd particular	Area		Field		Specialty	
			naster of science	Technical Sciences		Mechanica		Control Systems	
	degre					Engineerir	ng		
7.	-		nd area of	Area		Field		Specialty	
	docto	ral degr	ree	Technical Sciences		Mechanica	al	Control Systems	
						Engineerir	ng		
8.			state the	Institutio	n		Title a	nd area	
	institution where he/she			Faculty c	of Mechanic	al	Assista	ant Professor,	
	and the title and area in which				Engineering –Skopje			ation	
	is nan			Ŭ	0 10				
9.			es that the teacher					third cycle	
	9.1.		of courses that the t	eacher is le	ecturing in t	•			
		No.	Course			Study progra			
		1.	Monitoring and	Control				ntrol Systems, Faculty	
								neering – Skopje	
		2.	Control and auto	mation of	HEP			ogy/ Faculty of	
								ering – Skopje	
		3.	Practice in the in		all and			ntrol Systems, Faculty	
			medium enterpri					neering – Skopje	
	9.2.		of courses that the t	eacher is le	ecturing in t				
		No.	Course			Study progra			
		1.	Proportional tech	nnology				ntrol Systems, Faculty	
						of Mechanical Engineering – Skopje			
		2.	Real – Time con		ns and	Automatics and Control Systems, Faculty			
			Hadrware-in-the					neering – Skopje	
	9.3.			eacher is lecturing in the third cycle					
		No.	Course			Study progra	am/insti	tution	
-		1.							
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		No.	Author		Title			Publisher/year	
		1.	Emil Zaev, Gerha	,		Efficient Activ	ve	SICFP2013, Sweden,	
			and Hubert Kargl			Damping"		2013	
		2.	Gerhard Rath and	l Emil	2	Pressures in	а	Scandinavian	
			Zaev		Position C		-	International	
						ith Separate N	Aeter-	Conference on Fluid	
			D H G C C	15 1	in and Me			Power, 2013	
		3.	Emil Zaev, Gerha	ard Rath,		ulator for Re		DSC2011,	
			et al.		Time Simulation and		CADA	,	
					Software Testing"			Greece, 2011	
		4.	Emil Zaev, Gerha	ard Rath,	"Design o	f a Hydraulic		SysStruc 2011,	

10.2. Emil Zaev, Gerhard Rath, et al. 'Hydro Power Plant Governor Testing Using Hardware-In-The-Loop Simulation", MECO 2012, Bar Montenegro, 2012 10.2. Participation in scientific national and international projects (up to 5) No. Author Title Publisher/year 1. Atanasko Tuneski, Emil Zaev et al., Development of Environment and Resources Engineering Learning - DEREL Zo10, 2010-2014 2. Atanasko Tuneski, Emil Zaev et al., Development of Environment and Resources Engineering Curriculum - DEREL TEMPUS Joint European Project JEP- 3. A. Tuneski, Emil Zaev, et al. "Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)", 2006-2008 NATO Partnershi for Peace cofinand project, StP98187 (MIRVAX)", 2006-2008 4. A. Tuneski, D. Babunski, E. 3aeB i dr. "Proektiranje na SCADA sistem za dalechinsko upravuva e i monitoring na tehnoloshite procesi vo prehrambena i cementna project za tehnolos				Hubert Kargl	Damper for Heavy	Resita Romania,
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10.2. Participation in scientific national and international projects (up to 5) No. Author Title Publisher/year 1. Atanasko Tuneski, Emil Zaev et al., Development of Environment and Resources Engineering 2010, 2010-2014 TEMPUS Joint Project JP-511001 2. Atanasko Tuneski, Emil Zaev et al., Development of Environment and Resources Engineering 2010, 2010-2014 TEMPUS Joint European Project JP-511001 3. A. Tuneski, Emil Zaev, et al., "Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)", NATO Partnershi for Peace cofinant project, SfP98187 4. A. Tuneski, D. Babunski, E. 3aeB i dr. "Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementna GTZ (German Technical Cooperation) 200					5	
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10.2. Participation in scientific national and international projects (up to 5) No. Author Title Publisher/year 1. Atanasko Tuneski, Emil Zaev et al., Development of Environment and TEMPUS Joint 2. Atanasko Tuneski, Emil Zaev et al., Development of Environment and Resources TEMPUS Joint 2. Atanasko Tuneski, Emil Zaev et al., Development of Environment and Resources TEMPUS Joint 3. A. Tuneski, Emil Zaev, et al. "Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)", NATO Partnershi for Peace cofinand project, SfP98187 (MIRVAX)", 4. A. Tuneski, D. Babunski, E. 3aeB i dr. "Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementna proekt za tehnolos						
No.AuthorTitlePublisher/year1.Atanasko Tuneski, Emil Zaev et al.,Development of Environment and Resources Engineering Learning - DERELTEMPUS Joint Project JP-511001 2010, 2010-20142.Atanasko Tuneski, Emil Zaev et al.,Development of Environment and Resources Engineering Curriculum - DERECTEMPUS Joint European Project JEP- 19028_20042005 2008,3.A. Tuneski, Emil Zaev, et al."Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)",NATO Partnershi for Peace cofinant project, SfP98187 2006-20084.A. Tuneski, D. Babunski, E. 3aeB i dr."Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnaproekt za tehnolos for 2008		10.2.	Partic	cipation in scientific national	,	5)
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2.Atanasko Tuneski, Emil Zaev et al.,Development of Environment and Resources Engineering Curriculum - DERECTEMPUS Joint European Project JEP- 19028_20042005- 2008,3.A. Tuneski, Emil Zaev, et al."Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)",NATO Partnershi for Peace cofinand project, SfP98187 2006-20084.A. Tuneski, D. Babunski, E. 3aeB i dr."Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnaproject (German Technical Cooperation) 2002				Zaev et al.,	and	Project JP-511001-
2.Atanasko Tuneski, Emil Zaev et al.,Development of Environment and Resources Engineering Curriculum - DERECTEMPUS Joint European Project JEP- 19028_20042005- 2008,3.A. Tuneski, Emil Zaev, et al."Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)",NATO Partnershi for Peace cofinand vardar/Axios Watershed sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnaTEMPUS Joint					Resources Engineering	2010, 2010-2014
Zaev et al.,Environment and Resources Engineering Curriculum - DERECEuropean Project JEP- 19028_20042005- 2008,3.A. Tuneski, Emil Zaev, et al."Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)",NATO Partnershi for Peace cofinand project, SfP98187 2006-20084.A. Tuneski, D. Babunski, E. 3aeB i dr."Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnaproject, German Technical Cooperation) 2002						
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3.A. Tuneski, Emil Zaev, et al."Monitoring and Improving the Rivers in the Vardar/Axios Watershed (MIRVAX)",NATO Partnershi for Peace cofinand project, SfP98187 2006-20084.A. Tuneski, D. Babunski, E. Заев i dr."Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnaproekt za tehnolos GTZ (German Technical Cooperation) 2000				Zaev et al.,		
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4.A. Tuneski, D. Babunski, E. Заев i dr.(MIRVAX)",2006-20084.A. Tuneski, D. Babunski, E. Заев i dr."Proektiranje na SCADA sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnaproekt za tehnolos GTZ (German Technical DO0200000000000000000000000000000000000				al.		
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E. Заев і dr.sistem za dalechinsko upravuvawe i monitoring na tehnoloshkite procesi vo prehrambena i cementnarazvoj finansiran o GTZ (German Technical Cooperation) 2001						
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tehnoloshkite procesi vo prehrambena i cementna Cooperation) 2003				E. Jaeb 1 dr.		5
prehrambena i cementna Cooperation) 200					-	
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					1	Cooperation) 2003
industija"5.A. Tuneski, D. Babunski, "Optimalno, robustnoMinisterstvoto za			5	A Tunadri D Dahunatri	~	Ministeratuete 70
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				E. Saeb I di.	1	
						na R. Makedonija,
poremetuvanja"2003-200610.3.Printed books in the last five years (up to 5)		10.3	Print	d hooks in the last five years	· · · · ·	2003-2000
No.AuthorTitlePublisher/year		10.5.				Publisher/year
			-	Aution		T dominici/ year
10.4. Printed professional papers in the last 5 years (up to 5)		10.4	-	ed professional papers in the	last 5 years (up to 5)	
No. Author Title Publisher/year		10.4.				Publisher/vear
			-			
11. Supervision (mentorship) of undergraduate, master and doctoral studies students	11.	Super	-	(mentorship) of undergraduat	te, master and doctoral studies st	udents
11.1. Undergraduate 5						
11.2. Master		-		0		
11.3. Doctoral						
12. For mentors of doctoral thesis, selected work for the last four / five years	12.	For me	entors of	of doctoral thesis, selected we	ork for the last four / five years	
12.1. Proof of printed scientific papers in international scientific journals or international		12.1.	Proof	f of printed scientific papers i	n international scientific journals	s or international
publications in the related field (up to 6) in the past five years						

	No.	Author		Title		Publisher/	year
	1.						
12.2.	Proof	of at least two printed sci	ienti	fic papers in internati	onal scient	ific journals	s that have
	impact	t factor in the related fiel					
	No.	Author		Title		Publisher/	year
	1.						
12.3.	Proof	of at least three internation	onal	meetings' participation	on in the pa	ast four year	ſS
	No.	Author	Titl	e	Internatio	nal	Year
					meeting/c	onference	
	1.						

Add	. 4		Information about the teachers that lecture at the first, second and third study program and are mentors on the doctoral thesis									
1.	Name (Fi		Emilija Celakoska	tors on the	doctora	al thesis						
1. 2.	Date of b	· · · · ·	13.11.1975									
3.		degree / Title	Ph.D									
4.		ne scientific degree	Ph.D. in Mathematic	al Sciences								
5.		institution of the	Education	Year		Institution						
	scientific degree		Ph.D	2010		Faculty of Natural						
		0				Sciences and						
						Mathematics - Skopje						
			MSc	Sc 2006		Faculty of Natural						
						Sciences and						
						Mathematics - Skopje						
			BSc	1999		Faculty of Natural						
						Sciences and						
						Mathematics - Skopje						
6.		d and particular	Area	Field		Specialty						
		of master of	Mathematical	Mathemat	ics	Differential Geometry						
_	science d	<u> </u>	Sciences									
7.		d and area of	Area	Field		Specialty						
	doctoral o	aegree	Mathematical	Mathemat	ICS	Differential Geometry						
0	16		Sciences		T:41	nd area						
8.		ved, state the n where he/she	Institution		Title a	nd area						
		d the title and area	Faculty of Mechanic			ant Professor,						
	in which		Engineering -Skopje		Mathematics							
9.			r is lecturing separatel	y for first, se	econd a	nd third cycle						
			e teacher is lecturing in									
	N	o. Course		Study progr	am/inst	itution						
	1.	Engineering m	athematics	PINF, IND,	DK							
	2.			MHT								
	3.	Basics of prog	ramming	All of 4-yea	ır studie	S						

		4.	Programming languages		PINF		
		5.	Object oriented programm	ning	PINF		
	9.2.		of courses that the teacher is				
	<i>J</i> . <u></u> 2.	No.	Course	leetainig	Study program/institution		
		1.			<u> </u>		
	9.3.		of courses that the teacher is	lecturing	in the third cycle		
		No.	Course	U	Study program/institution		
		1.	Nonholonomic geometry	in	Mechanical engineering/Faculty of		
			mechanical systems		Mechanical Engine		
10.	Selecte	ed worl	k in the past five years				
	10.1.	Relev	ant scientific printed paper				
		No.	Author	Title		Publisher/year	
		1.	Trencevski Kostadin,		of Gravitation in	Springer/ 2011, Int. J	
			Celakoska	Flat Min	kowski Space	Theoretical Phys	
			Emilija, Balan Vladimir			50(1),1-26 (IF2012:	
		_		G 1	D ' 1	1.086)	
		2.	Trencevski Kostadin,		Precession and	Springer/ 2011	
			Celakoska Emilija		ragging Observed	Cent Eur J Phys 9(3), 654-661 (IF2012:	
					Massive Objects e to a Gyroscope		
		3.	Celakoska Emilija,		Link Problem and	0.905) Math. Nat. Sci., South-	
		5.	Chakmakov Dushan	Solutions		West Univ. "Neofit	
				bolution	,	Rilsky", Blagoevgrad/	
						2011, Proc. IV Int. Sci	
						Conf, FMNS2011.	
						Vol.1, 16-21.	
		4.	H.M.Srivastava, N.	Some Di	stortion and Other	Victoria Univ./2012	
			Tuneski, E. Celakoska	Propertie	s Associated with a	Austral. J Math. Anal.	
				-	f the n-Fold	Appl, 9(2) 1-17	
					ric Koebe Type		
		_		Function			
		5.	K.Trenchevski, E.	-	s of motion for two-	Taylor&Francis/2011	
			Celakoska	<i>•</i> 1	blem according to	J. Dyn. Syst. Geom.	
					ver inside the	Theor. 9 (2), 115-135.	
	10.2.	Dartic	l cipation in scientific nation	gravitational and inter		to 5)	
	10.2.	No.	Author	Title	manonai projects (up	Publisher/year	
		1.	Nikola Tuneski, PhD		ic theory of	Ministry of education	
		1.	The Tunoki, The		and applications	and science/ 2001-2004	
		2	Kostadin Tranchavalci				
		2.	Kostadin Trenchevski, PhD		ial-geometric and cal problems and	Ministry of education and science, 2006-2009	
				their app		and science, 2000-2009	
		3.	Dushan Chakmakov,		ng and optimizing	Ministry of education	
L	L	5.			ng und optimizing	inition y of coucation	

			PhD	aloggifiars for patter	-12	and scienc	2 2002
			FIID	classifiers for patter		2006	e, 2005 -
		4.	Nikola Tuneski, PhD	recognition applicat Theory of univalent			f education
		4.	Nikola Tulleski, PliD	functions and applic		and science	
				runctions and applied	cations	TUBITAK	
						2006 - 200	
		5.	Zivorad Tomovski, PhD	Linear and Nonline	ar	Bilateral p	
				Fractional Models		Macedonia 2011-2013	a - Austria, S
	10.3.	Printe	ed books in the last five ye	ears (up to 5)			
		No.	Author	Title		Publisher/	year
		1.	N.Tuneski, E. Celakoska	Introduction to MA	TLAB	Faculty of	Mechanical
						Engineerin	ng –Skopje,
						2010	
	10.4.	Printe	ed professional papers in t	he last 5 years (up to 5))		
		No.	Author	Title		Publisher/	year
		1.	Celakoska	On Radial Deforma	tions of	Proceedin	gs of IV
			Emilija, Trencevski	Rotating Disc		congress o	of
			Kostadin			mathemati	
						Republic 0 2011, 215	of Macedonia, -221
11.	Super	vision ((mentorship) of undergrad	uate, master and doctor	ral studies	students	
	11.1.		rgraduate				
	11.2.	Maste	<u> </u>				
	11.3.	Docto	ral				
12.	For me	entors of	of doctoral thesis, selected	work for the last four	/ five years		
	12.1.		of printed scientific pape				ational
			cations in the related field				
		No.	Author	Title		Publisher/	year
		1.					
	12.2.	Proof	of at least two printed sci	entific papers in intern	ational scie	entific journ	als that have
			et factor in the related fiel				
		No.	Author	Title		Publisher/	year
		1.					
				1	past four years		
	12.3.	Proof	of at least three internation	onal meetings' participa	ation in the	past four y	ears
	12.3.	Proof No.	of at least three internationAuthor	onal meetings' participa Fitle	Internatio		ears year
	12.3.				Internatio		

Add	1. 4	Inform	Information about the teachers that lecture at the first, second and third stu program and are mentors on the doctoral thesis						
1.	Name (Fi	rst, Last)	Bojan Prangoski						
2.	2. Date of birth		29.07.1984						

3.		ific de	gree /	Ph.D.						
	Title									
4.	Title c scient	of the ific deg	gree	Ph.D. in	1 Theor	retical Mathem	natics			
5.	Year a			Educati	on	Year	Institution			
	institu	tion of	the	B.S. in		2007	Faculty of Science, University Ss. Cyril and			
	scient	ific deg	gree	Mathem	atics		Methodius, Skopje			
				M.Sc. in	1	2010	Faculty of Science, University Ss. Cyril and			
				Theoret	ical		Methodius, Skopje			
				Mathem	atics		15			
				Ph.D. in	l	2013	Faculty of Science, University of Novi Sad,			
				Theoret	ical		Novi Sad, Serbia			
				Mathem	atics					
6.	6. Area, field		nd	Area		Field	Specialty			
	partici			Theoretical		Functional	Theory of distributions			
	specia			Mathem	atics	Analysis				
	master	r of sci	ence			2				
	degree	e								
7.	Area,	field a	nd	Area		Field	Specialty			
	area o	f docto	oral	Theoret	ical	Functional	Ultra distributions, Pseudo differential			
	degree			Mathem	atics	Analysis	operators			
8.		oloyed,		Institution			Title and area			
		stitutio		Faculty of Mechanical Engineering, Dept. of Mathematics and			Assistant professor			
		he/she								
		and th								
		ea in w	vhich	Informatics, Univ						
	is nam	ned		"Ss. Cyril and M						
9.	List of	of courses that the teacher is lecturing separately for first, second and third cycle								
	9.1.	List c	of cours	ses that the teacher is lecturin			g in the first cycle			
		No.	Cour	se		Study program/institution				
		1.								
	9.2.	List c	of cours	ses that th	ne teacl	her is lecturing in the second cycle				
		No.	Cour	se						
		1.								
	9.3.	List o	of cours	ses that th	e teac	her is lecturing	g in the third cycle			
		No.	Cour	se						
		1.								
10.	Selecte			e past five						
	10.1.	Relev	ant sci	ientific pr	inted p	paper (up to 5)				
		No.	Autho	r	Title		Publisher/year			
		1.	S.Pilip	povic,	On th	e	Monatshefte fur Mathematik, 173 1 (2014),			
				ngoski		olution of	83-105			
					Roun	nieu				

	1			1. 1. 1.		
				ultradistributions		
				through the ε		
				tensor product		
		2.	B.Prangoski	Laplace transform	Filomat, 27 5 (2013),	, 747-760
				in spaces of		
				ultradistributions		
		3.	S. Pilipovic,	Anti-Wick and	J. Math. Pures Appl.,	online April 2014,
			B. Prangoski	Weyl quantization	Weyl quantization http://dx.doi.org/10.1016/j.matpur.20 on	
			-	on		
				ultradistribution		
				spaces		
	10.2.	Parti	cipation in sc	ientific national and ir	ternational projects (up	to 5)
		No.	Author	Title	Publisher/year	
		1.				
	10.3.	Print	ed books in th	e last five years (up to	5)	
		No.	Author	Title	Publisher/year	
		1.				
	10.4.	Print	ed profession	al papers in the last 5 y		
		No.	Author	Title	Publisher/year	
		1.				
11.	-			of undergraduate, mas	ter and doctoral studies	students
	11.1.		ergraduate	-		
	11.2.	Mast		-		
	11.3.	Doct		-		
12.	1				the last four/five years	
	12.1.				national scientific journ	als or international
				related field (up to 6)		
		No.	Author	Title	Publisher/year	
		1.				
	12.2.					entific journals that have
		impa		e related field in the pa		
		No.	Author	Title	Publisher/year	
		1.				
	12.3.	Proo			ngs' participation in the	e past four years
		No.	Author	Title	International	year
1	1				meeting/conference	

18. Teachers statement of consent for participation in teaching specific subjects of the study program (only for teachers that are not employed at the faculty of Mechanical engineering - Skopje)

The document is attached in Appendix 5 at the end of this elaborate.

19. Consent from the higher educational institution for teacher participation in the realization of the study program (only for teachers that are not employed at the faculty of Mechanical engineering – Skopje)

Not applicable

20. Information about the number of students enrolling in the first year of the study program

According to estimates of the spatial features, the equipment and personnel potential for study program in Sustainable energy and environment it is planned to enroll up to 30 students per year.

21. Information for providing required and additional literature

Predicted required and additional literature (given in the subject programs) is provided by subject teachers, and some are located in the library of the Faculty of Mechanical Engineering. As required literature will be used literature translated and distributed by the Government from the subject programs where it exists.

22. Information for the web-page

All information about the study program at faculty of Mechanical engineering – Skopje are available at the web page of the faculty: <u>www.mf.edu.mk</u>

23. Professional or scientific name by which the student acquires after completion of the study program

Students who get university, academic one year full time studies in the second cycle at the Sustainable energy and environment study program acquires the following title:

In Macedonian:

МАГИСТЕР ПО ТЕХНИЧКИ НАУКИ ОД ОБЛАСТА НА МАШИНСТВОТО

In English:

MASTER OF SCIENCE IN MECHANICAL ENGINEERING

24. Activities and mechanisms to develop and maintain the quality of teaching

24.1. Teaching methods

The study program is implemented as a full-time study with the following types of instruction: lectures, lab work, computer tutorials and seminars. Regular classes are implemented for subjects where there are 5 or more students. Where the number of students is less than 5, it is organized mentor teaching.

The load of students is realized through specific types of activities, such as individual work, assignments and projects aimed at the study of practical cases relevant areas of research studies, teamwork, research, self-study and participation in workshops. Particular attention is paid to individual work with students in the form of mentoring and consultancy work.

The scope and organization of the studies were conducted in accordance with Article 112 of the Law on Higher Education of the Republic of Macedonia and Article 23 of the Rules of the first and second cycle studies of Ss according to ECTS methodology, or total student workload expressed in volume of 60 credits per year after 30 hours of placement credit, which is equal to 1800 hours per load. The number of hours per load distributed on the number of weeks in two semesters, 30 weeks weekly expresses the total student workload (teaching and specific forms of activity).

24.2. Verification methods of knowledge

Verification of knowledge is done through continuous assessment and final examination through. In the course programs that are implemented in the point 13 of this elaborate for each subject individually it is determined how to assess the knowledge and appreciation of the proportion of continuous assessment activities or defined points that provides the student with the implementation of individual actions defined in the respective program.

The final assessment of each of the subjects of this study program is formed on the basis of continuous assessment and final results achieved by the student. The final grade is based on the total score of the final or continuing assessment student won, and the maximum number of possible score is 100. The assessment is made pursuant to Rule 35 of the Rules of the first and second cycle studies Ss applying numerical scoring system respecting equivalent alphabetic grading system according to ECTS.

Students conquer this study program by passing the exams and accomplishing a certain number of ECTS credits, in accordance with the structure of the study program.

24.3. Activities and mechanisms for the development and maintenance of the quality of the study program

In order to develop and maintain the quality and quality control in the study program are implemented methods of continuous evaluation, self-evaluation and system for assessing the quality of the teaching staff in accordance with the provisions of the Law on Higher Education of the Republic of

Macedonia and article 73 and 77, and in accordance with the established mechanisms for evaluation within Ss.

The provision and maintenance of quality and quality control will be carried out in accordance with the mechanisms and activities that are conducted for all study programs and apply to all participants in the educational process of the faculty of Mechanical engineering. Mentioned activities and mechanisms of self-evaluation concerning:

- development of curricula,
- realization of the curriculum,
- student assessments,
- preparation of the thesis,
- assessing the quality of teaching by students with surveys at the end of each semester for each subject,
- assess the quality of study programs by students awarded the diploma and other procedures relating to resources and logistics of the teaching process

Evaluation by students for every subject, and for study programs in general are consistently implemented and taken into account in the evaluation and development of all study programs.

The activities for the development and maintenance of quality control and the quality of the study program, apply monitoring the situation with the success of students and the implementation of the program by the teaching council of Mechanical Engineering. Teaching council conducted an internal evaluation of the content of the study program in order to improve and develop in line with modern developments in the field.

24a. Results derived from the Guidelines for self-evaluation only basis of the evaluation and the evaluation procedures adopted by universities Agency for Evaluation of Higher Education in the Republic of Macedonia and the Interuniversity Conference of Macedonia (Skopje, Bitola, September 2002).

Taking into consideration the orientation for continuous inspection, evaluation, the provision and improvement of the quality in all the areas of its action at the University "Sv. Cyril and Methodius "in Skopje the fourth Foreign evaluation by a team of experts nominated by the European association of universities is in progress. The results are published in the report for the subsequent evaluation of Ss Cyril and Methodius University in Skopje for the period 2010/11 to 2012/13 years.

Also at the web site of Ss results are published from the report for the subsequent evaluation of Ss Cyril and Methodius University in Skopje for the period 2006/07 to 2009/10 years, issued by the European Association of Universities, 2011 year.

http://ukim.edu.mk/mk_content.php?meni=155&glavno=1

COURSES OFFERED AT UNIVERSITY LEVEL - LIST (ALL M5 COURSES)

Second cycle university studies