Study program Overview: Power Systems and Energy Management – MSc 20252028

Name of the Institution	University of Prishtina
Faculty / Department	Faculty of Electrical and Computer Engineering Department of Power Systems
Main campus and/or branch	Main campus
Name of study program	Power Systems and Energy Managament
Qualification Level according to KKK	Level VII
Academic grade or name of the academic grade in diploma:	Master of Science in Electrical and Computer Engineering - Study Program: Power Systems and Energy Managament
ECTS:	120
Profile of the study program (specialization)	Power Systems and Energy Management
Field of study according to Erasmus Subject Area Codes (ESAC)	06.2
Form of study:	Regular studies
Minimum duration of studies	2 years
Number of study places:	30

Content of the programme

Master of Science in Power Systems and Energy Management (MSc - PSEM)							
Year of study: I							
Semester: I			**Hours/week**				
Nr.	**C/E**	**Subject**	**L**	**NE**	**LE**	**ECTS**	**Lecturer**
1	C	Power System Analysis	2	1	2	6	Prof.Ass.Dr. Nuri Berisha
2	C	Conventional and Renewable Energy Production	2	1	2	6	Prof.Ass.Dr. Arben Gjukaj
3	C	High Voltage Techniques	2	1	2	6	Prof.Ass.Dr. Arben Gjukaj
4	C	Power Distribution and Industrial Systems	2	1	2	6	Prof.Ass.Dr. Nuri Berisha
5	C	Project Management	2	2	0	6	Prof.Ass.Dr. Nora Sadiku – Dushi

Total:						**30**	
Year of study: I							
Semester: II			**Hours/week**				
Nr.	**C/E**	**Subjects**	**L**	**NE**	**LE**	**ECTS**	**Lecturer**
1	C	Integration of Renewable Energy Resources in Power Systems	2	1	2	6	Prof.Ass.Dr. Vezir Rexhepi
2	C	Energy Storage Systems and Advanced Technologies	2	1	2	6	Prof.Dr. Qamil Kabashi, Prof.Ass.Dr. Drilon Bunjaku
3	C	Scientific and Research Methodology	2	2	0	6	Prof.Dr. Milaim Zabeli Prof. Dr. Blerim Rexha
Elective subjects							
4-1	E	Application of Software in the Design of Power Systems	2	0	2	6	Department/ PhDc. Msc. Ass. Petrit Emini
4-2	E	Advanced Power Electronics	2	1	2	6	Prof.Dr. Qamil Kabashi
4-3	E	Mathematical Methods in Engineering	2	2	0	6	Prof. Asoc.Dr. Valdete Rexhëbeqaj – Hamiti Prof. Asoc. Dr. Shqipe Lohaj

4-4	E	Economic Management of Power Systems	2	2	0	6	Department
4-5	E	Economic and Environmental Public Policies of EU	2	2	0	6	Department
5-1	E	Financial Management	2	2	0	6	Prof.Ass.Dr. Nora Sadiku –
5-2	E	Human Resource Management	2	2	0	6	Prof.Ass.Dr. Nora Sadiku-Dushi
Total:						**30**	
From the elective courses for the second semester, the student selects two courses: one from Group 4 and one from Group 5.							
Year of study: II							
Semester: III			**Hours/week**				
Nr.	**C/E**	**Subjects**	**L**	**NE**	**LE**	**ECTS**	**Lecturer**
1	C	Control and Operation of Power Systems	2	1	2	6	Prof.Ass.Dr. Vezir Rexhepi
2	C	Modern Power System Planning	2	2	1	6	Prof.Ass.Dr. Arben Gjukaj
3	C	Professional practice (Intership)	4	0	0	6	Prof.Ass.Dr. Nuri Berisha
Elective subjects							
4-1	E	Modern Relay Protection Systems	2	1	2	6	Department/Industry
4-2	E	Energy Efficiency and Demand Side Management	2	2	0	6	Prof.Ass.Dr. Vezir Rexhepi
4-3	E	Smart Grids Development	2	1	2	6	Prof.Ass.Dr. Nuri Berisha
4-4	E	Energy Data Analytics	2	0	2	6	Prof.Ass.Dr. Isak Shabani
4-5	E	Application of Artificial Intelligence in Energy	2	0	2	6	Prof.Ass.Dr. Lavdim Kurtaj
5-1	E	Circular Economy	2	2	0	6	Prof.Ass.Dr. Nora Sadiku-
5-2	E	Strategic Management	2	2	0	6	Dushi Prof.Ass.Dr. Nora Sadiku –
Total:						**30**	Dushi
From the elective courses for the second semester, the student selects two courses: one from Group 4 and one from Group 5.							

Year of study: II							
Semester: IV			Hours/week				
Nr.	C/E	Subjects	L	NE	LE	ECTS	Lecturer
1	C	Diploma Thesis				30	From Department
Total:						30	

Mission, objectives

The fields of Power Systems and Energy Management play a crucial role in shaping the development of society, the economy, and technological trends. Based on the developments and goals of our country, the processes and dynamics of European countries, and taking into consideration the preparation of students for these developmental, professional, academic and research trends, the mission of the proposed program in Power Systems and Energy Management (PSEM) is in accordance with the mission of the University of Pristina.

The mission of the Power Systems and Energy Management program is to develop highly skilled professionals capable of addressing the challenges of modern energy systems. The program aims to equip students with the knowledge and expertise required to design, manage, and innovate in the field of power systems and energy management. Aligned with the mission of the University of Prishtina and the Faculty of Electrical and Computer Engineering, the program focuses on fostering academic excellence, promoting scientific research, and responding to the demands of the labor market. Through a blend of theoretical and practical learning, the program prepares graduates to contribute to the sustainable development of Kosovo's energy sector, engage in lifelong learning, and compete in a global workforce.

Power Systems is considered a strategic interest of the Republic of Kosovo. The perspective of the program is built to prepare students according to an advanced and modern curriculum, aiming to adapt to the needs of the energy market, industry and economic development. The program and its development practices include exchanges and mobilities between institutions, where the beneficiaries are students and academic staff, with the aim of reaching international levels. Also, the mission of the Power Systems and Energy Management (PSEM) program is based on achieving the goals of the program through the provision of appropriate and modern infrastructure, so that students are able to understand, study, analyze and expand deep scientific and professional knowledge, to be able to advance critical scientific thinking and be competitive in the energy and industry market, both at the country, regional and European level.

The Power Systems and Energy Management program is based on three main pillars:

- Scientific, professional and practical development and advancement of students - according to the needs of the labor market at the national and international level.
- Research development and creativity – adapting to the advancements of new technologies, EU (European Union) energy standards and policies, research and scientific innovations,
- Cooperation with European university programs and interaction with industry – creating access and perspective of the program in our country with European countries through cooperation for sharing experiences and joint projects, interaction with industry and the private sector in increasing the competence and skills of students and their scientific and professional development.

Our country and the relevant institutions have drafted laws for energy sector and are implementing many energy projects, considering energy as a national asset in the development of this sector, the production of energy from

renewable sources, mainly solar and wind, but also geothermal, biomass and other hybrid forms. Among energy strategies and active energy institutions, it should be emphasized:

- Strategic plan for renewable energy sources,
- Kosovo's National Energy and Climate Plan (NECP), - National Action Plan for Renewable Energy Sources,
- Inter-institutional Coordinating Committee for the Development of One Stop Shop Cooperation for Renewable Energy Sources,
- Ministerial Council of the Energy Community.

The intended learning outcomes are at level seven (7) of studies and encompass the development of both generic and specific competencies. These outcomes are categorized into knowledge, skills, and competences as follows:

Knowledge

- Students will demonstrate comprehensive knowledge of energy production, transmission, distribution, and consumption, including the role and integration of renewable energy sources.
- Students will have a deep understanding of principles, policies, and regulatory frameworks in energy management at both local and European levels.
- Students will be familiar with emerging technologies and innovative practices for energy efficiency and management.
- Students will possess skills in research methodologies focused on addressing energy challenges, linking power systems to economic concepts, and understanding managerial practices in the energy sector.

Skills

- Students will critically analyze complex power systems and propose solutions using advanced methodologies and models.
- Students will design and conduct original research projects related to power systems, contributing to the advancement of knowledge in energy management.
- Students will plan, execute, and evaluate energy-related projects, demonstrating leadership and strong communication skills to articulate technical concepts to diverse stakeholders.
- Students will effectively collaborate within interdisciplinary teams to foster innovation and achieve shared goals.

Competencies

- Students will solve technical challenges in power systems and apply advanced technologies and models for effective management.
- Students will develop and implement strategic energy management plans that align with current industry trends and promote sustainability.
- Students will engage with stakeholders to address energy-related challenges and promote sustainable practices.

- Students will demonstrate the competencies and knowledge required for professional roles in the energy sector, including job market readiness and a commitment to lifelong learning.

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