

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Electrical Power Engineering		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Distributed Generation of Electrical Energy		
Lecturer (for lectures)		Janjić D. Aleksandar		
Lecturer/associate (for exercises)		Vučković D. Dragan		
Lecturer/associate (for OFE)		Vučković D. Dragan		
Number of ECTS	5	Course status (obligatory/elective)	Elective	
Prerequisites				
Basic knowledge about the principles of distributed generation and all possible energy resources for the distributed generation. Knowledge about the renewable energy resources. Impact of distributed generation on distribution network.				
Course objectives				
Students will be capable to perform necessary calculation to choose the optimal power of generator, without causing any harmful effect to the distribution network.				
Course outcomes				
Students will be capable to perform necessary calculation to choose the optimal power of generator, without causing any harmful effect to the distribution network.				
Course outline				
Theoretical teaching				
Integration principles. Types of distributed generators: hydroelectric, wind, solar, fuel cells, cogeneration. Storage of electrical energy. Connection to the distribution network: technologies, standards and and impacts to the network.				
Practical teaching (exercises, OFE, study and research)				
PV panels connection. Inverter connection. Measuring of basic PV panel characteristics on sunny and cloudy conditions. Demonstration of small hydroelectric plant operation.				
Textbooks/references				
1	V. Milosavljevic, "Distributed generation" (in serbian), Akademaska misao, Belgrade, 2011			
2	F. Farret, M. Godoy Simoes, „Integration of alternative sources of energy” John Wiley and sons, 2006			
3	EPS Technical recommendation			
4				
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	2	1	0	0
Teaching methods				
Teaching and computational examples are performed by lecturing, on a board. Students are doing their works independently, with the assistant supervision. Consultations.				
Grade (maximum number of points 100)				
Pre-exam duties		Points	Final exam	Points
Activity during lectures		5	Written exam	20
Exercises		5	Oral exam	20
Colloquia		40		
Projects		10		