Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Common		
Type and level of studies		Doctoral studies		
The name of the course		Physics of Ionized Gases		
Lecturer (for lectures)		Ristić S. Goran		
Lecturer/associate (for exercises)				
Lecturer/associate (for OFE)				
Number of ECTS	10	**Course status (obligatory/elective)**	Elective	
Prerequisites				
Course objectives	Get to know the basic processes that lead to the formation of charged particles in the gas and their transport. Getting to know about the breakdown of gases, tinnitus, sparks, coronas and arched discharge.			
Course outcomes	Mastering the theoretical knowledge of the process of the formation and transport of charged particles into a low ionized gas.			
Course outline				
Theoretical teaching	Theoretical lectures will take place in the following areas: Formation and disappearance of particles into a weakly ionized gas. Drift, energy and diffusion of charged particles. Breakdown in gases in the fields of different frequency band. Stable and unstable dissipation. Spark, corona and arched discharge. Solving the kinetic equation in a weakly ionized gas in the presence of an electric field. Physical mechanisms that lead to discharge and which are present in various types of discharge			
Practical teaching (exercises, OFE, study and research				
Textbooks/references				
1	A. Engel, Electric Plasmas: Their nature and users, Taylor and Frencis Ltd, London&New york, 1983			
2	G. Francis, Ionization Phenomena in Gases, Butterworthes Scientific Publication, London, 1960			
3	M.A. Lieberman and A.J. Lichtenberg, Principles of plasma discharges and materials processing, John			
4	Wiley&Sons Inc., New York, 1994			
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	**Exercises**	**OFE**	**Study and research work**	**Other classes**
3	0	0	0	0
Teaching methods	Presentations on specific topics, seminars and projects			
Grade (maximum number of points 100)				
Pre-exam duties		**Points**	**Final exam**	**Points**
Activity during lectures			**Written exam**	
Exercises			**Oral exam**	60
Colloquia		40		
Projects				