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	Electronic Measurements		
Lecturer (for lectures)	Živanović B. Dragan, Jovanović R. Jelena		
Lecturer/associate (for exercises)	Đorđević-Kozarov R. Jelena		
Lecturer/associate (for OFE)	Pešić T. Miroljub		
Number of ECTS	5	**Course status (obligatory/elective)**	Elective
Prerequisites			
Course objectives	Training students to design the measurement instrumentation and to use it properly in development, scientific-research work and its application in processes.		
Course outcomes	The capability to design the electronic measurement instruments. The capability to develop measurement methods to be applied in the electronic measurements.		
Course outline			
Theoretical teaching	The general classification and characteristics of the measurement systems. The measurement methods and techniques for the calibration of the measuring instruments. The measurement systems' errors. The metrological system and tracebility. The sources of the measurement signals. Viewing and recording of the signals' waveforms. The measurement of electric voltage, current and power. The measurement of frequency, phase and time interval. The measurement of signals' and systems' characteristics. The measurement of impedance, electronc circuits' and semiconductor components' parametars. The information technologies in the measurement instrumentation. Virtual instrumentation and visualization of the measurement processes. The interface systems. The measurement-information systems.		
Practical teaching (exercises, OFE, study and research	Realization of the laboratory exercises in which the basic measurement methods and systems are illustrated on the laboratory models.		
Textbooks/references			
1	Bagaric I. "Metrology of electrical quantities - Measurements and Measuring instruments", (in Serbian) Science, Belgrade 1996.		
2	A. Santic, "Electronic Instrumentation", (in Croation) Scool book, Zagreb		
3	Clyde F. Coombs, "Electronic Instrument Handbook", Mc Graw-Hill		
4	N. Kularatna, "Digital and Analogue Instrumentation testing and measurement", The Institution of Engineering and Technology		
5			

Number of classes of active education per week during semester/trimester/year				
Lectures	**Exercises**	**OFE**	**Study and research work**	**Other classes**
2	1	1	0	0
Teaching methods	Realization of the laboratory exercises in which the basic measurement methods and systems are illustrated on the laboratory models.			

Grade (maximum number of points 100)			
Pre-exam duties	**Points**	**Final exam**	**Points**
Activity during lectures	5	**Written exam**	20
Exercises	20	**Oral exam**	15
Colloquia	40		
Projects			