Study program: Electrical and Computing Engineering

Type and level of studies: Doctoral studies (third level of studies)

Course unit: IT in Power Systems

Teacher in charge: Aleksandar Ranković

Language of instruction: English

ECTS: 15

Prerequisites: -

Semester: Summer

Course unit objective

Introducing students with fundamentals of Information Technology (IT) and System Engineering.

Learning outcomes of Course unit Students acquire the knowledge in the area of the IT relevant for Power and Energy Systems.

Students acquire the knowledge in the area of IT application in Power Systems.

Course unit contents

Theoretical classes

1. **Information technology (IT).** Basic elements of IT. Information System (IS) and Data Base. Systems Architecture. IT-based systems. Commercial IT application for power systems.
2. **IT for power systems.** Analysis of power system activity and their IT demands. Technical and geographic information system (GIS).
3. **Software engineering.** Planning, design, development, maintenance, testing, and evaluation of the software.

Practical classes

Processing and analyzing project results.

Literature

[1] T. Connolly and C. Begg, *Database Systems*, 5th Edition, Addison Wesley, 2005.

[2] E. Simon, *Distributed Information Systems, From Client-Server to Distributed Multimedia*, McGraw-Hill, 2000.

Number of active teaching hours				**Other classes**
Lectures: 3	Practice: 5	Other forms of classes	Independent work: 2	

Teaching methods Lessons, consultations, study and research work

Examination methods (maximum 100 points)

Exam prerequisites	**No. of points:**	**Final exam**	**No. of points:**
Student's activity during lectures	**5**	oral examination	**50**
Practical classes/tests	**15**	written examination	
Seminars/homework	**-**	.....	
Project	**30**		
Other			

Grading system

Grade	**No. of points**	**Description**
10	**91-100**	Excellent
9	**81-90**	Exceptionally good
8	**71-80**	Very good
7	**61-70**	Good
6	**51-60**	Passing
5	**less than 50**	Failing