

Specification for the book of courses

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|--|--|---|--------------------------------|----------------------|
| Study program | | Electrical Engineering and Computer Science | | |
| Module | | Common | | |
| Type and level of studies | | Doctoral studies | | |
| The name of the course | | Digital Modulation Techniques | | |
| Lecturer (for lectures) | | Milić N. Dejan, Nikolić B. Zorica | | |
| Lecturer/associate (for exercises) | | | | |
| Lecturer/associate (for OFE) | | | | |
| Number of ECTS | 10 | Course status (obligatory/elective) | Elective | |
| Prerequisites | | | | |
| Course objectives | Mastering the basic knowledge necessary to determine the performance of digital modulation techniques. | | | |
| Course outcomes | Theoretical knowledge; Mastering the use of appropriate software simulation | | | |
| Course outline | | | | |
| Theoretical teaching | Minimum Shift Keying (MSK) and MSK modulation types. Modulation with the continuous phase. Phase Modulation. Spectrally efficient modulation without constant envelope. Performance of modulation techniques in fading channels, and equalization. | | | |
| Practical teaching (exercises, OFE, study and research) | Theoretical lectures, consultations, research work | | | |
| Textbooks/references | | | | |
| 1 | G.Lukatela, D.Drajić, G.Petrović, R.Petrović: "Digital Telecommunications" (in Serbian), Građevinska knjiga, Beograd, 1984. | | | |
| 2 | T.Oberg: "Modulation, Detection and Coding", John Wiley, 2001. | | | |
| 3 | F.Xiong: "Digital Modulation Techniques", Second Edition, Artech House, 2006. | | | |
| 4 | J. G. Proakis, "Digital communications", fourth edition, McGraw Hill, 2001. | | | |
| 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 | Lectures; Consultations; Study and research work. | | | |
| Grade (maximum number of points 100) | | | | |
| Pre-exam duties | Points | Final exam | Points | |
| Activity during lectures | | Written exam | | |
| Exercises | | Oral exam | 50 | |
| Colloquia | | | | |
| Projects | 50 | | | |