

Specification for the book of courses

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|--|--|--|--------------------------------|----------------------|
| Study program | Communications and Information Technologies | | | |
| Module | System Engineering and Radio-Communications | | | |
| Type and level of studies | Master studies | | | |
| The name of the course | Wireless Internet Access | | | |
| Lecturer (for lectures) | Dončov S. Nebojša, Stanković Ž. Zoran | | | |
| Lecturer/associate (for exercises) | Milijić R. Marija | | | |
| Lecturer/associate (for OFE) | Milijić R. Marija | | | |
| Number of ECTS | 4 | Course status (obligatory/elective) | Elective | |
| Prerequisites | | | | |
| Course objectives | The acquisition of theoretical and practical knowledge of the standard methods and techniques for wireless Internet access | | | |
| Course outcomes | Knowledge of current techniques of wireless Internet access. Knowledge of the practical implementation of various network architectures for Internet access. | | | |
| Course outline | | | | |
| Theoretical teaching | Overview of wireless communications standards used for Internet access. Internet access based on the IEEE 802.15 standard. PAN architecture and wireless networks. Bluetooth technology in data transfer. Internet access based on the IEEE 802.11 standard. Wi-Fi. PLCP and PMD layers of data transfer. Equipment for the implementation of wireless Internet access. Roaming in wireless networks and mobile IP protocol. Architecture of IEEE.802.16 network for Internet access. Wi-Max. Internet Access via GSM. WAP. Satellite Internet. Data security in the systems for wireless Internet access. | | | |
| Practical teaching (exercises, OFE, study and research) | Practical work related to the work operation analysis and adjustment of components for wireless Internet access. Practical work related to the implementation of various network architectures and service sets for wireless Internet access in a laboratory environment. | | | |
| Textbooks/references | | | | |
| 1 | A. F. Molisch, Wireless Communications, The second edition, John Wiley and Sons, 2012. | | | |
| 2 | C. Beard, W. Stallings, Wireless Communication Networks and Systems, Pearson, 2015. | | | |
| 3 | Mark Beaulieu, Wireless Internet Applications and Architecture, Addison-Wesley, 2001. | | | |
| 4 | J. Kim, M.Fischer, 802.11ac Wireless Computer Networking Standard, Willey, 2012. | | | |
| 5 | V. Marković, B. Milovanović, N. Dončov, Z. Stanković, Wireless communication systems (in Serbian), textbook, Faculty of Electronic Engineering, 2008. | | | |
| 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 | Lectures, auditory exercises, practical laboratory work, homework, consultations. | | | |
| Grade (maximum number of points 100) | | | | |
| Pre-exam duties | Points | Final exam | Points | |
| Activity during lectures | 5 | Written exam | 20 | |
| Exercises | 25 | Oral exam | 20 | |
| Colloquia | 30 | | | |
| Projects | | | | |