

<b>Study program: Communication technologies</b>			
<b>Course title: Mobile communications</b>			
<b>Professor/assistant: Ph. D Srđan M. Jovković</b>			
<b>Type of course:</b> compulsory			
<b>ECTS credits: 6</b>			
<b>Pre-requisites:</b> none			
<b>Aims of the course:</b>			
The students will acquire basic notions of base stations setting up, wireless transmission connections, wireless paths presentation and the standards for wireless transmission of signals. The aim of the course is to present the tracking system as well as to explain the EDGE signal transmission. The course will teach students how to address and locate the user. Also, the students will see how channels are split in wireless transmission according to their frequency.			
<b>Learning outcomes:</b>			
Upon finishing the course it is expected that the students will be able to:			
Handle the basic devices for wireless transmission, perform the spectral signal analysis and analyse the strength of the signal on their own. The students will be able to detect the implementation problems as well as the problems in connecting and thus propose adequate methods for solving problems. They will also be able to apply the gained knowledge when solving engineering problems.			
<b>Syllabus</b>			
<i>Theoretical part</i>			
Introduction to the basic features of mobile technology. PLC technology. FWA technology. Satellite systems and video signal transmission through mobile telephony. Network power supply. Transmission of wireless data. Analysis of data transmission over cellular phones.			
<i>Practical part</i>			
Connection and launching of the main external base station in practice. Work on android and cellular mobile phones.			
<b>Literature</b>			
<ol style="list-style-type: none"> <li>1. Dukić M., <i>Moderne telekomunikacije</i>. Beograd 2008</li> <li>2. R. Aleksandar, mobilna telefonija treće generacije, Akademska misao, 2003</li> <li>3. Borislav Tadić, mobilne komunikacije, naučna knjiga, 2001</li> <li>4. Matthias Patzold, <i>Mobile Fading channels</i>, issued 2002.</li> <li>5. Zorica Nikolić, Zbirka rešenih zadataka iz mobilnih telekomunikacija, Beograd 2004.</li> </ol>			
<b>Number of active classes 60</b>			Other forms of teaching:
Lectures: 30	Practical classes: 30	Research work:	
<b>Teaching methods</b>			
Combined and interactive, based on solving practical tasks.			
<b>Grading system</b> (maximum 100 points), <b>grading scale</b> from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
<b>Pre-exam obligations</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
activity during theoretical lectures	<b>10</b>	written exam	
practical training	<b>10</b>	oral exam	30
colloquium(s)/seminar papers	<b>40 + 10</b>		
<b>Sum</b>	<b>70</b>	<b>Sum</b>	<b>30</b>