Study program: Communication technologies

Course title: Antenna Systems

Professor/assistant: Srdjan Jovkovic

Type of course: compulsory

ECTS credits: 6

Pre-requisites:

Aims of the course:

Introducing students with basic principles of antenna systems work through theory and practical teaching. Basic display of antenna system, amplifier and amplifier system. Receiving sides of antenna system, modulation for radio wave transmission.

Learning outcomes:

Student's will be able for practical application of acquired knowledge in future engineering practice in the field of antenna systems and the way of realization and making of antenna systems.

Syllabus

Theoretical part

Principle of transmission of information without visible lines, transmitter and receiver, Basic circuits of receivers and transmitters, Relayed oscillator circuits, General transmitter characteristics, Residual power amplifier modulation, Modulators, Base, Differential pair, Frequency and phase modulation. Radio receiver. Frequency change rate, antenna systems. Data transfer via relays and links.

Practical part

Includes computational exercises, laboratory exercises.

Literature

1. Krstić, D., *Radiotehnika*, Niš, Univerzitet u Nišu 1999.
2. Stojanović, I., *Osnovi telekomunikacija*, Građevinska knjiga, Beograd, 1977.
3. Petrović, B., *Primena PLL petlje u sistemima za digitalno podešavanje i detekciju FM signala*, english. Univerzitet u Nišu, 1977.

Number of active classes 75			Other forms of teaching:
Lectures: 30	Practical classes: 30+15	Research work:	

Teaching methods

Teaching method is carried out in the form of lectures, calculus and practical exercises. The inductive method is used in the lectures. Based on a series of simpler examples, conclusions are drawn and formed knowledge that over time becomes an engineering intuition

Grading system (maximum 100 points), **grading scale** 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.

Pre-exam obligations	**points**	**Final exam**	**points**
activity during theoretical lectures	15	written exam	40
practical training	15	oral exam	
colloquium(s)/seminar papers	30		
Sum	60	**Sum**	40