Study program: Communication Technologies

Course title: Elementary of Telecommunications

Professor/assistant: Srđan Jovković / Milan Savić

Type of course: compulsory

ECTS credits: 6

Pre-requisites:

Aims of the course:

The aim is to introduce students to basic terms referring to analogue signals; modulation techniques; signal carrier; application of amplitude, phase and frequency modulation; Laplace transform; Fourier transform.

Learning outcomes:

It is expected that after this course students are able to analyze analogue signals, amplitude, phase and frequency modulation and make rational solutions for various engineering problems and requirements.

Syllabus

Theoretical part

Communication problems. Communication model. Deterministic and stochastic signals. Telephone signal. Spectrum of signals. Spectrum of elementary signals. Bandwidth. Amplitude, phase and frequency modulation. Signal-to-noise ratio.

Practical part

Introduction to elementary transmission techniques in telecommunication systems.

Literature

1. Dušan Drajić, *Statistička teorija telekomunikacija,* akademska misao, Beograd, 2003.
2. Stojanović, Z., *Osnovi telekomunikacija, zbornik rešenih zadataka*, ETF Beograd, 1998.
3. Miroslav Dukić, *Principi Telekomunikacija,* Akademska misao Beograd, 2008.
4. Stojanović, I., *Osnovi telekomunikacija*, Građevinska knjiga, Beograd, 1977.
5. N. Gospić, D. Vučković, A. Kostić, Osnove upravljanja telekomunikacijama, Beograd, 2004.

Number of active classes 60			Other forms of teaching:
Lectures: 30	Practical classes: 30	Research work:	

Teaching methods

Combination of interactive approach with practical problem solving.

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	**5**	written exam	
practical training	**15**	oral exam	**40**
colloquium(s)/seminar papers	**30+10**		
Sum	**60**	**Sum**	**40**