ELECTRONICS AND MODELING OF ELECTRONIC CIRCUITS 2

Credit module "Electronics and Modeling of Electronic Circuits" (EMEC -2) is an integral part of the discipline "Electronics and Modeling of Electronic Circuits" (EMEC) program which is drawn up in accordance with the educational-professional program of bachelor training directions 6.050902 "Radio Electronic Devices" branch of knowledge 0509 "Radio Engineering, Radio Electronic Devices and Communication". Discipline EMEC is included in the cycle of professional and practical training. The credit status of the module is regulatory. Credit module is taught in semester 4 of 2 years of preparation.

The subject of the course: electronic circuits and signals used in the systems of the creation, transmission, reception and processing of information.

Interdisciplinary relations: "Higher Mathematics", "General Physics", "Electronic Devices", "Materials Science and Materials Electronics". EMEC-2 provides the study of all without exception of the subsequent disciplines of radio engineering directions, teaching students directions 6.050902 "radio Electronic Devices".

The goal of the credit module is to develop students' abilities:

- to perform calculations of parameters of nonlinear electronic circuits;
- to calculate the main parameters of different types of radio signals during their passage of electromagnetic circuits and devices.

After mastering credit module students are expected to demonstrate the following learning outcomes:

- know the basic properties of radio signals as carriers of information;
- know the main methods of representation of signals;
- know the basic properties of nonlinear electronic circuits and their applications for signal conversion;
- know the main methods of calculation of the signals passing through the electronic device;
- be able to calculate the response of electronic devices on the effects of signals of different shapes;
- be able to calculate modes of operation of main devices of amplification and signal conversion;
- be able to experimentally investigate the characteristics of functional elements of electronic devices.

Form of education - full-time. The number of credits of ECTS - 7,5. The number sections – 6. The distribution of training time by type of classes: lectures - 72 hours, practical training - 18 hours, laboratory classes - 36 hours, independent work – 99 hours. The term control form – differentiated test.