

ELECTRONICS AND MODELING OF ELECTRONIC CIRCUITS 1

Credit module "Electronics and Modeling of Electronic Circuits", Part 1 (EMEC -1) 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 3 of 2 years in the making.

The subject of the course: linear electronic circuit for the formation and transformation of signals in systems creation, transmission, reception and processing of information.

Interdisciplinary relations: "Higher Mathematics", "General Physics", "Electronic Devices", "Materials Science and Materials Electronics". EMEC-1 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 electric modes of linear electronic circuits;
- calculate and experimentally investigate the basic parameters of different types of linear electronic circuits;

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

- know the purpose and structure of basic electronic devices and processes taking place within them;
- know the basic properties of linear electronic circuits; to know calculation methods for linear electronic circuits;
- to know methods of experimental research of characteristics of linear elements of the electronic device;
- be able to calculate the linear electronic circuits;
- be able to calculate frequency characteristics of linear circuits;
- to be able to experimentally investigate the characteristics of linear electronic circuits.

Form of training - daily. The number of ECTS credits is 5.5. The number sections – 3. The distribution of training time by type of classes: lectures - 54 hours, practical training - 18 hours, laboratory classes - 18 hrs, independent work – 75 hours. The term control form – exam.