

INTRODUCTION

Academic discipline "Engineering calculations personal electronic computers" refers to a sample of the curriculum for bachelors in the areas of 6.050503 "Mechanical Engineering" 6.050502 "Engineering Mechanics". Total training time required to study subjects according to the curriculum is (full) 306 hours (8.5 credits ECTS). Material disciplines taught in the 1st and 2nd courses student learning. Studying discipline based on the knowledge that students were in the study of philosophy, mathematics, computer science, some sections of physics and chemistry.

The purpose of discipline is to prepare professional who is able to use computer technology for technical computing in professional engineering, kinematic, parametric calculations and calculations for strength and rigidity, etc., which require the use of personal computers (PC) and apply mathematical model in engineering activities.

Subject disciplines - methodology and tools for performing parametric engineer, thermal, strength and other calculations on the PC.

Practice in Engineering involves the use of modern computer technology. It is used when processing experimental data, forecasting power load calculation and optimization of production equipment, distribution of technological resources in design, and to solve many other problems of modern engineering and technology.

Most payments for special educational disciplines students machine-building specialties based on knowledge of algorithmic languages and the ability to work with personal computers. Therefore the main task of computer workshop on the subject "engineering calculations on a PC" - a skills performance engineering calculations using a PC through the use of one of the most powerful algorithmic engineering-oriented programming language - FORTRAN.

Algorithmic Language Fortran well suited for students mastering techniques procedural programming syntax is simple and clear structure of program units. However, the settlement is a powerful professional tool that is traditionally used in difficult scientific and engineering problems. Therefore, it is like no other, suitable for beginners learning Engineers.

In the textbook paid attention to the basic rules of writing source code syntax Fortran, methods of console works with compilers FORTRAN, construction diagrams, creating

images of icons and their application, the basic rules of writing software units in Fortran among Microsoft Developer Studio, examples of algorithmic and programming, modeling Problems that occur in engineering and machine-building related to specialties.