

An annotation of discipline is "Methods of computer researches of devices and measuring objects" Entry

Program of educational discipline "Methods of computer researches of devices and measuring objects" are made in accordance with the educationally-professional program of preparation master's degree of speciality 8.051003.06 " Information technologies in an instrument-making ".

Educational discipline belongs to the cycle of "Discipline of independent choice of educational establishment".

The article of educational discipline is

it is a capture future specialists by the modern methods of computer researches of devices and measuring objects;

it is mastering of the modern object-oriented going near an engineering analysis.

Educational discipline is based on the preliminary studied courses, namely :
mathematical analysis

Educational discipline is based on the preliminary studied courses, namely :
mathematical analysis, programming, mathematical design, physicist, system CAE/CAD.

At exposition of the above-mentioned загальнотехнічних disciplines it follows to bind them to the requirements to the complex providing of high scientific and technical level of development of devices on the base of the newest methods of computer researches.

1. Aim and task of educational discipline

1.1. Aim of educational discipline.

The aim of educational discipline is forming for the students of capabilities :

it is application of modern methods of computer researches of devices and measuring objects for the put tasks;

- to the analysis of the put problem taking into account present computer technologies of making decision;

it is determination of correct method of research for a concrete task;

it is realization of procedure of computer research according to a select method.

1.2. Basic tasks of educational discipline.

According to the requirements of the educationally-professional program students after mastering of educational discipline must show such results of studies :

knowledge:

- are methodologies of research of devices and measuring objects on the basis of the multidisciplinary constrained analysis that is presented by various CAD/CAE platforms;

- it is a method of analysis of gasdynamic processes and multiphase environments on a base ANSYS CFX;

- it is a method of static construction analysis;

- it is a method of thermal research;

- it is a method of linear construction research.

ability: to own the methods of computer researches within the framework of realization a static construction, withstand thermal, free and preliminary tense oscillation analyses of behavior of devices and measuring objects; by technologies of treatment and analysis of numeral results; by technologies of optimization of realization of numeral experiment.

experience: it follows to link the marked knowledge and abilities within the framework of approach of the systems to the complex providing of high scientific and technical level of development of devices. Approach of the systems envisages the acceptance of optimal decisions, in particular, structural and scheme, on the basis of analysis of modern methods of computer researches of devices and measuring objects.