

DEVELOPER Abstract: Professor of instrumentation, professor Elena Bezvesilna

Summary of discipline Transforming Devices SUMMARY OF DISCIPLINE

Discipline "transforming devices" (PPP) is taught according to the educational and vocational training programs "Bachelor" direction 6.051003 "Instrument".

The cycle to which the training course: professional and practical training.

The subject of discipline: transformative devices devices.

PPP course is based on knowledge of the students studied their subjects: physics, higher mathematics, mathematical modeling on a computer, a special course in physics, metrology and interchangeability, electrical, electronics, theoretical mechanics; automatic control theory; Materials and construction materials, engineering and computer graphics, chemistry, technical mechanics, applied mechanics, instrumentation and other technologies;

In turn, the PPP exchange rate is the base for studying these subjects: methods and tools for measuring velocities and accelerations; Automated measuring complexes; special issues of designing devices; means of measuring energy saving systems; designing instrumentation; Weight measuring equipment; medical equipment; methods and tools for registration and retrieval; microprocessors in mass measurement; CAD and other measuring devices.

The aim of the course is to develop students' abilities: study principle, design features, inclusion schemes, advantages and disadvantages, the location on the object of measurement features of the main types of devices converting devices; field of use.

The main objectives of the course. Requires educational and professional programs, students after mastering discipline must demonstrate the following learning outcomes:

- teach the basic information necessary for theoretical and practical study converting device performing functional transformation in the transmission of information on the physical parameter that is controlled or adjusted by various means measuring chain measuring (pressure, flow, speed, etc.);
- teach the basic information necessary for the acquisition of skills and abilities calculation, design and use of standard converting equipment;
- disclose professional, methodical discipline focus of PPP, its relationship with other disciplines specialty.

Students' PPP acquire such

knowledge:

- philosophical problems of discipline IFR Precision Mechanics,
- the main directions and prospects of development of instrumentation, control and measuring equipment, RFP,
- mathematical methods for solving problems in the specialty, independent work methods for the development of materials, lectures and study of technical literature on PPP,
- methods of research on PPP, PPP respective election methods and mathematical processing of the data on a computer,
- subject discipline PPP and its role in training specialist;

the ability to:

- own rational methods of finding and using scientific and technical information in the field of PPP,
- use modern computing in the study and design of PPP Precision Mechanics,
- perform all the necessary calculations in the study and design of the RFP,
- to make decisions to choose the criteria and methods of optimization and optimize IFR Precision Mechanics,
- use modern mathematical tools and computer engineering in solving problems in the field of PPP on the profile of specialty;

experience:

- conduct research in the field of PPP instruments and instrument systems,
- use methods of scientific research on PPP, PPP respective election methods and mathematical processing of the data on a computer,
- use mathematical methods for solving problems of the profession, the techniques of self-study for the development of the study material of lectures and technical literature.