

Annotation "Mechanics 1.2, Mechanics 2.2"

The discipline "Mechanics 1.2, Mechanics 2.2" is a component of the curriculum, focused on the initial preparation of students for integrated engineering activities and is included in the basic part of the professional cycle of disciplines in the areas:

12.03.01 - Instrument making

12.03.02 - Optotechnics

12.03.04 - Biotechnical systems and technologies

13.03.01 - Heat power engineering and heat engineering

13.03.02 - Electrical Power Engineering and Electrical Engineering

18.03.01 - Chemical technology

18.03.02 - Energy and resource-saving processes in the chemical industry

Technology, petrochemicals and biotechnology

19.03.01 - Biotechnology

22.03.01 - Materials Science and Materials Technology

14.05.02 - Nuclear power plants: design, operation and engineering

Discipline is realized at the Department of Theoretical and Applied Mechanics of the Institute of Natural Resources of the National Research Tomsk Polytechnic University.

The content of the discipline promotes generalization, analysis, perception of information, setting goals and choosing ways to achieve it; Development of scientific and technical thinking of the future specialist.

Discipline is aimed at forming a some of general cultural and vocational competences of the graduate, such as

– Ability to self-organization and self-education;

–ability to search, store, process and analyse information from various sources and databases, present it in the required format using information, computer and network technologies;

– ability to present a scientific worldview.

Teaching discipline provides for the following organization educational process forms: lectures, practical classes, seminars, independent work of the student, tests, consultations.

The discipline program provides for the following types of control:

– ongoing progress assessment in the form of doing homework, monitoring attendance and assessing the personal qualities of the student;

– boundary control in the format of mini-conferences during the 1st and 2nd conference week, stipulated by the linear schedule of the educational process;

– intermediate control in the form of an exam in the 3rd semester and in the form of a differentiated offset for a course project in the 4th semester.

The total complexity of mastering the discipline in the 3rd semester is 4 credit units (credits), 144 hours. The program of the discipline provides for lectures in the amount of 32 hours, practical lessons in the amount of 48 hours, as well as independent work of the student in the amount of 64 hours.

The total complexity of mastering the discipline in the 4th semester is 2 credits (credits), 72 hours. The discipline program provides for practical classes in the amount of 16 hours, as well as independent work of the student in the amount of 56 hours.