Subjects studied at the department

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Undergraduate courses

№	The name of the objec	Brief information about the subject
1	*Materials science and technology of structural materials*	Course objectives: fundamentals of materials science, production, properties and structure of various metals and alloys, marking, thermal and chemical-heat treatment, fundamentals of casting, welding, metal processing by pressure and cutting, metal cutting machines and tools.
2	*Theory of mechanisms and machines*	Course objectives: General methods of research construction, kinematics and dynamics of mechanisms and machines, scientific bases of their design, synthesis of mechanisms, dynamics of machines and mechanisms, study of movement of machine parts under the influence of external forces.
3	*Details of machines*	Course objectives: purpose, classification, design and scope Course objectives: applications of various machine parts, as well as theoretical and practical skills in calculating the main parameters of machine parts, based on their reliability and suitability.
4	*Interchangeability, standardization and technical measurements*	Course objectives: the basics of interchangeability of machine parts, part size tolerances and selection of different fit connections depending on their purpose, the basics of the system of tolerances and fitments, calculation of dimensional chains, selection of fitings of standard connections.
5	*Metrology, standardization and certification.*	Course objectives: the place of Metrology, standardization and certification in the national economy, the basics of Metrology, technical measurements, measuring instruments, measurement errors, the basics of standardization, the choice of standardization objects, working with various standards, the basics of certification.
6	*Applied mechanics*	Course objectives: General methods for studying the kinematics and dynamics of typical machines and mechanisms for their analysis and synthesis, as well as the study of the design, working conditions and loading of typical parts, components and mechanisms of machines, calculation by performance criteria.

7	*Construction materials and metal technology. (under section of the object: metal technology)*	The main objectives of the course: fundamentals of materials science, production, properties and structure of various metals and alloys, marking, thermal and chemical-heat treatment, fundamentals of casting, welding, metal processing by pressure and cutting, metal cutting machines and tools.
8	*Theoretical and applied mechanics. ((in the sections theory of mechanisms and machines and machine parts)*	Course objectives: General methods for studying the kinematics and dynamics of typical machines and mechanisms for their analysis and synthesis, as well as the study of the design, working conditions and loading of typical parts, components and mechanisms of machines, calculation by performance criteria.
9	*The basis of design CAD-CAM-CAE*	The main objective of the course is to teach engineering graphics based on CAD systems. As a result of studying this course, the student should gain knowledge and skills in making drawings of models and machine parts, creating, analyzing and synthesizing, as well as testing 3D models.
10	*Engineering design*	One of the main goals of this course is to teach the student to use the advantages and opportunities of 3D design software products, thorough assimilation of state standards when performing drawings, designing and creating design documentation

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1	*Patenting, licensing and certification*	Course objectives: intellectual property, copyright, patent information, patent search, applications for various patents, the legislation of the Republic of Uzbekistan and international patenting systems, the basics of licensing and certification.
2	*3D engineering design*	The main objective of the course is to teach engineering graphics based on CAD systems. As a result of studying this course, the student should gain knowledge and skills in making drawings of models and machine parts, creating, analyzing and synthesizing, as well as testing 3D models.