SUBJECTS TAUGHT AT THE DEPARTMENT

Bachelor`s degree

	The title of the subject	Brief information about the subject
1	Hydraulics	The basics of hydraulic science, hydrostatic power of the pressure of the quit liquid, working out calculations of pressure pipes, meliorative and hydrotechnic installations, water-fluids, coupling of reaches; hydraulics of hydrotechnic installations and motion of underground water.
2	Hydraulics II	It includes pressure and non-pressure motion of the liquid in the open channels, uniform and uneven motion, laws of motion, hydraulics of hydrotechnic constructions, practical solvation of these tasks, also history of science and tendencies of the development.
3	Hydraulics and hydraulic systems	Hydraulic machines, irrigation systems, irrigation, water hydraulic processes in transport, hydrostatic pressure and pressure force, types of liquid motion, flow hydraulic elements, water pipes movement laws, hydraulic resistance and their identification
4	Hydromechanics	Studies the laws of distribution of forces in liquids and their changing while moving, also their use in hydraulic calculation and projecting of various devices and machines
5	Hydraulics and hydroinformatics	While studying science, students will be able to form a modern scientific outlook in the field of water management, the laws of fluids in equilibrium and motion and their practical application, the methodology of performing hydraulic calculations of water management facilities, monitoring water distribution, hydraulic and the skills of using ICT (information communication technologies) are formed in finding environmentally acceptable solutions, in digitizing the field of water management, in hydraulic calculation, in the design of water management facilities.
6	Mechanics of liquids	Teaches to find hydrostatic power of the pressure of quit liquid; conduct hydraulic calculation of flood-pipes, meliorative and hydrotechnic constructions.

Master`s degree

	The title of the subject	Brief information about the subject

1	Open Channels Hydraulics	It includes pressure and non-pressure motion of the liquid in the open channels, uniform and uneven motion, laws of motion, hydraulics of hydrotechnic constructions, practical solvation of these tasks, also history of science and tendencies of the development.
2	Hydraulics of Groundwater and Structure Filtration	It includes the tasks on calculation of the waste of underground waters, prescribed fast-changing pressure motion of ground waters, prescribed slow-changing non-pressure motion of underground waters, hydrological, hydrogeological and hydraulic parameters of the flood of underground waters, factors, impacting on forming the flood in open courses of the rivers and canals, engineering-hydraulic processes in building and watering the areas; studies peculiarities of balance and regime of underground waters in irrigating lands, hydraulic calculation of hydrotechnic structures.
3	Scientific-research Work in Hydraulics and Engineering Hydrology	Finding correct constructive economic and ecological salvation of tasks, conducting of calculation in the process of scientific modeling, learning and providing experiments, forming of modern scientific overview of students in the sphere of “Hydraulics and Engineering Geology” on the science “Hydraulics and Scientific-research work in Engineering Hydrology”.
4	Channel Processes	It gives opportunities to determine and develop channel processes beforehand, to know limited figure significance of medium speed in the process of silting and erosion and levels of enriching of floods with alluvium, to learn appearing processes in channels
5	Modeling of hydraulic and hydrological processes	While studying the subject, the master's students apply the theoretical and practical knowledge gained from the introduction to the basics of the science of "Hydraulic and hydrological process modeling", which is important for the formation of highly qualified personnel working in the field of water management in the future. In addition, it forms a modern scientific outlook in the fields of "Hydraulic and hydrological process modeling" in the graduate students.