Subjects taught at the department

Undergraduate

No	Name of subjects	Briefly information about science
1.	Use of hydromelioration systems	Irrigation and drainage networks, types of rational use of hydrotechnical structures, correct distribution of water for soil reclamation conditions, and calculations for improving land reclamation conditions are studied .
2	Resource-saving irrigation technologies	Teaches the selection, use and maintenance of resource-efficient technologies for the available area among different irrigation systems, as well as each irrigation method: drip, sprinkler, central irrigation, discrete irrigation teaches the use of systems.
3	Hydromelioration systems design and management	It teaches the design, operation and management of rivers, main canals, internal canals and other hydromelioration systems.
4	Use of remedial systems	It consists in studying the operation of reclamation systems on irrigated lands, the types, structure, and design of drainage systems in accordance with the type of soil.
5	Modelling of irrigation procedures	It teaches how to model the fields that need to be irrigated, the inner parts of the field, and the irrigation sequences.
6	Automation of hydromelioration systems	It teaches digitization and automation of various water measuring devices and other hydromelioration systems.
7	Prediction of crop yield based on water use plan	It teaches how to increase crop productivity by optimizing the water use plan during the growing season.
8	Irrigation and drainage	It teaches how to direct water resources that are filtered during the irrigation period to drains, design drains , and provide services .
9	Design of irrigation systems	Designing sequences from trunk canal to field irrigation technology, drip, sprinkler, center pivot and other systems is taught .

The Master's level

1	Resource-saving innovative irrigation technologies	Saving water resources in the process of watering plants using various innovative technologies. Among the irrigation systems, it teaches the selection of resource-efficient technologies for the existing area, their use and technical support, as well as using each irrigation method, i.e. drip, sprinkler, central irrigation system, discrete irrigation systems.

2	Remedial regime	Watering rate, watering sequence, soil mechanical composition, plant's demand for water will be increased. The amelioration works carried out in a certain irrigation facility during one vegetation period are fully taught.
3	Consulting services in the use of hydromelioration systems	It is to teach the theory, types and structure of reclamation systems on irrigated lands, as well as their proper design, construction and operation for certain soil reclamation conditions.
4	Ameliorative from systems use	It consists of studying the operation, types, structure and design of irrigation systems in accordance with the type of soil.
5	Water resources and their economical use	Specialists are theoretically and practically trained in water resources and methods of their economical use
6	Practical hydrometry	In the master's degree, logical, algorithmic, abstract thinking, the formation and development of the thinking of the service of measuring hydrological indicators in the use of irrigation and reclamation systems, and the clear statement of one's opinions and conclusions in a reasonable manner are taught.
7	Modernization of hydromelioration systems	Modernization of reclamation monitoring and cadastre of irrigated lands, including the use of GIS technology and the creation of modern EHM programs, as well as the correct study of various soil-reclamation regimes, various special automatic devices used in the field of water management and reclamation, types, structure, scope of use of tools and equipment, basics of calculation are taught.
8	Automation of hydromelioration systems	In the master's degree, the types of hydroautomatic devices, devices, structures, theoretical foundations, upper, lower and mixed beef hydroautomatic systems, requirements for them, positive and negative sides, rules for using hydroautomatic systems, types of telemechanics systems and their use, water use plans implementation using hydroautomatic methods is taught.