Subjects studied at the department

Subjects at the department

UNDERGRADUATE

№	The name of the subject	Brief information about science
1	Use of agricultural and reclamation techniques	The purpose of the course is to teach students the possibilities and principles of effective use of agricultural and land reclamation techniques, to increase the efficiency of their use in the performance of mechanized processes, and to provide theoretical and practical knowledge on the formation of a worldview. The objectives of the course are to provide students with a deep understanding of engineering issues such as agricultural and water production processes, tools and types of energy, the structure, operation, technological adjustments of agricultural and meliorative equipment used in mechanized work, their selection and preparation for work. consists in forming knowledge and practical skills.
2	Diagnostics and technical service of agricultural and reclamation equipment	The purpose of the course is to teach students to determine the reasons for the technical condition and malfunctions of agricultural and land reclamation equipment with the least amount of time and effort, to organize their service, methods of effective use of diagnostic technologies and technical tools, and complex issues related to them. is to provide knowledge on providing solutions. The tasks of the course are to provide students with technical diagnosis and service equipment and tools for agricultural and reclamation techniques, analysis of test methods, activities and processes of technical service enterprises, technological formation, design, use of information and communication technologies and the prospects for its development. consists of forming deep knowledge and practical skills.
3	Marketing of agricultural and reclamation equipment	The purpose of the course is to explain to students the concept and essence and purpose of marketing, to teach the state of the marketing environment of the agricultural and land reclamation machinery market, to provide theoretical and practical knowledge on the development of the marketing field, and to form their scientific outlook. The objectives of the course are to form and encourage marketing objectives for marketing of agricultural and land reclamation techniques in students, to ensure the validity of their acceptance, the development concept, features, methods of forming competitive markets for new agricultural and land reclamation techniques, It consists in forming knowledge, skills and qualifications appropriate to the specialization of the field, to have an idea about the interaction of dealership activities, the principles of modern service.

4	Agro-industry technician systems service	The purpose of the course is to form students' theoretical and practical knowledge of technical systems in agro-industry: production of agricultural machinery, delivery to consumers, technical service and organization of service of use systems. The objectives of the course are to provide students with knowledge on technical systems in agro-industry: production of agricultural machinery, delivery to consumers, technical service and service analysis of operating systems, their development directions, introduction of new innovative techniques and technologies. It is to ensure that they have in-depth knowledge and practical skills that can solve engineering problems such as application, setting perspectives.
5	Restoration of the resource of agricultural and water management techniques	The purpose of the course is to teach students how to use advanced methods of restoring the resource of agricultural and water resources, to teach the theoretical and practical foundations of improvement, to increase the characteristics and resource indicators of restoring the resource of details, to form a scientific outlook. is to give knowledge on The tasks of the course are for students to study and analyze the impact of the corrosion process on the performance of machines, theoretical justification of the parameters of corrosion-resistant materials, justification of the technology and mode parameters of the restoration of the resource of the details, methods of determining the composition of the layer of the restored part, determining the indicators of corrosion resistance of the details It consists of forming in-depth knowledge and practical skills that can solve engineering problems such as
6	Basics of using machines.	The purpose of the course is to teach students the possibilities and laws of increasing the efficiency of the use of machines in the implementation of agricultural production processes, to form an optimal and appropriate composition of production tools and to increase the efficiency of the use of machines, to provide knowledge on achieving high results in the implementation of mechanized processes, scientific forming a worldview. The tasks of the course are theoretical and practical principles of increasing the productivity of machines used in the introduction of resource-efficient production technologies, the theoretical basis of their effectiveness, the procedure for choosing the optimal composition and dimensions of the machine-tractor block, innovative control systems and tools for machines, telemechanics and the prospects for its development in engineering is to form deep knowledge and practical skills to solve problems.

7	Ergonomics of agricultural machinery	The purpose of the course is to familiarize students with the workplace conditions created for the operator of agricultural tractors and self-propelled machines, safety requirements and measures in the use of tools used in the management process, modern control and design systems in machinery, and help them form a scientific outlook. consists of The objectives of the course are to use the control tools at the operator's place of work in the management of agricultural machinery, to form in-depth knowledge and practical skills that can solve the engineering issues of ensuring the safety of machinery, and to use a methodical approach to the processes of studying their ergonomic indicators. is to form the skill of applying knowledge in practice.
8	Use of innovative techniques and technologies.	The purpose of the course is to teach students the possibilities and laws of increasing the efficiency of the use of machine-tractor aggregates in the production of agricultural products, the analysis of production processes, the procedures for identifying problems and solving them, the optimal means of production using innovative methods of controlling machines. - formation of the target structure, formation of knowledge and scientific outlook on ensuring effective use of agricultural techniques by applying innovative techniques and technologies to production. The tasks of the course are the main directions of increasing the productivity of machine-tractor aggregates used in the implementation of agricultural production technologies, factors affecting the productivity and quality of machines, identifying, analyzing and solving existing problems in production processes. is to form in-depth knowledge and practical skills that can solve engineering issues such as the selection and introduction of innovative techniques and technologies in accordance with the procedures.
9	Basics of scientific research	The purpose of the course is to introduce students to science, technique and technology, problem setting, topic formation, research object and subject, scientific prediction (hypothesis), law, principle, content, theory, experiment, methods and types of scientific research. in the process of using tensometric station, tenso-devices, oscillograph, amplifiers, sensors used in measurement, to be able to use force, power machine, torque and other measuring devices, to conduct scientific research in the field of improving the constructions of machines and mechanisms is to form a worldview. The tasks of the course are in-depth knowledge that can solve engineering problems, such as introducing students to the main content of scientific research, as well as the structure, types, methods, experiments, processing the obtained results, forming conclusions, familiarizing students with the procedures and rules of implementation processes. and practical skills formation.

10	Use of agricultural machinery and technical service	The purpose of the course: effective use of agricultural machinery and technical service tools and methods in agricultural production, solving complex issues related to the use of agricultural machines and mastering new theoretical knowledge on their operation, agriculture It consists in forming the optimal composition of farm equipment, the scientific outlook on the execution of constructive and technological calculations. The objectives of the course are to solve engineering issues such as the theoretical and practical basis of increasing the productivity of machine-tractor units, the selection of the optimal composition of units, the principles and methods of improving domestic and foreign machinery service systems, the evaluation of their economic efficiency, and the formation of in-depth knowledge and practical skills.
11	Mechanization of agricultural production	The purpose of the course is to provide students with knowledge on the basics of high-efficiency use of mechanization in the field of agriculture, the structure and operation of tractors and working machines, as well as the selection of their types suitable for local conditions. is to form a suitable scientific outlook. The tasks of the course are the structure, use, technological adjustment, selection, preparation for work of tractors and agricultural machines used in the mechanization of agricultural production, harvesting, preliminary processing, storage technologies and consists of forming knowledge and practical skills to teach students the processes and rules of using machines
12	Technical support of mechanized work	The purpose of the course is to provide students with technical maintenance of machines, their main malfunctions, technical condition, structures, technical diagnostics of their main equipment, repair and maintenance base, technology of organization of machine maintenance, provision of fuel and lubricants. It is to provide theoretical and practical knowledge and to form a scientific outlook. The tasks of the course are to teach the students the basics of technical service, malfunctions that occur in machines, their flow, elimination, supply of spare parts, fuel and lubricants, technical condition assessment, diagnosis and repair methods, technical service bases, storage formation of knowledge and skills to teach students the methods and rules of organization technologies, their effective use.
13	Resource-saving techniques and technologies	The purpose of the course is to provide students with advanced technologies in the application of resource-efficient techniques and technologies in agriculture, modern scientific and technical development directions of energy, opportunities to increase the efficiency of using techniques and technologies, and to create an optimal-target composition of resource-efficient techniques. is to give knowledge on The objectives of the course are to teach students the principles of intensive production technologies, the theoretical basis of the efficiency of resource use, the parameters and indicators of resource-saving when aggregates are working, the process of resource-efficient tillage of the soil, remote control and its development prospects. consists of forming knowledge and practical skills.

14	Management of the work output of machine tractor aggregates	The purpose of the course is to teach students the theoretical foundations of technical knowledge, the methods of using machine-tractor aggregates with high efficiency, the selection of highly intensive and resource-efficient movement methods in the cultivation of crops adapted to their economic capabilities, the optimal use of technological aggregates of machine-tractor aggregates in the implementation of complex production processes, agricultural It is to provide the necessary knowledge on the methods of energy analysis of the technology of growing jalik crops and the use of machine-tractor units, the methods of justifying the optimal composition of machine-tractor units, the essence of determining and analyzing the indicators of their use, and applying them in practice. The objectives of the course are to provide students with theoretical knowledge and practical skills, as well as to form a methodological approach and worldview to the technological processes performed with machine-tractor units in agricultural production.
15	Agricultural engineering systems	The purpose of the course is to teach students the possibilities and laws of increasing the efficiency of the use of machines in the implementation of agricultural production processes, to form an optimal and appropriate composition of production tools and to increase the efficiency of the use of machines, to provide knowledge on achieving high results in the implementation of mechanized processes, scientific forming a worldview. The tasks of the course are theoretical and practical principles of increasing the productivity of machines used in the introduction of resource-efficient production technologies, the theoretical basis of their effectiveness, the procedure for choosing the optimal composition and dimensions of the machine-tractor block, innovative control systems and tools for machines, telemechanics and the prospects for its development in engineering is to form deep knowledge and practical skills to solve problems.

IN MASTER DEGREE

№	Name of the subject	Brief information about the subject

16	Basics of using agricultural machinery and technical service	The purpose of the course is to teach masters the basics of developing technical systems in agro-industry and the effective use of techniques, the possibilities and laws of increasing the efficiency of the use of machine-tractor aggregates available in farmers, farms and clusters producing agricultural products, the basics of technical use of machines. study, based on this, formation of the optimal - target composition of the means of production, development of the company's technical service service system, creation of a remote control system for agricultural machinery, knowledge and experience on the prospects of increasing the efficiency of the use of machine-tractor aggregates is to ensure improvement of skills. The task of the subject is the theoretical and practical principles of increasing the productivity of machine-tractor aggregates used in the implementation of production technologies, the theoretical basis of their efficiency, the optimal composition of the machine-tractor aggregate taking into account the soil and climate conditions of farmers, farms and clusters. and can solve engineering issues such as choosing sizes, remote control and increasing the efficiency of technical use of machines, identifying problems in technical systems, analyzing and preparing recommendations for their solution, creating innovative developments, selecting techniques and technologies and introducing them to production consists of forming deep knowledge and practical skills.