S.Seifullin Kazakh Agrotechnical University

Confirm
S.Seifullin Kazakh Agrotechnical University
Dean of the Technical Faculty
_____ E. Akhmetov
"___" _____ 2022г.

CATALOG OF ELECTIVE DISCIPLINES

For students in the direction of preparation 8D087 Agricultural engineering

Brief description of the elective disciplines of the educational program

EPG	EP	Form of education	The name of discipline	Code of subject	Discipline cycle	Component	Number of credits	Level of training	Cafedra	Course	Academic period	Pre-requisitions	Post-requisitions	Brief content of the discipline	Key learning outcomes	Name of the alternative discipline
D136 - «Vehicles »	8D08701 - «Agricultural engineering»	Full-time (PhD 3 years) tremestr	Complex Analysis	KA 7203	BS	Elective subjects	4.0	Doctoral studies by specialization (scientific & pedagogical direction)	Higher mathematics	1	1	Master's degree course - Fundamentals of Scientific research, Experimental planning, Theoretical foundations of agricultural production mechanization	PhD student's research work, incl. doctoral thesis, Scientific basic precision of agriculture.	General provisions of a Complex number. Functions of complex variables Differentiation and integration of functions of a complex variable. The ranks of Taylor and Laurent. Singular point Deductions. Complex potential	Independently carry out research activities in the relevant professional field using modern research methods. Theoretical knowledge and experience in the development of agro-engineering systems and the management of programs to master the latest products of promising technologies	Prediction of technological progress and the support of a system of machines in plant
D136 - «Vehicles »	8D08701 - «Agricultural engineering»	Full-time (PhD 3 years) tremestr	Prediction of technological progress and the support of a system of machines in plant		BS	Elective subjects	4.0	Doctoral studies by specialization (scientific & pedagogical direction)	Mechanization of technological processes	1	1	Master's course Theoretical foundations of mechanization of agricultural production, Technical support of technological processes in the precision farming system	PhD student's research work, incl. doctoral thesis, Scientific basic precision of agriculture	Forecasting and planning methods. Budget planning. Cost management. Methods of forecasting scientific and technical progress. Principles and main stages of forecasting. Planning as a science and activity. Basics of forecasting methodology. Feasibility study. Business plans. Comparison of costs, investment and payback.	Scientific and engineering knowledge and practical experience in the development of agro-engineering systems in the mechanization of agricultural production. Willingness to conduct scientific research, characterized by academic integrity, based on modern scientific theories and methods of analysis. Independently carry out research activities in the relevant professional field using modern research methods. Know and understand the goals and objectives of industrial, technological, organizational and management activities in the field of the AIC. Ability to critically analyze and evaluate modern scientific achievements, generate new ideas in solving research and practical problems. Theoretical knowledge and experience in the development of agro-engineering systems and the management of programs to master the latest products of promising technologies	Complex Analysis
D136 - «Vehicles »	8D08701 - «Agricultural engineering»	Full-time (PhD 3 years) tremestr	Methods of research and processing of experimental data	MNIOOD 7302	AS	Elective subjects	3.0	Doctoral studies by specialization (scientific & pedagogical direction)	Mechanization of technological processes	1	1	Master's Course - Fundamentals of Scientific Research., Systems Modeling, Experiment Design	PhD student's research work, incl. doctoral thesis, Research practice, Scientific basic precision of agriculture	Basic concepts and research. Classification of research. Stages and sequence of research work. The concept of observation and measurement. Errors of observation. Planning and organization of the experiment. Research methodology. The concept of research methods. Measurement errors. Determination of time spent on research. Processing and analysis of research results. Basic concepts of mathematical statistics. Tasks of mathematical statistics in the processing of experimental data. Disperse analysis. Planning an experiment when searching for optimal conditions. Basic concepts and definitions. Staging and conducting	Willingness to conduct scientific research, characterized by academic integrity, based on modern scientific theories and methods of analysis. Know and understand the goals and objectives of industrial, technological, organizational and management activities in the field of the AIC. Theoretical knowledge and experience in the development of agro-engineering systems and the management of programs to master the latest products of promising technologies	Educational activity of high school teacher
D136 - «Vehicles »	8D08701 - «Agricultural engineering»	Full-time (PhD 3 years) tremestr	Educational activity of high school teacher		AS	Elective subjects	3.0	Doctoral studies by specialization (scientific & pedagogical direction)	Профессионально е образование	1	1	Master's course	Academic writing, Teaching practice	Fundamentals of the theory of training, education and development, general and professional pedagogical culture of a teacher, pedagogical values in the structure of professional pedagogical culture, technology of pedagogical activity, theory and practice of pedagogical management, norms of professional and pedagogical ethics, essence and means of advanced training of specialists. Application of acquired knowledge and skills, developed abilities in teaching, scientific, social and other activities.	Scientific and engineering knowledge and practical experience in the development of agro-engineering systems in the mechanization of agricultural production. Ability to work in a team, be mobile, make decisions in conditions of uncertainty	Methods of research and processing of experimental data

Protocol No. 10 (E) dated June 29, 2022 approved by the Faculty Council

head of Fedra E. zh. Kaspakov