Efficiency of using sensors and controllers in support of experimental research

Status	Selective
Department	Agroengineering
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Contact information	Classroom 216m Consultation time – every Thursday from 12:00 to 14:00, e-mail: arhimag0@gmail.com Web page: профіль
Course objective	Formation of knowledge in future PhDs on theoretical and practical aspects of using sensors and controllers to ensure accuracy, reliability and efficiency of experimental research. Providing competencies in the selection, integration and analysis of data obtained from sensor systems and controllers to optimize experimental processes in scientific and engineering research.
Main tasks	Providing students with knowledge and skills to use sensor systems and controllers in research, conduct measurements and monitor technological parameters. Developing skills in data processing, analysis and visualization, ensuring the integration of sensor technologies into automated research systems.

As a result of studying the discipline, the student should

know	- Principles of operation of sensors and controllers, their technical characteristics and application in various experimental conditions. - Methods of integrating sensors and controllers into automated data collection and analysis systems. - Features of the selection of sensor systems depending on the type of research. - Methods of ensuring the accuracy and reliability of measurements.
be able to	- Use modern sensors and controllers to monitor experimental parameters. - Develop systems for automatic collection and processing of data obtained from sensors. - Analyze and visualize the results of experiments using controllers and sensor systems.