

ANNOTATION OF THE EDUCATIONAL COMPONENT

**Scientific substantiation of the use of CAD/CAM/CAE systems in agricultural engineering**

Status	Selective
Chair	Technical service
Teacher	Dumanchuk Mykhailo Yuriyovych, Candidate of Technical Sciences
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Purpose discipline	of formation of knowledge in future doctors of philosophy on the theoretical and practical aspects of the justified choice and application of software and hardware complexes CAD/CAM/CAE for computer-aided design of technical systems in agricultural engineering.
Main tasks	obtaining knowledge and skills in modern computer-aided design of technical agricultural systems in various CAD systems, data preparation and engineering analysis
As a result of studying the discipline, the student must know	- interface features of various CAD systems - principles of creating 3D models of agricultural machinery products; - rules and techniques for forming technical and working documentation; - requirements for the composition and structure of data for engineering analysis in various CAE systems; - sequence of engineering analysis of technical systems
be able	- develop 3D models of agricultural machinery products in various CAD systems; - conduct engineering analysis of 3D models of agricultural machinery products in various CAE systems; - provide preparation of source data for 3D printing of models of agricultural machinery products