Computer Aided Design of Technological Tooling (Term Project)

Major «*Technology of Aircraft Manufacturing Department*»

Level of Higher Education	*first (Bachelor)*
Course Status	*student's choice*
Scope of discipline	60 hours / 2 ECTS credits
Language	*Ukrainian / English*
What will be studied (subject of study)	As a result of the implementation of the undergraduate course project, the applicant for education studies the object of study and solves the tasks. The work consists of several mandatory design stages that form the structure of the project. The development of a technological process for dimensional processing and design of a jig for machining includes: - preliminary design of the jig for machining; - development of a technological route for manufacturing a part by machining; - development of technological operations of mechanical processing; - design of a special machining jig. or Development of a technological process for sheet stamping and die design, including: - outline design of a stamp; - designing a stamp in an automated system; - choice of equipment; - registration of documentation on the designed stamp and the technological process of stamping the part.
Why is it interesting/should be studied (goal)	Implement the project using computer-aided design (CAD) systems designed to automate the technological process of product design, the result of which is a set of design documentation sufficient for the manufacture and operation of the design object. The course of computer-aided design has two components on the example of two software packages. Each applicant is given the task of designing a stamp for a sheet part, or a jig for machining a part (based on SolidWorks)
How can you use the acquired knowledge and skills (competencies)	Ability to communicate in the state language both orally and in writing. Skills in the use of information and communication technologies. The ability to generate new ideas (creativity). Ability to learn and master modern knowledge. The ability to develop and implement technological processes for the production of parts and objects of aviation equipment. The ability to ensure the quality of information technology products and services throughout their life cycle. The ability to choose methods of calculation, design and production, considering the characteristics of different types of aviation equipment
Prerequisites	
Corequisite	
Organization of training	Types of classes: practical, self-study Forms of education: full-time / part-time Forms of control: differential test
Department	Technology of Aircraft Manufacturing
Faculty	Aircraft Engineering

<table>
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<tr><td>Links to course materials</td><td colspan="4">1. https://mentor.khai.edu/course/
2. Borysevych V.V., Danchenko V.G., Zastela A.N., Mesheryakov A.N., Morgolenko A.S., Kharkiv, KhAI, 2009, 65p.</td></tr>
<tr><td>Link to work program (syllabus)</td><td colspan="4">https://khai.edu/assets/files/silabusi/Major/104/silabus_b_134_Computer-aided-design-of-technological-tooling-TPmajor.pdf</td></tr>
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