



Computer Aided Design of Technological Tooling (Term Project)

Major «Technology of Aircraft Manufacturing Department»

Level of Higher Education	<i>first (Bachelor)</i>
Course Status	<i>student's choice</i>
Scope of discipline	60 hours / 2 ECTS credits
Language	<i>Ukrainian / English</i>
What will be studied (subject of study)	<p>As a result of the implementation of the undergraduate course project, the applicant for education studies the object of study and solves the tasks.</p> <p>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:</p> <ul style="list-style-type: none"> - 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. <p>or</p> <p>Development of a technological process for sheet stamping and die design, including:</p> <ul style="list-style-type: none"> - 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)	<p>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.</p> <p>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)</p>
How can you use the acquired knowledge and skills (competencies)	<p>Ability to communicate in the state language both orally and in writing.</p> <p>Skills in the use of information and communication technologies.</p> <p>The ability to generate new ideas (creativity).</p> <p>Ability to learn and master modern knowledge.</p> <p>The ability to develop and implement technological processes for the production of parts and objects of aviation equipment.</p> <p>The ability to ensure the quality of information technology products and services throughout their life cycle.</p> <p>The ability to choose methods of calculation, design and production, considering the characteristics of different types of aviation equipment</p>
Prerequisites	
Corequisite	
Organization of training	<p>Types of classes: practical, self-study</p> <p>Forms of education: full-time / part-time</p> <p>Forms of control: differential test</p>
Department	Technology of Aircraft Manufacturing
Faculty	Aircraft Engineering

Teachers	Name	Olga Shypul	Name	Iryna Voronko
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Links to course materials	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.			
Link to work program (syllabus)	https://khai.edu/assets/files/silabusi/Major/104/silabus_b_134_Computer-aided-design-of-technological-tooling-TPmajor.pdf			