



## Computer Aided Design of Technological Tooling (Term Project)

Major «*Technology of Aircraft Manufacturing Department*»

<b>Level of Higher Education</b>	<i>first (Bachelor)</i>
<b>Course Status</b>	<i>student's choice</i>
<b>Scope of discipline</b>	60 hours / 2 ECTS credits
<b>Language</b>	<i>Ukrainian / English</i>
<b>What will be studied (subject of study)</b>	<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"> <li>- preliminary design of the jig for machining;</li> <li>- development of a technological route for manufacturing a part by machining;</li> <li>- development of technological operations of mechanical processing;</li> <li>- design of a special machining jig.</li> </ul> <p>or</p> <p>Development of a technological process for sheet stamping and die design, including:</p> <ul style="list-style-type: none"> <li>- outline design of a stamp;</li> <li>- designing a stamp in an automated system;</li> <li>- choice of equipment;</li> <li>- registration of documentation on the designed stamp and the technological process of stamping the part.</li> </ul>
<b>Why is it interesting/should be studied (goal)</b>	<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>
<b>How can you use the acquired knowledge and skills (competencies)</b>	<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>
<b>Prerequisites</b>	
<b>Corequisite</b>	
<b>Organization of training</b>	<p>Types of classes: practical, self-study</p> <p>Forms of education: full-time / part-time</p> <p>Forms of control: differential test</p>
<b>Department</b>	Technology of Aircraft Manufacturing
<b>Faculty</b>	Aircraft Engineering

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<b>Links to course materials</b>	<ol style="list-style-type: none"> <li><a href="https://mentor.khai.edu/course/">https://mentor.khai.edu/course/</a></li> <li>Borysevych V.V., Danchenko V.G., Zastela A.N., Mesheryakov A.N., Morgolenko A.S., Kharkiv, KhAI, 2009, 65p.</li> </ol>			
<b>Link to work program (syllabus)</b>	<a href="https://khai.edu/files/uploads/vibirkovi/bakalavri/major/silabus_b_134_computer-aided-design-of-technological-tooling-tpmajor-s.pdf">https://khai.edu/files/uploads/vibirkovi/bakalavri/major/silabus_b_134_computer-aided-design-of-technological-tooling-tpmajor-s.pdf</a>			