






Technologies of Aircraft Manufacturing (Stamping)

Major «*Technology of Aircraft Manufacturing Department*»

Level of Higher Education	<i>first (Bachelor)</i>
Course Status	<i>student's choice</i>
Scope of discipline	135 hours / 4,5 ECTS credits
Language	<i>Ukrainian / English</i>
What will be studied (subject of study)	<p>As a result of studying the discipline, students will be able to study:</p> <ul style="list-style-type: none"> - basic concepts and definitions of technology for the production of aerospace equipment. General characteristics of an aircraft and a helicopter as an object for the manufacture of aerospace equipment in blanking and stamping production. - general characteristics of the stamping process. - the main methods and means of ensuring interchangeability in the production of frame parts and skins for aerospace engineering. - methods and ways of distribution of semi-finished products into blanks and parts. - obtaining flat parts from a sheet in tool dies. - progressive ways of distribution of materials. - production of parts of planes and helicopters flexible from a leaf. - production of parts for aircraft and helicopters from profiles and pipes. - obtaining parts of aircraft and helicopters by drawing from a sheet in stamps. - progressive methods of extraction. - production of skins for aircraft and helicopters with tight fitting. - special methods of manufacturing parts for aircraft and helicopters. - the main issues of technological preparation of production, existing problems and directions for the development of stamping.
Why is it interesting/should be studied (goal)	<p>The goal is to provide knowledge about the essence of technological processes for manufacturing aircraft and helicopter parts from sheets, profiles, pipes by metal forming methods; formation of skills for calculating the main parameters of the manufacturing processes of parts; training in methods of rational design of technologies and equipment.</p> <p>The task is to study the technological processes of modern methods for manufacturing parts from sheet materials, profiles and pipes by separating and mold-changing operations, as well as special methods for forming parts, directions for intensifying existing technological processes; study of modern methods and means of technological equipment for the manufacture of aircraft parts by blanking and stamping operations</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>Ability to work in a team.</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: lectures, laboratory, practical, self-study</p> <p>Forms of education: full-time / part-time</p> <p>Forms of control: exam</p>

Department	Technology of Aircraft Manufacturing		
Faculty	Aircraft Engineering		
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Links to course materials	<ol style="list-style-type: none"> Suchy, I. Handbook of Die Design, Second Edition. The McGraw-Hill Company (2005). – 711 p. Boljanovic, V. Sheet metal forming processes and die design. Industrial Press Inc., New York (2004). – 219 p. Blanking processes in aircraft manufacturing. Part 2. Tutorial for laboratory work. Hoffman, E. Jig and Fixture Design, Fifth Edition. Delmar, Cengage Learning, NY 12065 USA (2004). – 369 p. Borysevych V.V., Danchenko V.G., Zastela A.N., Mesheryakov A.N., Morgolenko A.S., Kharkiv, KhAI, 2009, 65p. https://mentor.khai.edu/course/view.php?id=891 		
Link to work program (syllabus)			