




## **Technologies of Aircraft Manufacturing (assembly unit)**

**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>	135 hours / 4,5 ECTS credits
<b>Language</b>	<i>Ukrainian / English</i>
<b>What will be studied (subject of study)</b>	<p>As a result of studying the discipline, students will be able to study:</p> <ul style="list-style-type: none"> <li>- Technological processes of assembly, installation, testing, which are the most important components of the technological system for the characteristics of these processes.</li> <li>- Organizational and technological structure of the airline, its production and assembly process; the influence of the volumes and programs for the production of aircraft products on the types and forms of the technological production system.</li> <li>- Technological methods for ensuring the quality of assembly and assembly production.</li> <li>- Economic efficiency of assembly technical processes and methods of its increase.</li> <li>- The essence and content of work in the technological preparation of mass assembly production.</li> <li>- Manufacturability of the design of aircraft and helicopters.</li> <li>- Schemes for dividing aircraft and helicopters into constituent units.</li> <li>- Schemes for assembling aircraft (helicopters) and their constituent units.</li> <li>- Methods of compilation and assembly bases in aircraft construction.</li> <li>- General principles for ensuring the specified accuracy of manufacturing, assembly of products and the accuracy of linking dimensions to each other.</li> <li>- The loft-template and loft-instrumental methods provide interchangeability and coordination of the shapes and sizes of aircraft products.</li> <li>- The standard-template method provides interchangeability and coordination of shapes and sizes in aircraft construction.</li> <li>- The program-instrumental method for ensuring interchangeability and linking the shapes and sizes of structural elements and connections.</li> <li>- Methodology for designing schemes for linking equipment.</li> <li>- The general methodology for designing technological processes for assembly and installation and test work.</li> <li>- Characteristics of node and panel assembly technologies in aircraft and helicopter construction.</li> <li>- General classification and characteristics of compounds.</li> </ul>
<b>Why is it interesting/should be studied (goal)</b>	<p>The purpose of the study: to provide knowledge about the systematic approaches to the integrated technology for assembling aircraft and helicopters; formation of skills in calculating the main parameters of the process of assembling standard structures of individual units, compartments, sections and assemblies; assimilation of design methods for typical operations for the preparation of relevant technological documentation.</p> <p>Tasks: to be able to draw up technical documentation for the assembly of products; thoroughly know the technologies used in the design of aviation equipment; be able to use the composition of standards, reference books and methodological literature governing the design of technological processes, tools and equipment selection.</p>

<b>How can you use the acquired knowledge and skills (competencies)</b>	Ability to communicate in the state language both orally and in writing. Skills in the use of information and communication technologies. Ability to work in a team. 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		
<b>Prerequisites</b>			
<b>Corequisite</b>			
<b>Organization of training</b>	Types of classes: lectures, laboratories, self-study Forms of education: full-time / part-time Forms of control: exam		
<b>Department</b>	Technology of Aircraft Manufacturing		
<b>Faculty</b>	Aircraft Engineering		
<b>Teachers</b>		Name	<b>Iurii Vorobiov</b>
Position		Professor	
Academic title		Docent	
Scientific degree		Dr.Tech.Sc.	
e-mail		<a href="mailto:i.vorobiov@khai.edu">i.vorobiov@khai.edu</a>	
	Name	<b>Svitlana Myronova</b>	
	Position	Senior Lecturer	
	Academic title		
	Scientific degree		
	e-mail	<a href="mailto:s.mironova@khai.edu">s.mironova@khai.edu</a>	
<b>Links to course materials</b>	<a href="https://mentor.khai.edu/course/view.php?id=890">https://mentor.khai.edu/course/view.php?id=890</a>		
<b>Link to work program (syllabus)</b>			