

Technologies of Aircraft Manufacturing (Stamping)

Major «Technology of Aircraft Manufacturing Department»

Level of Higher Education	first (Bachelor)		
Course Status	student's choice		
Scope of discipline	135 hours / 4,5 ECTS credits		
Language	Ukrainian / English		
What will be studied (subject of study)	As a result of studying the discipline, students will be able to study: - 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)	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. 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		
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. 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		
Prerequisites			
Corequisite			
Organization of training	Types of classes: lectures, laboratory, practical, self-study Forms of education: full-time / part-time Forms of control: exam		

Department	Technology of Aircraft Manufacturing				
Faculty	Aircraft Engineering				
Teachers		Name	Kateryna Maiorova		
		Position	Head of the Department		
		Academic title	Docent		
		Scientific degree	PhD		
		e-mail	k.majorova@khai.edu		
		Name	Olga Shypul		
		Position	Associate Professor		
		Academic title	Docent		
		Scientific degree	PhD		
		e-mail	o.shipul@khai.edu		
		Name	Serhii Zaklinskyi		
		Position	Senior Lecturer		
		Academic title			
		Scientific degree			
		e-mail	s.zaklinskiy@khai.edu		
Links to course materials	1. Suchy, I. Handbook of Die Design, Second Edition. The McGraw-Hill Company (2005). – 711 p.				
	York (2004). – 219 p. 3. Blanking processes in ai 4. Hoffman, E. Jig and Fi: USA (2004). – 369 p. 5. Borysevych V.V., Danc Kharkiv, KhAI, 2009, 65p.	York (2004). – 219 p. 3. Blanking processes in aircraft manufacturing. Part 2. Tutorial for laboratory work. 4. Hoffman, E. Jig and Fixture Design, Fifth Edition. Delmar, Cengage Learning, NY 12065 USA (2004). – 369 p. 5. Borysevych V.V., Danchenko V.G., Zastela A.N., Mesheryakov A.N., Morgolenko A.S., Kharkiv, KhAI, 2009, 65p.			
Link to work program (syllabus)					