




## Engines of Airplanes and Helicopters

<b>Level of Higher Education</b>	<i>first (Bachelor)</i>		
<b>Course Status</b>	<i>student's choice, 6 semester</i>		
<b>Scope of discipline</b>	150 hours / 5 ECTS credits		
<b>Language</b>	<i>English</i>		
<b>What will be studied (subject of study)</b>	Working process and main parameters, performances, general arrangement, major components design (intake duct, compressor, combustion chamber, turbine, exhaust system, afterburner) and support systems (automatic control, fuel, lubrication, air, starting, ice protection, fire extinguishing) of aircraft engines and power plants.		
<b>Why is it interesting/should be studied (goal)</b>	Each aviation specialist must know the flight principles of airplanes and helicopters. It is impossible without knowing the engines operation principles and structure. All around us in the world is energy transformation. It is opportunity to know one of the greatest mystery in the world – fuel to motion transformation and significantly enhance professional background.		
<b>How can you use the acquired knowledge and skills (competencies)</b>	It is powerful background for working in field of aircraft, engines, and aircraft systems development and maintenance.		
<b>Organization of training</b>	Types of classes: lectures, laboratory and practical works, self-studying Forms of education: full-time / part-time Forms of control: exam		
<b>Department</b>	Aircraft engines design (203)		
<b>Faculty</b>	Aircraft Engines		
<b>Teacher</b>		Name	<b>Sukhovey Sergey</b>
		Position	Associate Professor
		Academic title	Associate Professor
		Scientific degree	PhD
		e-mail	<a href="mailto:s.sukhovi@khai.edu">s.sukhovi@khai.edu</a>
<b>Links to course materials</b>	<ol style="list-style-type: none"> <li>1. Yepifanov, S. Design of aircraft engines: Handbook [Text] / S. Yepifanov, V. Chygryn. – Kharkov: National Aerospace University “Kharkov Aviation Institute”, 2021. – 362 p.</li> <li>2. Yepifanov, S. Major units of aircraft gas turbine engines: Tutorial [Text] / S. Yepifanov, Y.Shoshin, Y. Gusev. – Kharkov.: National Aerospace University “Kharkov Aviation Institute”, 2013. – 101 p.</li> <li>3. Yepifanov, S. Afterburners and exhaust systems of turbine engines: Tutorial [Text] / S. Yepifanov, Y.Shoshin, V. Chygryn. Kharkov.: National Aerospace University “Kharkov Aviation Institute”, 2014. – 32 p.</li> <li>4. The Jet engine [Text] // The Technical Publications Department of RR plc .– Derby, England . – 1996. – 278 p.</li> <li>5. Treager, I.E. Aircraft gas turbine engine technology [Text] / I.E. Treager. – 3-rd ed. – Glencoe/McGraw-Hill. 2001. – 677 p.</li> </ol>		
<b>Link to work program (syllabus)</b>			