



RTU Course "Introduction to the Aviation Branch"

15E01 Aeronautikas tehnoloģiju katedra

General data

Code	TAE107
Course title	Introduction to the Aviation Branch
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Undergraduate Studies
Course type	Professional
Field of study	Transport
Responsible instructor	Kleinhofs Mārtiņš
Academic staff	Blumbergs Ilmārs
Volume of the course: parts and credits points	1 part, 2.0 Credit Points, 3.0 ECTS credits
Language of instruction	LV, EN, RU
Possibility of distance learning	Not planned
Abstract	Study course is composed as an introduction to studies in aviation transport for the professional undergraduate program at the Aviation Institute. Students are introduced with the study program, possible employment and further education for graduates. Students receive recommendations in the study techniques and the first individual assignments regarding the chosen specialty. The structure of the Latvian transport system. A joint transport system as a branch of the national economy. Introduction to principles of flight, basics of aerodynamics and flight dynamics. Airplane and helicopter design, maintenance and management. Safety of aviation transport. History and problems of civil aviation.
Goals and objectives of the course in terms of competences and skills	The goal of the study course is to help students to foresee their potential place in the labour market, as well as to understand the aviation transport industry development. The tasks for the study course are to obtain a detailed notion of the study program, employment and business opportunities for graduates and by fulfilment of assignment to improve the understanding of aircraft aerodynamics, flight dynamics, design and maintenance.
Structure and tasks of independent studies	Individual research assignment for the work with literature in the library and in electronic environment. Consultants for the assignment are lecturers from the RTU Aviation Transport Department.
Recommended literature	1. V. Pavelko Gaisakuģu aerodinamika. RTU izdevniecība, Rīga, 2009.-258 lpp. 2. JAR CPL Course: 08000- Principles of Flight, 08100- Subsonic Aerodynamics). 1998.- 250 pp 3. Airoplane Structure and Strength Analysis. Part 1. RTU, Riga 2009.g. pp.121 4. Airoplane Structure and Strength Analysis. Part 2. RTU, Riga 2002.g. pp.102 5. A&P Technician Airframe Textbook. Colorado: Jeppesen Sanderson, Inc. 2002. pp. 650. 6. Civilās aviācijas normatīvie dokumenti. http://www.caa.lv
Course prerequisites	Knowledge of mathematics, physics and English language at the secondary school level.

Course outline

Theme	Hours
Study program RMCA0. Possible further education and employment for graduates.	2
Study techniques. Individual assignments.	2
Principles of flight, basic aerodynamics and flight dynamics.	6
Joint transport system as a branch of national economy.	2
Aircraft, powerplant and systems design.	6
Principles of maintenance and aviation transport safety.	4
Aviation history and aircraft development.	2
Practical work.	8

Learning outcomes and assessment

Learning outcomes	Assessment methods
The student is able to link the chosen direction of study with the specific professions and business types.	Class discussions.
The student is able to recognize, identify and explain steps in the study process of the selected study program.	Class discussions.
The student is able to work on assignment at the level corresponding to the engineering study program knowledge.	Assignment submission, discussions with lecturers on individual assignment.
The student knows the principles of flight, basic aerodynamics and flight dynamics.	Exams.
A student is able to describe aircraft, powerplant and systems design.	Exam.
A student understands the principles of maintenance.	Exam.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	2.0	3.0	1.0	1.0	0.0		*	