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Study programme "Aviation Transport"

Main attributes

Title	Aviation Transport
Identification code	MCA0
Education classification code	42525
Level and type	Professional Bachelor Study
Higher education study field	Mechanics and Metal Processing, Heat Power Engineering, Heat Technology, and Mechanical Engineering
Head of the study field	Aldis Balodis
Department responsible	Faculty of Mechanical Engineering, Transport and Aeronautics
Head of the study programme	Andris Rijkuris
Professional classification code	2144-44; 2152-08
The type of study programme	Full time
Language	Latvian, English
Accreditation	16.11.2022 - 17.11.2028; Accreditation certificate No 2022/30-A
Volume (credit points)	160.0
Duration of studies (years)	Full time studies - 4,0
Degree or/and qualification to be obtained	Professional bachelor degree in aviation transport / aircraft maintenance engineer
Qualification level to be obtained	The 6th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF); the 6th level of professional qualification
Programme prerequisites	Secondary education

Description

Abstract	The study programme provides knowledge that complies with the requirements of the state standards of the higher professional education and international documents regulating the air transport related professions. The programme provides the level of knowledge required for performing professional responsibilities defined by the International Civil Aviation Organization (ICAO) in compliance with the European Commission Regulation (EC) No 2042/2003. The scope and contents of the study programme comply with the requirements defined by the European Aviation Safety Agency (EASA), Civil Aviation Agency (CAA) of the Republic of Latvia, Ministry of Education and Science of the Republic of Latvia and with the professional standard: Aircraft Maintenance Engineer (PS - 127) with specializations Aircraft Maintenance Mechanical Engineer (2144 - 44) or Aircraft Maintenance Avionics Engineer (2152 - 08).
Aim	The aim of the study programme is to have a wide profile and high quality Internationally recognized professionals with an integrated second-level professional in the field of education in the aviation transport sector and capable of performing maintenance on aircraft mechanical equipment, in the provision of technical maintenance and repair of mechanical equipment, aggregates and assemblies, as in the provision of technical maintenance and repair of aircraft electronic, radio-electronic, electrical and electromechanical equipment, aggregates and assemblies. The necessary knowledge, skills and competences acquired during the studies enable the aviation transport maintenance engineer to successfully integrate into the international labour market, participate in the execution of scientific research, methodical renovation and maintenance of the infrastructure of the aviation transport sector and the opportunity to continue studies in the master's degree..
Tasks	The tasks of the study programme: - to ensure the continuous improvement of the quality of the aviation sector by training highly qualified educational specialists for the private and public sectors in the field of aviation transport; - to develop students' ability to plan the tasks of an engineer related to the maintenance of aircraft mechanical equipment or the use, supervision, maintenance of electronic, electrical and electromechanical equipment; - to develop the ability to analyse economic aspects, plan the work to be carried out, prepare mechanical or electronic equipment for operation in accordance with the applicable regulatory instructions; - to develop students' ability to perform professional, innovative and research activities in the field of aviation transport, which would be the basis for reviewing the regulatory documentation of mechanical or avionics equipment and introducing new requirements; - to develop students' abilities to independently acquire, select and analyze information of the aviation transport system and use it, make decisions and solve problems in the field of maintenance and operation of mechanical or electronic equipment of aviation transport; - to promote cooperation between students and academic staff in the development of scientific works and practical implementation of the obtained results in aviation companies, as well as to publish the obtained results; - to stimulate the interest of students and graduates in studies in higher level study programs, lifelong learning, as well as to improve knowledge about innovations in the field and in the field of professional activity.

Learning outcomes	<p>Graduate of the study programme:</p> <ul style="list-style-type: none"> - is able to demonstrate mechanics or avionics specific to the aviation industry basic and specialized knowledge and understanding of the most important concepts and regularities of the industry; - is able to explain analytically the information on the system of assemblies and assemblies of mechanical or electronic equipment for aviation, using theoretical knowledge and acquired skills, to make decisions and solve problems in the field of air transport and aircraft technical operation and maintenance; - is able to independently obtain, select, formulate and analytically describe information on mechanical or electronic equipment and make decisions in solving problems in aviation in the transport system sector; - is able to explain and argue the technical aspects of aviation and aircraft maintenance issues of operational mechanical or electronic equipment with both specialists and non-specialists; - is able to structure learning independently, to direct one's own and subordinates' further learning, and professional development in aviation transport and related interdisciplinary fields demonstrate a scientific approach to problem solving, take responsibility and take the initiative to work individually, in a team or to lead other people decisions and solutions to change or uncertain circumstances; - able to show that they understand professional ethics, evaluate the impact of their professional activities on the environment and society and participate in the development of the field of aviation transport system.
Final/state examination procedure, assessment	<p>The professional bachelor's degree in aviation transport and the professional qualification of an aircraft maintenance engineer (specializations - aircraft maintenance mechanical engineer or aircraft maintenance avionics engineer) are awarded after passing the state exams and developing and successfully defending the bachelor's thesis with parts of the project.</p>
Description of the future employment	<p>An aircraft maintenance engineer works in organizations and companies that use aircraft, perform technical operation, maintenance and repair.</p> <p>The maintenance engineer performs tasks related to the use, monitoring and maintenance of aircraft mechanical equipment, performs tasks related to the use, monitoring and maintenance of electronic, electrical and electromechanical equipment of aircraft, prepares electronic and electrical devices for work, and also performs research work in the field of aircraft maintenance and operation.</p>
Special enrollment requirements	<p>English language proficiency equivalent to at least CEFR B2 level.</p>
Opportunity to continue studies	<p>The obtained professional bachelor degree in air transport provides the opportunity to study at the professional or academic master study programmes.</p>

Courses

No	Code	Name	Credit points
A		Compulsory Study Courses	78.0
A.1		General Education Study Courses	13.0
1	SDD700	Innovative Product Development and Entrepreneurship	6.0
2	ICA301	Civil Defence	1.0
3	IDA700	Basics of Labour Protection	1.0
4	VAS038	Environment and Climate Roadmap	1.0
5	TAE107	Introduction to the Aviation Branch	2.0
6	TAE304	Aviation Legislation	2.0
A.2		Field-Specific Theoretical Basic and IT Study Courses	36.0
1	DMS101	Mathematics	9.0
2	LTK700	Supplementary Mathematics (Aviation Transport)	4.0
3	MFB101	Physics	6.0
4	TAS100	Fundamentals of Aerodynamics	2.0
5	TAA206	Fundamentals of Electronic Engineering	2.0
6	TAA104	Fundamentals of Electrical Engineering	4.0
7	TAS215	Technical Mechanics	4.0
8	TSL703	Modern Application Packages for Computers	3.0
9	TAS705	Computer Design of Machines and Mechanisms	2.0
A.3		Field-Specific Professional Study Courses	29.0
1	TAS207	Materials and Hardware	4.0
2	TAA437	Measurements in Avionics Devices and Systems	3.0
3	AVI700	Digital Techniques Electronic Instrument Systems	3.0
4	TAS308	Fundamentals of Aircraft Manufacturing Technology	3.0
5	TAA212	Electrical Power Supply Systems of Aircraft	2.0
6	TAA211	Aircraft Electrical Systems	3.0
7	TAE515	Engineering diagnostics of an aircraft	3.0
8	TAL425	Aerodynamics of Aircrafts	2.0
9	TAE431	Technical Operation of Aircraft and Engines	3.0
10	TAK222	Aircraft Aerodynamics, Structures and Systems	3.0
B		Compulsory Elective Study Courses	41.0
B1		Field-Specific Study Courses	33.0
		<i>Technical operation of aircraft</i>	<i>33.0</i>
1	TAS209	Mechanics of Airframes (Study Project)	2.0
2	TAK433	Aircraft and Engine Structure and Strength (Study Project)	2.0
3	TAE443	Aircraft and Powerplant Maintenance (Study Project)	2.0
4	TAA413	Devices and Systems of Control of Aircraft Powerplant	2.0
5	TAE307	Theory of Aircraft Engines	3.0
6	TAE306	Structure and Strength of Aviation Gas Turbine Engines	4.0
7	TAA515	Aircraft Aviation and Radioelectronic Equipment	3.0
8	TAK402	Aircraft Strength	4.0
9	TAE211	Fluid and Gas Systems of Aircraft	2.0
10	TAE209	Propeller	2.0
11	TAD325	Heat Technics and Thermodynamics	2.0
12	TAS219	Aerohydromechanics	3.0
13	TAE203	Organization and Ensuring of Aircraft Operation	2.0
		<i>Technical operation of aircraft electronic equipment - avionics</i>	<i>33.0</i>
1	TAA215	Digital Techniques Electronic Instrument Systems (Study Project)	2.0
2	TAA258	Aircraft Electrical and Power Supply Systems (Study Project)	2.0
3	TAA260	The Technical Maintenance of the Aircraft Electrical Devices (Study Project)	2.0
4	AVI705	Antennae and Propagation of Radio Waves	2.0
5	TAA701	Basics of Aviation Devices and Systems	2.0
6	TAA408	Aviation Communication Systems and Nets	2.0
7	TAD213	Propulsion	2.0
8	TAA207	Special Chapters of Electronic Engineering	2.0
9	TAA231	Aircraft Automatic Control Systems	3.0
10	TAA501	Aircraft Radio Location Systems	3.0
11	TAA414	Aircraft Radio Navigation Systems	3.0
12	TAA416	Radio Transmitters and Radio Receivers	4.0

13	TAA107	Fundamentals of Communication Systems	2.0
14	TAA531	Global Satellite Navigation Systems	2.0
B2		Humanities and Social Sciences Study Courses	8.0
1	TSL700	Aviation Technical English	4.0
2	TAE315	Human Factor	2.0
3	TAE221	Economics of Aviation Transport	2.0
4	HVD101	The English Language	2.0
5	HFL336	Basic Ethics	2.0
6	HPS120	Basics of Communication	2.0
7	HSP430	Social Psychology	2.0
C		Free Elective Study Courses	6.0
D		Practical Placement	23.0
1	AER009	Practical Placement (in mechanics)	23.0
2	AVI009	Practical Placement (in avionics)	23.0
E		Final Examination	12.0
1	TAE012	Bachelor Thesis Including Project	12.0
2	TAA012	Bachelor Thesis Including Project	12.0