



## RĪGAS TEHNISKĀ UNIVERSITĀTE

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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 (First Cycle) Studies
Higher education study field	Mechanics and Metal Processing, Heat Power Engineering, Heat Technology, and Mechanical Engineering
Head of the study field	Marina Čerpinska
Department responsible	Faculty Of Civil And Mechanical Engineering
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: <ul style="list-style-type: none"><li>- 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;</li><li>- 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;</li><li>- 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;</li><li>- 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;</li><li>- 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;</li><li>- 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;</li><li>- 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.</li></ul>

Learning outcomes	<p>Graduate of the study programme:</p> <ul style="list-style-type: none"> <li>- 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;</li> <li>- 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;</li> <li>- 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;</li> <li>- 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;</li> <li>- 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;</li> <li>- 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.</li> </ul>
Final/state examination procedure, assessment	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.
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	English language proficiency equivalent to at least CEFR B2 level.
Opportunity to continue studies	The obtained professional bachelor degree in air transport provides the opportunity to study at the professional or academic master study programmes.

**Courses**

No	Code	Name	Credit points
<b>A</b>		<b>Compulsory Study Courses</b>	<b>78.0</b>
<b>A1</b>		<b>General Education Study Courses</b>	<b>13.0</b>
1	<a href="#">SDD700</a>	Innovative Product Development and Entrepreneurship	6.0
2	<a href="#">ICA301</a>	Civil Defence	1.0
3	<a href="#">IDA700</a>	Basics of Labour Protection	1.0
4	<a href="#">VAS038</a>	Environment and Climate Roadmap	1.0
5	<a href="#">TAE107</a>	Introduction to the Aviation Branch	2.0
6	<a href="#">TAE304</a>	Aviation Legislation	2.0
<b>A.2</b>		<b>Field-Specific Theoretical Basic and IT Study Courses</b>	<b>36.0</b>
1	<a href="#">DMS101</a>	Mathematics	9.0
2	<a href="#">LTK700</a>	Supplementary Mathematics (Aviation Transport)	4.0
3	<a href="#">MFB101</a>	Physics	6.0
4	<a href="#">TAS100</a>	Fundamentals of Aerodynamics	2.0
5	<a href="#">TAA206</a>	Fundamentals of Electronic Engineering	2.0
6	<a href="#">TAA104</a>	Fundamentals of Electrical Engineering	4.0
7	<a href="#">TAS215</a>	Technical Mechanics	4.0
8	<a href="#">TSL703</a>	Modern Application Packages for Computers	3.0
9	<a href="#">TAS705</a>	Computer Design of Machines and Mechanisms	2.0
<b>A.3</b>		<b>Field-Specific Professional Study Courses</b>	<b>29.0</b>
1	<a href="#">TAS207</a>	Materials and Hardware	4.0
2	<a href="#">TAA437</a>	Measurements in Avionics Devices and Systems	3.0
3	<a href="#">AVI700</a>	Digital Techniques Electronic Instrument Systems	3.0
4	<a href="#">TAS308</a>	Fundamentals of Aircraft Manufacturing Technology	3.0
5	<a href="#">TAA212</a>	Electrical Power Supply Systems of Aircraft	2.0
6	<a href="#">TAA211</a>	Aircraft Electrical Systems	3.0
7	<a href="#">TAE515</a>	Engineering diagnostics of an aircraft	3.0
8	<a href="#">TAL425</a>	Aerodynamics of Aircrafts	2.0
9	<a href="#">TAE431</a>	Technical Operation of Aircraft and Engines	3.0
10	<a href="#">TAK222</a>	Aircraft Aerodynamics, Structures and Systems	3.0
<b>B</b>		<b>Compulsory Elective Study Courses</b>	<b>41.0</b>
<b>B1</b>		<b>Field-Specific Study Courses</b>	<b>33.0</b>
		<i>Technical operation of aircraft</i>	<i>33.0</i>
1	<a href="#">TAS209</a>	Mechanics of Airframes (Study Project)	2.0
2	<a href="#">TAK433</a>	Aircraft and Engine Structure and Strength (Study Project)	2.0
3	<a href="#">TAE443</a>	Aircraft and Powerplant Maintenance (Study Project)	2.0
4	<a href="#">TAA413</a>	Devices and Systems of Control of Aircraft Powerplant	2.0
5	<a href="#">TAE307</a>	Theory of Aircraft Engines	3.0
6	<a href="#">TAE306</a>	Structure and Strength of Aviation Gas Turbine Engines	4.0
7	<a href="#">TAA515</a>	Aircraft Aviation and Radioelectronic Equipment	3.0
8	<a href="#">TAK402</a>	Aircraft Strength	4.0
9	<a href="#">TAE211</a>	Fluid and Gas Systems of Aircraft	2.0
10	<a href="#">TAE209</a>	Propeller	2.0
11	<a href="#">TAD325</a>	Heat Technics and Thermodynamics	2.0
12	<a href="#">TAS219</a>	Aerohydromechanics	3.0
13	<a href="#">TAE203</a>	Organization and Ensuring of Aircraft Operation	2.0
		<i>Technical operation of aircraft electronic equipment - avionics</i>	<i>33.0</i>
1	<a href="#">TAA215</a>	Digital Techniques Electronic Instrument Systems (Study Project)	2.0
2	<a href="#">TAA258</a>	Aircraft Electrical and Power Supply Systems (Study Project)	2.0
3	<a href="#">TAA260</a>	The Technical Maintenance of the Aircraft Electrical Devices (Study Project)	2.0
4	<a href="#">AVI705</a>	Antennae and Propagation of Radio Waves	2.0
5	<a href="#">TAA701</a>	Basics of Aviation Devices and Systems	2.0
6	<a href="#">TAA408</a>	Aviation Communication Systems and Nets	2.0
7	<a href="#">TAD213</a>	Propulsion	2.0
8	<a href="#">TAA207</a>	Special Chapters of Electronic Engineering	2.0
9	<a href="#">TAA231</a>	Aircraft Automatic Control Systems	3.0
10	<a href="#">TAA501</a>	Aircraft Radio Location Systems	3.0
11	<a href="#">TAA414</a>	Aircraft Radio Navigation Systems	3.0
12	<a href="#">TAA416</a>	Radio Transmitters and Radio Receivers	4.0

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