



RĪGAS TEHNISKĀ UNIVERSITĀTE

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Study programme "Aviation Transport"

Main attributes

Title	Aviation Transport
Identification code	MMA0
Education classification code	45525
Level and type	Academic Master (Second 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	
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)	120.0
Duration of studies (years)	Full time studies - 2,0
Degree or/and qualification to be obtained	Master degree of engineering science in mechanical engineering
Qualification level to be obtained	The 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF)
Programme prerequisites	Bachelor degree of engineering science in mechanical engineering or comparable education

Description

Abstract	The study programme provides a level of knowledge that corresponds to the fulfilment of the obligations set by the International Aviation Organization (ICAO), the scope and content of the study programme comply with the state standard of academic education of the Ministry of Education and Science of the Republic of Latvia and provides appropriate in-depth theoretical knowledge in the field of aviation transport, develops students' research skills, prepares aviation leading specialists in transport technical maintenance, process analysts related to technical maintenance and industry specialists for solving various problems.
Aim	The aim of the study programme is to prepare demanded and high-quality specialists in the aviation industry with in-depth knowledge of the field, who have systemic and analytical thinking and independent work skills, as well as to prepare students for further doctoral studies.
Tasks	The tasks of the study programme: <ul style="list-style-type: none">- to develop competencies in the operation, construction, and maintenance of aircraft equipment;- to ensure continuous improvement of the quality of aviation transport education by training highly educated specialists for the private and public sectors in the field of aviation;- to stimulate the interest of students and graduates in studies in higher level study programmes;- to develop the ability to independently organize one's own and team work.
Learning outcomes	<p>Knowledge (knowledge and understanding):</p> <ul style="list-style-type: none">- can demonstrate in-depth, extended knowledge and understanding in the field of air transport. Students acquire information on the latest discoveries in aviation science. The knowledge acquired through the study programme provides the basis for creative thinking and involvement in scientific research activity. <p>Skills (ability to use knowledge, communication, general skills):</p> <ul style="list-style-type: none">- can independently use theoretical methods and problem-solving skills to carry out scientific research in the field of air transport and perform highly skilled professional functions;- can reasonably explain and discuss complex or systematic, scientific or professional aspects of aircraft maintenance both with professionals and non-professionals;- can independently direct the development and specialization of their competencies and assume responsibility for the results and analysis of personnel's team;- can conduct the business activity, introduce innovations in the field of air transport systems, conduct a study or learn in difficult and unpredictable conditions and, if necessary, change these conditions by applying new approaches. <p>Competence (analysis, synthesis and evaluation):</p> <ul style="list-style-type: none">- can independently formulate and critically analyse complex scientific and professional problems related to the branch of air transport;- can independently substantiate decisions and, if necessary, carry out additional analysis;- can integrate knowledge from different fields and make contribution to the creation of new knowledge;- can promote the development of scientific research methods in the field of air transport systems, demonstrate understanding of and responsibility for the possible effect of scientific results or professional activity on the environment and society.
Final/state examination procedure, assessment	The master of engineering degree in mechanical engineering is awarded by the MTAF Council after the master's thesis has been developed and successfully defended before the Final Examination Commission.

Description of the future employment	A highly qualified specialist who has obtained the education of the academic master's study programme "Aviation transport" with in-depth knowledge of the aviation industry will be able to work in a wide range of the labour market: both as a leading specialist of aircraft operation and maintenance companies, and as a designer in aerospace companies, aircraft and aviation systems production companies, scientific in research centres, transport logistics companies.
Special enrollment requirements	English language proficiency equivalent to at least CEFR B2 level.
Opportunity to continue studies	The obtained academic master's degree in mechanical engineering gives the opportunity to continue studies in doctoral study programmes "Transport, Mechanical Engineering and Mechanics" or similar study programmes.

Courses

No	Code	Name	Credit points
A		Compulsory Study Courses	36.0
A1		General Education Study Courses	36.0
1	BM0756	Standardization, Certification and Licensing in Air Transport	6.0
2	BM0747	Theoretical Fundamentals of Flight Safety	3.0
3	BM0236	Dynamics of Flight	5.0
4	BM0122	Analysis of Aviation Transport Reliability	4.0
5	BM0744	Finite Element Method and its Applications	6.0
6	BM0745	Mechanics and Strength of Composite Materials	6.0
7	BM0751	Preparation, Implementation and Processing of Experiments	6.0
B		Compulsory Elective Study Courses	42.0
B1		Field-Specific Study Courses	36.0
		<i>Technical operation of aircraft</i>	<i>36.0</i>
1	BM0753	Basics of Aerodrome Operation	6.0
2	BM0743	Activities of Aerospace Companies	6.0
3	BM0749	Air Accident Investigation	3.0
4	BM0742	Aircraft Maintenance and its Technical Management	6.0
5	BM0243	Digital Signals Processing in Avionics Equipment	5.0
6	BM0741	Modern Materials and Technologies in Aeronautics	6.0
7	BM0755	Parametric Modelling of Mechanical Objects	3.0
8	BM0750	Transport logistics	3.0
9	BM0757	Digital Signal Processing in Aerospace Applications	6.0
10	BM0748	Computational Fluid Dynamics for Aerospace Applications	3.0
11	BM0752	Modern Technologies of Fiber-Optical Networks in Aviation	3.0
B2		Humanities and Social Sciences Study Courses	6.0
1	DE0643	Pedagogy	3.0
2	DE0516	Communication Psychology	3.0
3	DE0653	Psychology	3.0
4	DE0388	Presentation Skills	3.0
C		Free Elective Study Courses	6.0
D		Practical Placement	6.0
1	BM0746	Practical Placement	6.0
E		Final Examination	30.0
1	BM0754	Master Thesis	30.0