

STUDY PROGRAMME TITLE	AVIONICS SYSTEMS ENGINEERING
National code	6531EX065
Type of study programme	Higher education college studies
Study cycle	First
Study area	Engineering sciences
Study field	Aerospace engineering
Minimum access requirements	Secondary education
Mode of studies (duration in years)	Full-time studies (3 years) Part-time studies (4 years)
Scope in credits	180 credits
DEGREE AND (OR) PROFESSIONAL QUALIFICATION AWARDED	PROFESSIONAL BACHELOR IN AEROSPACE ENGINEERING
GRADUATION DOCUMENTS	PROFESSIONAL BACHELOR DIPLOMA AND DIPLOMA SUPPLEMENT
Study programme aim	To train specialists in the field of aeronautical engineering who are able to solve the tasks of integration, debugging, testing and operation of avionics software, applying various methods and tools, theoretical knowledge and technological progress and who are also striving for continued development associated with the changing professional activities.
Reasons to choose the study programme	<ul style="list-style-type: none"> • Study programme is oriented towards practical activities, its curriculum is based on real requirements necessary for aviation mechanical engineer qualification. • Studies are implemented in a concentrated and intensive manner; practical skills are formed in modern laboratories and, based on consolidation, in the facilities of social partners. • Teachers - specialists in their field; each subject is taught by teachers with specific knowledge in aerospace engineering. • Possibility to acquire international experience is provided by Erasmus + mobility program.

SUBJECTS**SEMESTERS**

I	II	III	IV	V	VI
GENERAL SUBJECTS OF COLLEGE STUDIES					
	Foreign language 1	Foreign language 2 Philosophy/Sociology		Aviation Law Situation Psychology / Project Management	
CORE AND COMPULSORY SUBJECTS					
Mathematics 1, Physics, Information Technologies, Aviation Materials, Avionics Systems, Fundamentals of Electronics and Electrotechnics, Measurements and Fundamental of Metrology	Mathematics 2, Engineering Graphics and Computer Aided Design, Digital Electronics, Fundamentals of Aerodynamics	Aircraft Structural Components, Aircraft Functional Systems, Microprocessors, Electromagnetism and Electromechanics	Signals and their processing, Aircraft gas turbine engines and fuel systems, Navigation and communications	Aircraft computer systems, Business economics and management, Semester work	Environment and Human Safety, Human factor in Aviation Engineering

SPECIALIZATION SUBJECTS

				Images, Image Processing and Rendering / Fundamentals of Autonomous Flight/ Helicopter Avionics Systems	Wireless communications and antennas / Unmanned aircraft
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OPTIONAL SUBJECTS

A STUDENT SELECTS OPTIONAL SUBJECTS FROM THE LIST, WHICH IS APPROVED EVERY ACADEMIC YEAR

Practices	<ul style="list-style-type: none"> • Training Practice performed at KTK; • Aircraft Technology Practice and Final Practice are performed in enterprises.
Learning outcomes	<p>Knowledge and abilities</p> <ul style="list-style-type: none"> • Know the general laws of science and mathematics needed for understanding the fundamentals of aviation electronic and electric engineering; • Know the main concepts of avionics systems engineering and understand their content; • Have the fundamental knowledge in aviation electronic and electric engineering study programme necessary to perform practical maintenance of avionics systems. <p>Engineering analysis</p> <ul style="list-style-type: none"> • Be able to apply knowledge and understanding in order to analyse and solve problems of avionics systems engineering, while applying familiar analysis and modeling methods creatively; • Be able to apply knowledge and understanding in analysing engineering problems and selecting appropriate methods and experimental and industrial equipment for their solution; <p>Design Works</p> <ul style="list-style-type: none"> • Be able to apply engineering knowledge and understanding, formulating and performing the design tasks according to established requirements; • Understand the methodology for designing maintenance processes and be able to apply it; <p>Applied research</p> <ul style="list-style-type: none"> • Be able to find necessary professional information using databases and other scientific and engineering information sources; • Be able to perform experiments necessary for engineering tasks, process the results and present their practical conclusions; <p>Engineering tasks</p> <ul style="list-style-type: none"> • Be able to combine theoretical and applied knowledge in solving problems in avionics systems engineering problem, selecting tools and equipment; • Understand ethical, environment and commercial circumstances of avionics systems engineering activity ; • Understand the principles of avionics systems engineering activity organisation, know the main work safety and fire protection requirements; <p>Personal and social abilities</p> <ul style="list-style-type: none"> • Be able to solve engineering tasks related to avionics systems individually and in team; • Be able to communicate with engineering community in the international context; • Understand the impact of engineering solutions to society and environment, comply with standards of ethics and engineering activities, understand the responsibility for the engineering activities; • Comprehend the importance of individual long-life learning and prepare for it.
International mobility possibilities	Students have a possibility to study according to Erasmus+ student mobility program in higher education institutions of Austria, Check Republic, Denmark, Estonia, Latvia, Poland, Germany, Hungary, Malta, Portugal and Turkey, as well as to perform Erasmus+ practices in foreign companies.
Career possibilities	Graduates who have obtained a professional bachelor's degree in aeronautical engineering will be able to work in Lithuanian and foreign civil aviation companies, military air force and home affairs system, air transport companies as aircraft continuing airworthiness maintenance specialists, as well as in government institutions responsible for flight safety assurance, airports and their units and other companies that require aeronautical / avionics engineers and technicians.
Access to further studies	Graduates can continue studies at universities implementing Aerospace Engineering field study programmes and get a Master's degree.
Final assessment	Graduation thesis