



RTU Course "Aviation Devices and Systems"

15E02 Avionikas katedra

General data

Code	TAA404
Course title	Aviation Devices and Systems
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Professional
Field of study	Transport
Responsible instructor	Trifonovs-Bogdanovs Pjotrs
Academic staff	Smirnovs Igors
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	Aircraft on-board devices and system classification and tasks. Ergastic complex "avionics systems - servicing." Avionics system structure diagrams and typical elements. Flight safety. Avionics systems development perspective.
Goals and objectives of the course in terms of competences and skills	To learn the avionics system structure diagrams and typical elements. To develop skills to analyze complex structures of avionics circuits and their functioning.
Structure and tasks of independent studies	To independently prepare reports on different aircraft avionic system algorithms and structure circuits. Work with professional literature. Classes in Aviation institute's specialized room.
Recommended literature	1. Tooley M., Wyatt D. Aircraft Electrical and electronic Systems. Butterworth-HEINMANN Ltd, 2008g. 424 lpp. 2. Moir I., Seabridge A., Aircraft Systems. Wiley-Blackwell. 2008. 546 lpp.
Course prerequisites	Aviation systems, electrical systems, navigation systems.

Course outline

Theme	Hours
Aircraft on-board equipment and systems classification and tasks.	2
Ergastic complex.	2
Flight safety. Security-enhancing factors.	4
Information representation on aircraft. Classification. Perspective.	6
Aerobatic and navigation complex. Composition and design principles.	4
Navigation solutions for complex tasks on ergastic complex.	4
Aircraft power system types and organization charts.	4
Power supply system control functionality.	4
Power supply system development perspective.	2

Learning outcomes and assessment

Learning outcomes	Assessment methods
A student knows aircraft avionics typical complex structure and functioning of the circuit elements.	Pract. works: Avionics circuit complex structure schemes. Exam.
A student understands modern aircraft information display.	Pract. works: Avionics display device integrated circuits. Exam.
A student is able to analyze power system in different modes.	Individual work, seminars. Exam.
A student is able to analyze complex avionics operation in different modes.	Individual work, seminars. Exam.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	2.0	3.0	1.5	0.0	0.5		*	