



## RTU Course "Methods and Means of Diagnostics of Aircraft Electrical Systems"

15E02 Avionikas katedra

### General data

Code	TAA534
Course title	Methods and Means of Diagnostics of Aircraft Electrical Systems
Course status in the programme	Compulsory/Courses of Limited Choice; Courses of Free 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, 3.0 Credit Points, 4.5 ECTS credits
Language of instruction	LV, EN, RU, DE
Possibility of distance learning	Not planned
Abstract	Avionics system diagnostic methods. A variety of avionics systems control device algorithms and structure diagrams.
Goals and objectives of the course in terms of competences and skills	To acquire aircraft electronic systems diagnostic methods. To develop skills to draw up a variety of electronic systems for the diagnostics of device algorithms and structure schemes.
Structure and tasks of independent studies	To independently prepare reports on the topic - Aircraft electronic systems for a variety of diagnostic algorithms for device structure and circuits. Work with special literature. Classes in Aviation institute 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. 3. Moir I. Jukes M. Seabridge A. Military Avionics Aystems. John Wiley & Sons Ltd. 2006. 542 lpp. 4. В. Ключев и др. Технические средства диагностики. Машиностроение, Москва. 1998. 672 стр.
Course prerequisites	Physics, math, aviation systems.

### Course outline

Theme	Hours
Diagnostic parameters.	6
Testing diagnostics.	6
Functional diagnosis.	8
Diagnostic algorithm. Defect finding depth.	8
Avionic electronic system diagnostics.	8
Avionics computing unit diagnostics.	6
Avionics systems condition change prediction.	6

### Learning outcomes and assessment

Learning outcomes	Assessment methods
The student knows the methods of diagnostic algorithms.	Pract. works: diagnostic method algorithms. Exam.
The student knows the diagnostic devices.	Pract. works: diagnostic methods and means. Exam.
The student is able to develop avionics system diagnostics algorithms.	Individual work, seminars. Exam.
The student is able to develop avionic system diagnostic device diagram.	Individual work, seminars. Exam.

### Study subject structure

Part	CP	ECTS	Hours per Week			Tests			Tests (free choice)		
			Lectures	Practical	Lab.	Test	Exam	Work	Test	Exam	Work
1.	3.0	4.5	2.0	0.5	0.5		*			*	