



RTU Course "Aircraft Electrical and Power Supply Systems (Study Project)"

15E02 Avionikas katedra

General data

Code	TAA258
Course title	Aircraft Electrical and Power Supply Systems (Study Project)
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Undergraduate Studies
Course type	Professional
Field of study	Transport
Responsible instructor	Trifonovs-Bogdanovs Pjotrs
Academic staff	Podgornovs Andrejs 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	The aircraft power system development structure scheme. Aircraft power systems working equipment electrical circuit calculation and construction creation.
Goals and objectives of the course in terms of competences and skills	Develop skills to analyze the aircraft power supply system scheme structure. Acquire the power systems unit circuitry calculation.
Structure and tasks of independent studies	Independently develop and optimize the aircraft power system structure scheme. Independently develop electric power system unit circuitry and design. Working with the special literature. Lessons in the Aviation Institute specialized lecture hall and computing laboratories.
Recommended literature	1. Electrical Power Systems: Design and Analysis . Mohamed E. El-Hawary, IEEE Computer Society Press. 2008. 808 p. 2. Tooley M., Wyatt D. Aircraft Electrical and electronic Systems. Butterworth-HEINMANN Ltd, 2008g. 424 lpp. 3. Moir I., Seabridge A., Aircraft Systems. Wiley-Blackwell. 2008. 546 lpp. 4. Z. Bunžs, S. Miesniece, Bezkontakta komutācijas aparāti. RTU. 2008.g. 308 lpp. 5. Electrical Power Equipment Maintenance and Testing. Paul Gill. CRC Press Inc. 2008. 1000 p.
Course prerequisites	Electrical engineering, aviation electrical machinery and apparatus, power supply systems.

Course outline

Theme	Hours
Aircraft power system structure diagram and optimization.	4
Electric power system unit structure diagram creation.	2
Electric power system unit circuitry creation.	4
Electrical circuitry calculating of blocks.	6
Development of block construction.	2
Developed power system operating basics.	2
Power systems structure scheme drawings.	2
Block electrical circuits and design drawings.	5
Preparation of technical documentation.	5

Learning outcomes and assessment

Learning outcomes	Assessment methods
The student understands the aircraft electrical system operation in different modes.	Consultation. Volume and quality control.
The student is able to develop power systems structure schemes.	Consultation. Volume and quality control.
The student is able to develop electric power system unit structures and circuitry schemes.	Consultation. Volume and quality control.
The student is able to make a block electrical circuit calculation.	Consultation. Volume and quality control.
The student is able to develop a block structure.	Consultation. Volume and quality control.

Study subject structure

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