



RTU Course "Airfield Lighting Systems"

15E02 Avionikas katedra

General data

Code	TAA256
Course title	Airfield Lighting Systems
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	Belavin Oleg
Volume of the course: parts and credits points	1 part, 2.0 Credit Points, 3.0 ECTS credits
Language of instruction	LV, EN, RU, DE
Possibility of distance learning	Not planned
Abstract	Aerodrome lighting sources. Aerodrome landing and take-off, maneuvering light devices. Regulating and control apparatus.
Goals and objectives of the course in terms of competences and skills	Acquire the skills to analyze the lighting system functioning in different modes. Acquire the skills to analyze the lighting unit activity under different conditions.
Structure and tasks of independent studies	Independently prepare reports on the topic - airfield lighting systems, unit construction and operation in various modes. Performance analysis. Calculation methods. Working with the special literature. Lesson in the Aviation Institute specialized lecture hall.
Recommended literature	<ol style="list-style-type: none"> 1. Aircraft Electrical and Electronic Systems: Principles, Maintenance and Operation. Mike Tooley, David Wyatt. Butterworth-Heinemann Ltd. 2008. 424 p. 2. Aircraft Electrical System. J.E. Bygate. Jeppesen. 1996. 127 p. 3. В.Жуков, В.Вольперт, В.Воеводинский. Электрическое и световое оборудование аэропортов. Москва. Транспорт. 1998г. 280 стр. 4. Aircraft Electrical Systems. E. H. Pallett. Addison-Wesley. 1998. 254 p.
Course prerequisites	Physics, math.

Course outline

Theme	Hours
Classification of aerodrome lighting technical devices.	2
Light values. Bodies and the environment optical characteristics.	3
Aerodrome lighting sources, their characteristics and design.	5
Take-off, landing light equipment. Light source placing at an aerodrome. Electric networks.	4
Take-off, landing light devices for regulation and control apparatus.	6
Lighting devices manoeuvring tracks. Placing at an aerodrome, electric networks.	4
Aviation lights. Design, performance.	2
Aerodrome lighting devices and general types of systems.	6

Learning outcomes and assessment

Learning outcomes	Assessment methods
The student knows the aerodrome lighting source design and performance.	Lab. works: Aerodrome lighting sources. Exam.
The student understands the aerodrome lighting scheme and placement.	Lab. works: Aerodrome lighting circuits. Exam.
The student is able to analyse the aerodrome lighting system assemblies for operation in different modes and conditions.	Independent work, seminars. Exam.
The student is able to analyse the aerodrome lighting system operation in different modes.	Independent 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		*	