



## RTU Course "Propeller"

15E01 Aeronautikas tehnoloģiju katedra

### General data

Code	TAE209
Course title	Propeller
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Undergraduate Studies
Course type	Professional
Field of study	Transport
Responsible instructor	Ozoliņš Ilmārs
Academic staff	Kleinhofs Mārtiņš
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	Classification, constituents and applications of propellers. Forces and moments acting on blades of a propeller. Coactions of a propeller and a speed governor. Negative thrust of propellers and its prevention. Design and operation of propellers.
Goals and objectives of the course in terms of competences and skills	Learn the propeller operation, automatic control techniques, operational nature, and safety.
Structure and tasks of independent studies	One system review. Preparing for the exam.
Recommended literature	1. Устройство и эксплуатация силовых установок самолетов ИЛ-96-300, ТУ-204, ИЛ-14. Москва: Транспорт. 1993, 170 стр. 2. Airframe and Powerplant Mechanics. Airframe Handbook. US Department of Transportation. Federal Aviation Administration. New Delhi: Himalayan Books.1994, 630p.
Course prerequisites	Preliminary knowledge about maintenance of engines and aircraft.

### Course outline

Theme	Hours
Propeller operation and the classification.	6
Propeller theory.	8
Propeller design.	6
Propeller, automatic and manual control.	6
Operational issues.	6

### Learning outcomes and assessment

Learning outcomes	Assessment methods
A student is capable to classify the propellers.	Test, exam.
A student knows how to determine load input to the propeller control.	Test, exam.
A student understands the principle of automatic control systems.	Test, exam.

### Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	2.0	3.0	1.0	1.0	0.0		*	