SYLLABUS

I. GENERAL DATA ON SUBJECT COURSE

CODE AND TITLE OF SUBJECT COURSE (in Estonian and English)	Sissejuhtatus mehitamata õhusõidukiga süsteemidesse *(RPAS)* *Introduction to Remotely Piloted Aircraft Systems (RPAS)* TECH.078
ACADEMIC YEAR, TERM, FORM OF STUDIES	2016/2017, autumn, full-time
CURRICULUM, SPECIALITY AND MODULE WHERE THE SUBJECT BELONGS TO	Aircraft Engineering (118817)
VOLUME OF SUBJECT (ECTS)	3 ECTS
FORM OF CONTROL	Non-graded assessment
WORKLOAD AND FORMAT OF STUDIES	Contact hours: 39 hrs, independent work: 39 hrs, practical training: 0 hrs
LANGUAGE OF INSTRUCTION	English
ADDITIONAL INFORMATION (prerequisites for admission to course, restrictions on participating in the course, etc)	-
LECTURER	Jaanus Jakimenko

II. THE GOAL, LEARNING OUTCOMES AND ABSTRACT OF SUBJECT COURSE

GOAL OF SUBJECT COURSE	To give an overview of the usage of different unmanned aerial vehicles. To introduce generic principles of remotely piloted aircraft and its subsystem design
LEARNING OUTCOMES	Student who has passed the subject knows: 1) Correct terms and vocabulary of RPAS; 2) different unmanned aerial vehicles and configurations; 3) components and systems of RPAS; 4) how to design a basic multicopter; 5) laws and rules with reference to RPAS; 6) how to avoid threats and hazards while operating UAV-s
ABSTRACT OF SUBJECT COURSE	Overview of commonly used unmanned aerial vehicles, systems and components, configurations and constructions, basic design solutions, legislation and safety

III. GRADING SYSTEM AND CRITERIA

PREREQUISITES TO BE ALLOWED TO TAKE EXAMINATION /	75% participation is required

PRELIMINARY EXAMINATION	
FORMATION OF EXAMINATION / PRELIMINARY EXAM MARK	Final task forms 100%. Final task is to build and test multirotor RPAS which will be assessed
OPPORTUNITIES FOR SETTLING ARREARS	A failed subject must be redone in next academic year

IV. TIMETABLE AND LIST OF TOPICS		
HOURS	**TOPICS**	**LECTURER**
03.10.2016 3h	Introduction to Unmanned Aerial Vehicles Overview of UAVs, design, constructions, classification, applications	Jaanus Jakimenko
04.10.2016 3h	Law and rules Legislation of UAVs in Estonia and the EU	Jaanus Jakimenko
17.10.2016 5h	Components Overview of components which are necessary for RPAS. Components required for the operation of a small and simple multirotor RPAS	Andres Moks
24.10.2016 5h	Components (4h) Overview of components which are necessary for RPAS. Components required for the operation of a small and simple multirotor RPAS Design (1h) Basic design principles for a typical multirotor RPAS	Andres Moks
31.10.2016 5h	Design (5h) Basic design principles for a typical multirotor RPAS	Andres Moks
07.11.2016 4h	Design (4h) Basic design principles for a typical multirotor RPAS	Andres Moks
21.11.2016 5h	Software (5h) Overview and setup of the software used in autopilots and in ground control stations	Andres Moks
05.12.2016 5h	Software adjustment (4h) Exercise preparations (1h)	Andres Moks
15.12.2016 4h	Final exercise	Jaanus Jakimenko,

V. LEARNING MATERIALS
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