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	2018/2019, 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	Andres Moks

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
3h	Introduction to Unmanned Aerial Vehicles; Overview of UAVs, design, constructions, classification, applications.
3h	Law and rules; Legislation of UAVs in Estonia and the EU.
5h	Components; Overview of components which are necessary for RPAS. Components required for the operation of a small and simple multirotor RPAS.
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.
5h	Design (5h); Basic design principles for a typical multirotor RPAS.
4h	Design (4h); Basic design principles for a typical multirotor RPAS.
5h	Software (5h); Overview and setup of the software used in autopilots and in ground control stations.
5h	Software adjustment (4h); Exercise preparations (1h).
4h	Final exercise.

V. LEARNING MATERIALS

-