SYLLABUS

I. GENERAL DATA ON SUBJECT COURSE	
CODE AND TITLE OF SUBJECT COURSE (in Estonian and English)	CNS.068 Introduction to MATLAB and SIMULINK *Sissejuhatus tarkvarakeskkondadesse MATLAB ja SIMULINK*
ACADEMIC YEAR, TERM, FORM OF STUDIES	2018/2019 fall term, e-study
CURRICULUM, SPECIALITY AND MODULE WHERE THE SUBJECT BELONGS TO	Module of 2018 ER, e-course Students from all aviation specialities
VOLUME OF SUBJECT (ECTS)	2 ECTS
FORM OF CONTROL	Non-differentiated assessment
WORKLOAD AND FORMAT OF STUDIES	Individual work, e-seminars 52 h
LANGUAGE OF INSTRUCTION	English
ADDITIONAL INFORMATION (prerequisites for admission to course, restrictions on participating in the course, etc)	Knowledge of English at upper-intermediate level (CEF B2). Basic knowledge about computer programming.
LECTURER	Valeri Kravets, MEng

II. THE GOAL, LEARNING OUTCOMES AND ABSTRACT OF SUBJECT COURSE	
GOAL OF SUBJECT COURSE	To give the basic knowledge about calculations in MATLAB and model-based design in SIMULINK
LEARNING OUTCOMES	After the completion of the course the student: 1. Knows the basic functions of MATLAB. 2. Has a basic overview of modelling, simulation and analysis workflow in SIMULINK.
ABSTRACT OF SUBJECT COURSE	Operations, variables, matrices, functions, scripts, modelling, simulation, analysis, toolboxes.

III. GRADING SYSTEM AND CRITERIA	
PREREQUISITES TO BE ALLOWED TO TAKE EXAMINATION /PRELIMINARY EXAMINATION	All the tasks set at the practices have been done.
FORMATION OF EXAMINATION /PRELIMINARY EXAM MARK	At least 51% result has to be achieved in individual assignment.
OPPORTUNITIES FOR SETTLING ARREARS	Individual assignment can be remaked.

IV. TIMETABLE AND LIST OF TOPICS		
WEEK OF YEAR	**WORK FORMAT**	TOPICS
Week 38	Lecture 2h	Introduction and warming up for course.
Week 39	Practice 5h	Basic operations, Matrices and Arrays, Indexing
Week 40	Practice 5h	Language fundamentals
Week 41	Practice 5h	Graphics
Week 42	Practice 5h	Programming and Scripts
Week 43-44	Practice 10h	SIMULINK
Week 45	Practice 5h	Mapping Toolbox
Week 46-48	Practice 15h	Work with individual project.

V. LEARNING MATERIALS

Compulsory materials:

1. Moodle course: https://moodle.eava.ee/enrol/index.php?id=189
2. MATLAB and SIMULINK documentation available in Moodle and in mathworks.com website.
3. A Guide to MATLAB: for Beginners and Experieced Users / Brian R.Hunt, Ronald L.Lipsman, Jonathan M.Rosenberg. Hunt, Brian R., New York: Cambridge, 2006.

Additional materials recommended:

1. http://se.mathworks.com/support/learn-with-matlab-tutorials.html