

Course title:	Mathematical packages
----------------------	------------------------------

Course code	Course status	Semester	Number of ECTS credits	Lecture hours
132003148	Mandatory	III	6	3+0+2

Study program:

Basic applied studies, ELECTRICAL ENGINEERING, study program: Computer engineering (studies last for 6 semesters, 180 ECTS credits).

Prerequisites: No prerequisites required.

Course aims:

Through this course students are given basic knowledge in important program for mathematical calculations MATLAB. This program package became unavoidable at all the world universities and institutions due to its simplicity, flexibility and universality. Beside, basics of the MAPLE program are presented, which is associated as a MATLAB toolbox for symbolic calculations.

Teacher(s) and assistant(s):

Ph.D. Zdravko Uskoković – teacher, Ph.D. Milovan Radulović - assistant, Mr Aleksandar Vučinić – assistant

Teaching method:

Lectures and laboratory exercises organized in computer classroom/laboratory. Studying and individual doing home exercises. Consultations.

Course synopsis:

Preliminary weeks	Preparation and semester enrolment.
I week	Introduction. Basic MATLAB properties.
II week	Operations with ordered set.
III week	Simple graphs.
IV week	Script files. Strings
V week	Relation operators. Logical operators.
VI week	First test
VII week	Free week
VIII week	Data analyses.
IX week	Polynomials.
X week	Numerical analyses, graphics.
XI week	Linear algebra.
XII week	Graphics.
XIII week	Second test
XIV week	Symbolic mathematics.
XV week	Operations with symbolic expressions.
XVI week	Final exam
Final week	Administrative procedures.
XVIII-XXI week	Additional lessons, correction of the final exam and administrative procedures.

STUDENT WORKLOAD

<u>per week</u>	<u>per semester</u>
6 credits x 40/30 = 8 hours	Teaching and the final exam: (8 h) x 16 = 128 h
Working hours structure:	Necessary preparation (before semester): 2 x (8 h) = 16 h
3 hours for teaching	Total work hours for the course: 6 x 30 hours = 180 hours
2 hours for laboratory exercises	Additional hours for preparing correction of the final exam, including the exam taking: up to 36 hours (the rest of the time from the first two items, up to the total work hours for the course, 180 hours).
3 hours for individual work, including consultations.	Work hours structure:
	128 h (lectures) + 16 h (preparation) + 36 hours (additional work)

Lessons attendance is mandatory for students, as well as doing home and laboratory exercises and both tests.

Literature: Basic: Z. Uskoković, Lj. Stanković, I. Đurović: "MATLAB for Windows".
Additional: Lj. Stanković, Z. Uskoković: " MATLAB "

The forms of knowledge testing and grading:

- 6 home exercises carry 6 points total (1 point each).
- Each test carries 22 points (44 points total).
- Final exam carries 50 points.

Student gets the passing grade by collecting 51 points at least.

Special remarks for the course: The teaching is organized for student groups of about 100 students, and laboratory exercises for student groups of about 60 students. If needed, the course can also be taught in English.

Teacher(s) who provided the information: Ph.D. Zdravko Uskoković

Remark: