**Discrete mathematics (ECTS credits: 6)**

Language: the course is offered in Serbian and Hungarian.

Contact person: Dr. Lívia Szedmina (slivia@vts.su.ac.rs)

**Course description:**

The course covers elements of different topics.

This course would cover the following topics:

1. lecture: Matrixes- operations with them and their properties

2. lecture: Determinants

3. lecture: Matrix equations

4. Lecture: The solving system of linear equations using inverse matrixes

5. lecture: The solving system of linear equations using Gauss elimination and Cramer’s rule

6. lecture: Complex numbers- algebraic form and operations with them

7. lecture: Complex numbers- trigonometric and exponential form and operations with them

8. lecture: Solving equations in C

9. lecture: Polynomials and operations with them

10. lecture: Polynomials-zeros and factorization

11. lecture: Vectors-scalar and cross products

12. lecture: Equations of plain

13. lecture: Equations of straight line

14. lecture: Characteristic matrix, polynomial and vectors.

**Aims:**

The goals are the following:

* Understanding the notions of matrix, determinant, the system of linear equations, complex number, polynomial, equations of the plain and straight line and characteristic matrix, polynomial and vectors.

**Learning outcomes:**

After completing the course the student should be able to:

* solve mathematical problems with matrixes, determinants, complex numbers, plains and straight lines and characteristic matrixes, polynomials and vectors and solve equations in C and systems of linear equations.