

Mathematics III

ISSUES:

1. Analysis of the complex numbers, limit, continuity, derivation
2. Elementary functions of the complex variable
3. Integral calculus in the field of the complex numbers
4. Fourier series
5. Fundamentals of the theory of the Ordinary Differential Equations
6. Selected types of the first order Ordinary Differential Equations
7. N-th order Ordinary Differential Equations
8. Systems of the first order Linear Ordinary Differential Equations, general and homogeneous
9. Boundary problems for the LODE
10. Laplace transform

Literature:

- Widder, D.V.: Advanced calculus. Dover Publications, Inc., New York 1989..
- Kwok,Y.K.: Applied complex variables for scientists and engineers. Cambridge University Press 2002..
- Davies, B.: Integral transform and their applications. Springer, New York 2002.
- <http://mi21.vsb.cz/>

Organization of the lectures:

- Lectures 2 h, Seminars 2 h per week.
- Continuous written control tests in agreement with the teacher.
- **The exam** is oral as the discussion above the tests.
- **The grading scale:**
 - A...Excellent
 - B...Very good
 - C...Good
 - D...Satisfactory
 - E...Sufficient
 - F*..Fail
- Pardubice 18.1.2019
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