Title	Code
(Matematyka)	**1010102111010340001**
Field: **Civil Engineering Second-cycle Studies**	Year / Semester: **1 / 1**
Specialty: **-**	Course: **core**
Hours: Lectures: **2** Classes: **1** Laboratory: **-** Projects / seminars: **-**	Number of credits: **3**
	Language: **polish**

Lecturer:

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Faculty:

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Status of the course in the study program:

Obligatory (basic) course

Assumptions and objectives of the course:

-the main aim is the understanding of basic notions of the theory in order to apply them to solving of techics problems, making use of tensor calculus to solving eigenvalue problems, solving boundary problems and boundary-initial problems - partial differentiable equations (in particular by applying Fourier transforms)

Contents of the course (course description):

- basic notions of linear algebra applied in tensor analysis
-partial differential equations of 1 and 2 order (including elliptic, parabolic and hyperbolic equations)
- Fourier series and Fourier transforms
-applications of differential equations
-elements of variational calculus

Introductory courses and the required pre-knowledge:

-basic knowledge from I degree studies and basic facts from analytic (Cartesian) geometry and theory of linear spaces (basis, dimension)

Courses form and teaching methods:

-lectures, classes (mainly traditional presentation - blackboard and chalk)

Form and terms of complete the course - requirements and assessment methods:

- classes : evaluation of written tests and the direct activity during the classes (solving problems and preparing of reports)
-lectures : written exam concerning mainly the theoretic part of the subject

Basic Bibliography:

Additional Bibliography: