FACULTY:	**Faculty of Technology and Education**
FIELD OF STUDY:	Materials Science and Engineering
COURSE TITLE:	**Mathematical analysis**
LECTURER'S NAME:	dr Piotr Kozioł, assistant professor
E-MAIL ADDRESS OF THE LECTURER:	piotr.koziol@wbiis.tu.koszalin.pl
ECTS POINTS FOR THE COURSE:	5
ACADEMIC YEAR:	2015/2016
SEMESTER: (W – winter, S – summer)	S
HOURS IN SEMESTER:	30+30=60
LEVEL OF THE COURSE: (1st cycle, 2nd cycle, 3rd cycle)	1st cycle
TEACHING METHOD: (lecture, laboratory, group tutorials, seminar, other-what type?)	Lectures (30h), Classes (30h)
LANGUAGE OF INSTRUCTION:	English
ASSESSMENT METOD: (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?)	Written exam, class test
COURSE CONTENT:	Improper integrals, functions of several real variables, partial derivatives, local and conditional extremes of functions of several variables, implicit functions, ordinary differential equations (ODE), initial and boundary conditions, multiple integrals, change of variables in multiple integrals, line integrals, fundamentals of the vector field theory, number and function series: fundamental theorems, power series, elements of Fourier analysis.
ADDITIONAL INFORMATION:	Required knowledge – Differential and integral calculus, Algebra.
RECOMMENDED LITERATURE	**Schaum's Outline Series:** 1. Calculus *by* Frank Ayres and Elliott Mendelson 2. Advanced Calculus *by* Robert Wrede and Murray Spiegel 3. Vector Analysis *by* Murray Spiegel, Seymour Lipschutz and Dennis Spellman 4. Advanced Mathematics for Engineers and Scientists *by* Murray Spiegel 5. Mathematical Handbook of Formulas and Tables *by* Seymour Lipschutz, Murray Spiegel and John Liu