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| FACULTY: | Institute of Technology and Education |
| FIELD OF STUDY: | Materials Science and Engineering |
| COURSE TITLE: | Calculus of Probability and Statistics |
| LECTURER'S NAME: | dr Piotr Koziół, assistant professor |
| E-MAIL ADDRESS OF THE LECTURER: | piotr.koziol@wbiis.tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 3 |
| ACADEMIC YEAR: | 2014/2015 |
| SEMESTER: (W – winter, S – summer) | S |
| HOURS IN SEMESTER: | 30+15=45 |
| LEVEL OF THE COURSE: (1 st cycle, 2 nd cycle, 3 rd cycle) | 1 st cycle |
| TEACHING METHOD: (lecture, laboratory, group tutorials, seminar, other-what type?) | Lectures (30h), Classes (15h) |
| 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: | Space of elementary events, set of random events, the probability space and axioms of probability, basic theorems and properties of probability, random variables and their properties, probability mass function (pmf), probability density function (pdf), characteristics of random variables, normal distribution: main theorems and applications, probability as a measure, Lebesgue measure, geometric probability. Fundamentals of mathematical statistics: descriptive and inferential statistics, population, random sample, data set, statistics and their characteristics, characteristics of statistical distributions: determining and interpretation, estimators: examples and determining, statistical hypothesis testing, examples of statistical tests. |
| ADDITIONAL INFORMATION: | Required knowledge – Differential and integral calculus, Algebra. |
| RECOMMENDED LITERATURE | Schaum's Outline Series: 1. Probability and Statistics by John Schiller, R. Alu Srinivasan and Murray Spiegel 2. Advanced Mathematics for Engineers and Scientists by Murray Spiegel 3. Mathematical Handbook of Formulas and Tables by Seymour Lipschutz, Murray Spiegel and John Liu |