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| **Module card** |
| I. GENERAL INFORMATION |
| **THE WITELON STATE UNIVERSITY OF APPLIED SCIENCES IN LEGNICA****DEPARTMENT OF TECHNICAL AND ECONOMIC SCIENCE** |
| **Field** | Computer Science |
| **Module title** | Fundamentals of a probabilistic methods - B.4 |
| **Language of lecture** | English |
| **ECTS points** | 6 |
| **Preliminary conditions:** |  |
| II. Education aims |
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| Objective 1: Learning the basics of probability theory, mastering probability methods for analyzing and describing uncertain events.Objective 2: Learning the basic methods of mathematical statistics as tools for studying mass phenomena.Goal 3: Acquiring the ability to correctly and effectively use knowledge of probability and mathematical statistics to solve accounting tasks and simple practical problems. |
| III. Education outcomes |
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| Families of sets. Sigma - algebra of sets. Elements of combinatorics.Random experience, elementary event, event, probability, probabilistic space.Examples of probabilistic spaces. Conditional probability, total probability, Bayes' formula. Product probability, geometric probability.Probability distribution, random variable, types and parameters of probability distributions.Overview of probability distributions.Discrete two-dimensional random variables.Limit theorems.Basic concepts of mathematical statistics. Distributions of selected statistics.Point estimation. Properties of estimators. Methods of building estimators.Interval estimation.Testing statistical hypotheses. Parametric and non-parametric tests. |

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| IV. EDUCATIONAL METHODS |
| **Assesment method:** Multimedia presentations |
| **Assessment methods:** Project, observation during class activities |
| V. MODULE TYPE AND CONTENTS |
| Basic evaluation criteria:1. Oral or written assessment
2. 50-59% - satisfactory,
3. 60-69% - satisfactory plus,
4. 70-79% - good rating,
5. 80-89% - good plus rating,
6. above 90% - very good rating.
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| VII. ECTS POINT BALANCE SHEET - STUDENT'S WORKLOAD |
| **Category** | **Student’s workload** |
| ***Contact hours*** | 30 |
| Participation in lectures | 15 |
| Participation in classes, workshops | 15 |
| Exam | - |
| ***Independent student’s work*** | 120 |
| Preparation for the lecture | 35 |
| Preparation for the classes, workshops | 55 |
| Preparation for the test | - |
| Preparation for the exam | - |
| Preparing the project | 15 |
| Preparing multimedia presentation | 15 |
| ***Total numer of hours*** | 150 |
| ***ECTS points***  | 6 |
| VIII. Recommended literature |
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