## KARTA PRZEDMIOTU / COURSE DESCRIPTION

| **Nazwa przedmiotu w języku polskim / Course name in Polish** |
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| Inteligentne systemy informacyjne |
| **Nazwa przedmiotu w języku angielskim / Course name in English** |
| Intelligent Information Systems |
| **Dyscyplina / Scientific discipline** |
| Informatyka techniczna i telekomunikacja |
| **Opis skrócony / Short description** |
| The lecture is intended as a path leading from the morphology of the classical information system, i.e. determining its components with the greatest possible accuracy, and then leading by searching for the answer to the question: which of the individual components can be equipped with "intelligence" using knowledge representation methods and techniques, artificial intelligence and related fields to - as a result - lead to the development of a map of the architecture of a generic information system with the indication of those places where, how and to what extent "intelligent" components can be introduced to the system. The motto of the lecture is R. Hamming's saying: "The purpose of computing is insight, not numbers." The lecture is accompanied by projects that are a practical development of its content. |
| **Opis / Description** |
| Lecture (30 hours):<br>1. Introduction. Intelligence (2 hours)<br>2. Basic concepts: data, information, knowledge, system, information system<br>(4 hours)<br>3. Knowledge representation (3 hours)<br>4. Naive Bayes Classifier (2 hours)<br>5. Classical logic as a method of knowledge representation. Information system<br>in logic (6 hours)<br>6. Information systems in non-classical logic (2 hours)<br>7. Semantic Webs (2 hours)<br>8. Semantic atoms (2 hours)<br>9. Frames and scripts (2 hours)<br>10. Ontologies (3 hours)<br>11. Neural networks (2 hours)<br>Project:<br>The lecture is accompanied by a project that includes either planning and execution of a simple experiment using a selected technique(s) discussed in the lecture or another technique(s) in the field of artificial intelligence and related fields, or creating a simple "intelligent" application that could be integrated with a classical information system. Examples of projects are: conducting an experiment of factual/text data mining, development of a parser for a certain language of semantic atoms, implementation of a search mechanism in a certain class of semantic networks, development of a program for identifying user preferences based on the analysis of his queries. There are no prerequisites for the development tools to be used for carrying out the design/implementation work. |
| **Język / Language** |
| Angielski/ English |

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| **ECTS** | 4 | **Prowadzący/ Lecturer** | prof. dr hab. inż. Mieczysław Muraszkiewicz |

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| **Forma zaliczenia / Examination** | Egzamin/ Exam |
| **Wykład / Lecture** | 30 |
| **Projekt/ Project** | 30 |