

**Course title: Intelligent systems**

**Course code: 63268**

**ECTS: 6**

**Professor: Marko Robnik Šikonja**

**Undergraduate program**

**Short course description:**

- Machine learning and data mining, overview of basic algorithms
- Data preprocessing, discretization, visualization
- Intelligent data analysis
- Clustering
- Basic principles of machine learning (ML), evaluation of learning, combining ML algorithms.
- Parallel distributed processing and artificial neural networks.
- Basic principles of modelling: learning as modelling, model quality, model evaluation.
- Statistical modelling: Bayesian reasoning, linear models, regression models, multivariate models, non-parametric models, stochastic processes.
- Evolutionary computation: genetic algorithms, swarm intelligence, ant colony optimization.
- Multiagent systems: overview of intelligent agents, agent architectures, multiagent systems for intelligent problem solving.