Study programmes: PhD studies - Informatics

Course name: R474 - Data mining - Advanced topics

Lecturers: Nenad Mitić and other lecturers at Department of computer Science

Status: Optional

ECTS: 9

Attendance prerequisites: -

Course aims: Primary goal is to mastering advanced topics and methods of data mining and their applications in problem solutions.

Course outcome: After completion of the course, the students are able to continue further training in this field and doing independent scientific and professional work.

Course content: Mining multimedia, spatial, and spatio-temporal. Mining data streams. Selected topics of classification wuth support vector machines. Languages, standards, and system architectures for data mining. Mining bing data. Applications of data mining in science and business. Data mining in bioinformatics and biomedicine. Trends in data mining.

Literature:

1. Shigeo Abe: Support Vector Machines for Pattern Classification, 2nd. ed., Springer, 2010
2. Anand Rajaraman, Jeffrey D. Ullman: Mining of Massive Datasets, Cambridge University Press, 2011
3. Bertrand Clarke, Ernest Fokoue, Hao Helen Zhang: Principles and Theory for Data Mining and Machine Learning, Springer, 2009
4. Selected papers
(The lecturer can choose another relevant current literature)

Number of hours: 10	**Lectures: 4**	**Tutorials: -**	**Laboratory: -**	**Research: 6**

Teaching and learning methods: Frontal lectures, group and individual tutorials and exercises.

Assessment (maximal 100 points)

Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	-	Oral exam	70 (project)
Colloquia	-	Written-oral exam	-
Essay / Project	30		