Code of the subject Status of the subject Optional Study programme for which it is organized: PhD program, Sustainable Development" (Computer Science and Informatics) Dependency by other subjects: none Objective of studying this subject: The objective of this subject is to gain a deep insight into the methods of intelligent data analysis and the application in various areas of application. Contents of the subject (teaching units, forms of students' individual work, forms of testing presented per working weeks in the academic calendar: Preparatory week Data and information Ill week Data and information Ill week Multi-dimensionality of data Ill week Process of intelligent data analysis: Problem definition Data pre-processing Data analysis using intelligent methods. IV week Evaluation of results: Pass positive and false negative Error rate Reliability of rules Process of intelligent methods. V week Cost-sensitive data analysis V week Cost-sensitive data analysis VIII week XII week XIII week XII week XIII week XIIII week X	Name of the subj	ect: Intelligent Data	a Analysis		
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 Individual work: 210 			1		

Literature:

- T. Hastie, R. Tibshirani, J. Friedman: The Elements of Statistical Learning, Springer Series in Statistics, Berlin, 2001.
- M.J.A. Berry, G.S. Linoff: Data Mining Techniques for Marketing, Sales, and Customer Relationship Management, Wiley, New York, NY, USA, 1997.
- Ian H. Witten, Eibe Frank: Data Mining: Practical Machine Learning Tools and Techniques, Second Edition (Morgan Kaufmann Series in Data Management Systems), San Francisco, CA, USA, 2000.
- P. Cabena, P. Hadjinijan, R. Stadler, J. Verhees, A. Zanasi: Discovering Data Mining ~ From Concept to Implementation, Prentice Hall Ptr., New Jersey, USA, 1997.
- P.R. Cohen: Empirical Methods for Artificial Intelligence, MIT Press, Cambridge, MA, USA, 1995.
- D. Pyle: Data Preparation for Data Mining, Morgan Kaufmann Publishers, Inc., San Francisco, CA, USA, 1995.
- S.M. Weiss, N. Indurkhya: Predictive Data Mining ~ A practical guide, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA, 1998.
- M. Berthold, D. J. Hand: Intelligent Data Analysis, Springer, Berlin, 2007.

Learning outcomes (complied with the outcomes for the study programme):

Knowledge and understanding:

On completion of this course the student will be able to:

- show a deep insight knowledge in the area of the intelligent data analysis,
- conduct research in a selected application area using intelligent data analysis,
- analyze knowledge acquisition problems, synthesize an appropriate approach to problem solving and to evaluate chosen approach and results.

Transferable / Key skills and other attributes:

- Communication skills: written scientific report and oral defence, manner of expression at written and oral examination.
- Use of information technology: use of software tools for data processing analysis.
- Problem solving: analysis, design and research using intelligent data analysis methods.

Forms of tests and evaluation:

- completed project work 50%
- oral examination 50%

Name and surname of teacher and associate:

Iztok Fister

Particularities needed	to b	Эе	emphasized	for	the	subj	ect:

Note (if needed):		