

DESCRIPTION OF STUDY COURSE

Course unit title	Big Data Analysis		
Programme	Business Administration		
Year of study	1st		
Level of course unit (e.g. first, second or third cycle)	Master's study		
Course unit code	MV022		
Name of lecturer(s)	Jānis Hermanis		
Number of ECTS credits allocated (1KP = 1,5ECTS)	3 ECTS		
Credit points	2 CP, Latvian credit points are multiplied by 1,5 to get ECTS credit points		
Language of instruction	Latvian		
Type of course unit (compulsory, optional)	Compulsory		
Semester when the course unit is delivered	2nd		
Mode of delivery	Face-to-face		
Aim of Course	The aim of the course is to provide the skills and abilities to work with big data sets, techniques, and technologies available to apply for the analysis of such kind of data, as well to introduce to the visualizations of the obtained results.		
Preliminary knowledge (prerequisites and co-requisites)	Informatics and Management Systems of Data Bases, Mathematics for Economists, Statistics, Research Work Methodology		
Course contents	<ol style="list-style-type: none"> 1. Big Data concept. 2. Data mining concept and the methodology used. 3. Data mining technologies. 4. Cognitive data analytics. 5. Available software for data mining methodology and technology implementation. 6. Data and results visualization methodology. 7. Technical tools for data visualization 		
Planned learning activities	Students attend lectures, take part in seminars, and carry out independent and individual assignments. Joint assessment of the course consists of: 50% of the study process carried out by practical works, 50% of the final research/individual assignments developed and the presentation of the results in the exam.		
Planned teaching methods	Teaching methods	Student workload	
		Full-time	Distance learning
	Lectures	30%	20%

	Seminars	5%	-		
	Practical work	15%	10%		
	Preparation and presentation of the independent work	30%	20%		
	Work at the library, independent studies	20%	50%		
	Total 80 hours				
Learning outcomes of the course unit	<ol style="list-style-type: none"> 1. Understands the big data analysis methods used and the results obtained 2. Can use appropriate software for data mining process in carrying out tasks 3. Can use appropriate software data and applies results for visualization. 				
Assessment methods and criteria	Learning outcome		1.	2.	3.
	The form of assessment				
	Individual work during lectures		●		
	Group work during lectures			●	●
	Participation in the seminars			●	●
	Preparation and the presentation of the independent work		●	●	●
Recommended or required reading	<p>Required reading:</p> <ol style="list-style-type: none"> 1. Zikopoulos, P., Eaton C. (2011), <i>Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data</i>, McGraw-Hill Osborne Media, New York 2. Knaflic, C.N. (2015), <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i>, Wiley, New Jersey 3. Microsoft, (2022), Power BI documentation, available https://docs.microsoft.com/en-us/power-bi/ <p>Recommended reading:</p> <ol style="list-style-type: none"> 1. Ferrari, A., Russo, M., (2016), <i>Introducing Microsoft Power BI</i>, Microsoft Press, Redmond 2. Provost, F., Fawcett, T. (2013), <i>Data Science for Business: What you need to know about data mining and data-analytic thinking</i>, O'Reilly Media, Sebastopol 3. North, M. (2012), <i>Data Mining for the Masses</i>, Global Text Project 				
Recommended optional programme components	To be agreed at the start of the course				