DESCRIPTION OF A STUDY COURSE

Course unit title	**Statistics and Data Analysis**			
Programme	**Business process management**			
Year of study	**1**			
Academic year	**2022./2023.**			
Level of course unit	**Bachelor**			
Course unit code	**BP020**			
Name of lecturer(s)	**Aivars Vembris, Jānis Hermanis, Aivars Spīlbergs**			
Credit points	**4**			
Number of ECTS credits allocated	**6**			
Language of instruction	**Latvian or English**			
Type of course unit (compulsory, optional)	**Compulsory**			
Semester when the course unit is delivered	**2**			
Mode of delivery	**full-time education**			
Aim of Course	**The aim of the study course is to provide students with preliminary knowledge about collecting, managing and analyzing data, the theory of probability and analytic statistics in order to be ready for further acquisition of professional courses, as well as preliminary knowledge about risk assessment and analysis. Completion of the course will give students knowledge about statistical data collection methods, sorting of data and graphic illustration methods; students will be able to calculate and interpret statistical database collations, understand the meaning of economic indexes, will be able to determine and analyse coherence of statistical data, and have skills to perform analysis of statistical data, as well as modelling and forecasting of economic indicators. The completion of independent work shall give students necessary skills to independently and individually analyze and evaluate situations in a particular business sector.**			
Preliminary knowledge	**Mathematics**			

Course contents	No	Tittle	
	1	**Statistical data collection methods**	
	2	**Population, sample and sampling techniques**	
	3	**Variation series and their graphical illustration**	
	4	**Descriptive statistics given the same sample size**	
	5	**Multiple sample size coherence analysis**	
	6	**Indexes**	
	7	**Theory of probability**	
	8	**Probability of discrete random variables**	
	9	**Probability of continuous random variables**	
	10	**Hypothesis testing**	
The study course calendar	No	Topic	Type of assessment
	1	**Descriptive statistics**	**Test**
	2	**Assigment of probability and hypothesis testing**	**Test**
	3	**Analysis of correlation and regressions**	**Test**

<table>
<tr><td rowspan="8">Planned learning activities and teaching methods</td><td colspan="3">Assessment of learning outcomes</td><td colspan="2">Distribution (%)</td></tr>
<tr><td colspan="3">Test</td><td colspan="2">60%</td></tr>
<tr><td colspan="3">Active participtionin the class</td><td colspan="2">40%</td></tr>
<tr><td colspan="3">Total (%):</td><td colspan="2">100%</td></tr>
<tr><td colspan="3">Teaching methods</td><td colspan="2">Student workload (h)</td></tr>
<tr><td colspan="3">Classes in the auditorium</td><td colspan="2">32</td></tr>
<tr><td colspan="3">Lecturer-led Individual assignments</td><td colspan="2">32</td></tr>
<tr><td colspan="3">Case study</td><td colspan="2">32</td></tr>
<tr><td colspan="3">Work in the library</td><td colspan="2">64</td></tr>
<tr><td colspan="3">Total (h):</td><td colspan="2">160</td></tr>
<tr><td rowspan="5">Planned learning outcomes</td><td>No</td><td colspan="3">Learning outcomes</td><td>No of progr. study</td></tr>
<tr><td>1</td><td colspan="3">Students understand statistical data collection methods</td><td>3</td></tr>
<tr><td>2</td><td colspan="3">Students are able to sort data and illustrate it graphically</td><td>3</td></tr>
<tr><td>3</td><td colspan="3">Students are able to calculate statistical database collations</td><td>9</td></tr>
<tr><td>4</td><td colspan="3">Students are able to independently analyze and assess situation in each specific case</td><td>9</td></tr>
<tr><td rowspan="3">Assessment methods and criteria</td><td colspan="2">Learning outcomes
Assessment methods</td><td>1</td><td>2</td><td>3</td><td>4</td></tr>
<tr><td colspan="2">Test</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
<tr><td colspan="2">Active participtionin the class</td><td>●</td><td>●</td><td>●</td><td>●</td></tr>
<tr><td>Mandatory and supplementary literature</td><td colspan="5">Mandatory literature
1. Schiller, J., Srinivasan, R.A., Probability and statistics. London, 2005;
2. John E. Hanke, Artur G. Reitsch, Understanding Business Statistics, Irwin, 1991.
Supplementary literature
1. Navarro, D., Foxcroft, D., Faulkenberry, T., (2019), Learning Statistics with JASP: A Tutorial for Psychology Students and Other Beginners</td></tr>
</table>

Evaluation criteria of learning outcomes.	
Grade	**Explanation**
10 (outstanding)	Knowledge, exceeding curriculum requirements, attests independent research and deep understanding of a problem
9 (excellent)	Complete acquaintance with curriculum requirements, ability to apply gained knowledge independently
8 (very good)	Complete acquaintance with curriculum requirements, though at times lacks deeper understanding and ability to affiliate gained knowledge with more complicated issues.
7 (good)	Curriculum requirements mastered, although less important knowledge gaps can be detected
6 (above average)	Acquaintance with curriculum requirements, though lack of problem understanding in detail can sometimes be detected
5 (average)	General knowledge of curriculum requirements although lacks understanding of several problems in general
4 (below average)	General knowledge of curriculum requirements, competence corresponds to minimum of curriculum requirements, problematic application of gained knowledge in practice
3 (weak)	General knowledge of a curriculum gained, though a complete lack of orientation in other relevant issues is detected. Additional studies required to get an assessment.
2 (very week)	General knowledge on certain relevant issues in a curriculum gained, curricula requirements are not completed on average
1 (extremely week)	A complete lack of basic curricula requirements is detected, almost no knowledge on a basic curriculum