

Course Syllabus

Title of the course	Methods of Working with Tabular Data		
Title of the Academic Programme	Master Program “Marketing technologies”		
Type of the course	Mandatory		
Prerequisites	<ul style="list-style-type: none"> ▪ Introductory Statistics and/or Econometrics ▪ At least one undergraduate course in Mathematics (Calculus, Linear Algebra, etc.) ▪ Microsoft Excel basics: developing and copying formulas with relative and absolute cell addresses, and using the function and chart wizards 		
ECTS workload	4		
Total indicative study hours	Directed Study	Self-directed study	Total
	44	108	152
Course Overview	<p>Given the importance for marketing professionals to be able to work efficiently with tabular data, this course aims at teaching tabular data management and analysis using spreadsheets. Students will learn how Microsoft Excel can add value to professional decision-making and how to design decision support systems to help businesses make better decisions. Not only reporting, but also optimization, simulation and forecasting techniques are studied.</p>		
Intended Learning Outcomes (ILO)	<p>Upon successful completion of the course students will be able to:</p> <ol style="list-style-type: none"> 1. Carry out analysis and investigation using advanced technical models such as optimization and simulation 2. Use advanced Excel functions (such as SUMIFS, OFFSET, VLOOKUP, etc.) fluently 3. Apply advanced techniques and tools to a variety of specialized Management Science questions 4. Create actionable dashboards from tabular data using Pivot Tables and Charts <p>Learning outcomes in terms of competencies (Code/Level/Competency/Descriptor)</p> <ol style="list-style-type: none"> 1. CK-1/ ПБ/ Ability to critically assess and modify studied scientific methods/ Identifies correspondence between analytical problems and methods 2. CK-3/СД/Ability to self-study new research methods, change their research orientation/ Knows how to search for information about new research methods and their applications in different domains. 3. CK-6/ПБ/Ability to analyze, verify information in their professional activity, impute and synthesize missing information whenever necessary, work under uncertainty/ Applies advanced techniques and tools for modeling under uncertainty. 4. ПК27/СД/Ability to select and justify the use of instrumental tools, modern information technologies for 		

	data processing according to a predefined goal in the field of management, analyze computational output and give justified managerial recommendations/ Justifies the selection of instrumental tools, interprets results, assesses the limitations of the analysis, justifies managerial prescriptions.						
Teaching and Learning Methods	<ul style="list-style-type: none"> ▪ Every week a lecture is given to introduce students to the topic ▪ A set of case studies is solved in class every week ▪ Solutions are submitted through LMS and are assessed semi-automatically 						
Content and Structure of the Course							
№	Topic / Course Chapter	Total	Directed Study		Self-directed Study		
			Lectures	Tutorials			
1	Decision support using spreadsheets for marketing and management	68	6	8	54		
2	Advanced Microsoft Excel functions and formulas	28	2	8	18		
3	Regression analysis and forecasting in Microsoft Excel	28	2	8	18		
4	Using Pivot tables and charts for creating dashboards and survey data analysis	28	2	8	18		
Total study hours		152	12	32	108		
Indicative Assessment Methods and Strategy	<p>Assessment methods: Problem sets solved in class: 75-min. tests given at classroom every week. Each Problem Set consists of 3-5 problems. Classwork is assessed using the average grade across all problem sets.</p> <p>Homework: problem set solved at home (week 2 of Module 2)</p> <p>Test: Problem set solved in class that assesses knowledge and skills studied (week 4 of Module 2)</p> <p>Exam: Final test (duration: 75-minutes) covering all topics</p> <p>Assessment strategy: Cumulative grade (before exam)=0.8*average grade across all classroom problem sets (rounded to the nearest integer)+0.1*Homework+0.1*Test</p> <p>Final grade=0.7*Cumulative grade+0.3*Exam</p> <p>All types of testing are implemented using HSE’s corporate Learning Management System eFront. In the case of LMS testing the percentage of task completion transforms into 10-point scale using following:</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 50%; text-align: center;">% of maximum potential amount of</td> <td style="width: 50%; text-align: center;">10-point scale</td> </tr> </table>					% of maximum potential amount of	10-point scale
% of maximum potential amount of	10-point scale						

	<table border="1"> <tbody> <tr> <td>points</td> <td></td> </tr> <tr> <td>95-100</td> <td>10</td> </tr> <tr> <td>85-94</td> <td>9</td> </tr> <tr> <td>75-84</td> <td>8</td> </tr> <tr> <td>65-74</td> <td>7</td> </tr> <tr> <td>55-64</td> <td>6</td> </tr> <tr> <td>45-54</td> <td>5</td> </tr> <tr> <td>35-44</td> <td>4</td> </tr> <tr> <td>25-34</td> <td>3</td> </tr> <tr> <td>15-24</td> <td>2</td> </tr> <tr> <td>1-14</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	points		95-100	10	85-94	9	75-84	8	65-74	7	55-64	6	45-54	5	35-44	4	25-34	3	15-24	2	1-14	1	0	0
points																									
95-100	10																								
85-94	9																								
75-84	8																								
65-74	7																								
55-64	6																								
45-54	5																								
35-44	4																								
25-34	3																								
15-24	2																								
1-14	1																								
0	0																								
Readings / Indicative Learning Resources	<p><u>Mandatory</u></p> <ul style="list-style-type: none"> Quirk T. J. Excel 2016 for Business Statistics. – Springer International Publishing Switzerland, 2016. <i>The book is available through HSE's electronic resources (Springer Books)</i> <p><u>Optional</u></p> <ul style="list-style-type: none"> Taylor, Bernard W. Introduction to management science 9th ed. – Prentice Hall, 2006. Powell S. G., Baker K. R. Management science: The art of modeling with spreadsheets. – Wiley, 2009. 																								
Indicative Self- Study Strategies	<table border="1"> <thead> <tr> <th>Type</th> <th>+/-</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>Reading for seminars / tutorials (lecture materials, mandatory and optional resources)</td> <td>-</td> <td></td> </tr> <tr> <td>Assignments for seminars / tutorials / labs</td> <td>+</td> <td>36</td> </tr> <tr> <td>E-learning / distance learning (MOOC / LMS)</td> <td>+</td> <td>36</td> </tr> <tr> <td>Fieldwork</td> <td>-</td> <td></td> </tr> <tr> <td>Project work</td> <td>-</td> <td></td> </tr> <tr> <td>Other (please specify)</td> <td>-</td> <td></td> </tr> <tr> <td>Preparation for the exam</td> <td>+</td> <td>36</td> </tr> </tbody> </table>	Type	+/-	Hours	Reading for seminars / tutorials (lecture materials, mandatory and optional resources)	-		Assignments for seminars / tutorials / labs	+	36	E-learning / distance learning (MOOC / LMS)	+	36	Fieldwork	-		Project work	-		Other (please specify)	-		Preparation for the exam	+	36
Type	+/-	Hours																							
Reading for seminars / tutorials (lecture materials, mandatory and optional resources)	-																								
Assignments for seminars / tutorials / labs	+	36																							
E-learning / distance learning (MOOC / LMS)	+	36																							
Fieldwork	-																								
Project work	-																								
Other (please specify)	-																								
Preparation for the exam	+	36																							
Academic Support for the Course	Academic support for the course is provided via the course page in LMS, where students can find guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials																								
Facilities, Equipment and Software	<ul style="list-style-type: none"> VNC software for sharing teacher's screen with students Microsoft Excel (version 2007 or later) Student resources are available from the course's LMS page 																								
Course Instructor	Elena B. Pokryshevskaya, PhD, Associate Professor, Department of																								

Management