

1.	Module code:	B19A04E
2.	Title:	PROBABILITY AND STATISTICS
3.	Credit points:	7
4.	Start term:	spring
5.	Module leader:	DANIEL KEHL, DR.
6.	Accredited by:	MUBS
7.	Module restrictions:	
	• Pre-requisite	none
	• Programme restrictions	BSc in Business Administration and Management
	• Level restrictions	4
7.	• Other restrictions or requirements	none
	8.	Aims: To develop a basic understanding in probability theory (discrete and continuous distributions) and basic statistical methods (both descriptive and inferential). The course aims to build a basis in methodology for both theoretical and practical issues in the given field. The module helps to understand concepts and methods covered in more advanced statistics courses. Data analytic skills are among the most in-demand jobs nowadays and in the coming years.
	9.	Learning outcomes: On completion of this module, the successful student will be able to: 1. analyse a population using descriptive statistics, 2. summarise the key aspects of probability and random variables in the decision making process, 3. infer population parameters based on a sample. 4. solve numerical business problems, 5. select the appropriate technique and method for the solution of such problems, 6. apply theoretical concepts in a business environment.
	10.	Syllabus: <ul style="list-style-type: none"> • Introduction • Organizing and Visualizing Data • Numerical Descriptive Measures • Basic Probability • Discrete Probability Distributions • The Normal Distribution and Other Continuous Distributions • Sampling and Sampling Distributions • Confidence Interval Estimation • Fundamentals of Hypothesis Testing: One-Sample Tests • Two-Sample Tests
11.	Learning and teaching strategy: Two classes per week in which theory is explained and applications are demonstrated. An exercise comprising several problems issued at each lecture will form the basis of the follow-up seminars. A home assignment is given each week for the students to practice the newly learnt material. Students are expected to extend their knowledge of computer programs (primarily Microsoft Excel) to solve some of these problems. It is inevitable that students practice on their own at home based on the exercises and their solutions in the core learning materials. A Forum is provided to have the ability of a panel discussion about the material online on Moodle.	
12.	Assessment scheme:	
	Formative assessment scheme QA sessions before midterm tests and drop-in office hours.	
	Summative assessment scheme	

	<p>Midterm (15% each): Three written unseen tests in computer lab using Excel usually in weeks 4, 7 and 10 (LOs 1, 2, 3, 4 and 5)</p> <p>Take home assessments (15%): 30-question weekly quizzes in Moodle to be done at home(LOs 1, 2 and 3)</p> <p>Final exam(40%): unseen, written examination in computer lab, based on statistical problem-solving across the syllabus (LOs 1, 2, 3, 4, 5 and 6)</p> <p>Midterm tests and home assignments cannot be resat.</p>						
	<table border="1"> <tr> <td>Seen examination</td> <td>0%</td> </tr> <tr> <td>Unseen examination</td> <td>85%</td> </tr> <tr> <td>Coursework (no examination)</td> <td>15%</td> </tr> </table>	Seen examination	0%	Unseen examination	85%	Coursework (no examination)	15%
Seen examination	0%						
Unseen examination	85%						
Coursework (no examination)	15%						
13.	<p>Timetabled examination required</p> <p>YES</p>						
14.	<p>Length of exam</p> <p>1.5 hours</p>						
15.	<p>Learning materials</p> <ul style="list-style-type: none"> • Essential • Recommended <p>Basic Business Statistics: Global Edition 13/e Mark L Berenson, David Levine and Timothy C. Krehbiel ISBN: 9781292069029</p>						