



## Sofaer Global MBA

### 1238.2211.01 - Statistics for Business and Management

Prerequisites: Basic knowledge of algebra, computer skills, Excel, and passing the preparation course

#### Module 2 – 2017/18

#### Course Section Details

Section	Day	Hour	Classroom	Lecturer	Email	Telephone	Office
Class	Mondays	08:15-11:00	Recanati 254	Dino Levy	<a href="mailto:dinolevy@post.tau.ac.il">dinolevy@post.tau.ac.il</a>	03-6409565	332
	Thursdays	11:45-14:30					
Tutorial	Mondays	14:30-15:45	Recanati 254	Natalie Shefer	<a href="mailto:natalie.afota@gmail.com">natalie.afota@gmail.com</a>	03-6409087	22
	Wednesdays	11:45-13:00					

Teaching Assistant (TA): Natalie Shefer, [natalie.afota@gmail.com](mailto:natalie.afota@gmail.com)

Office Hours: By appointment

#### Course Units

Course Units: 2 cu

4 ECTS (European Credit Transfer and Accumulation System) = 1 course unit

By making higher education comparable across Europe, ECTS makes teaching and learning in higher education more transparent and facilitates the recognition of all studies.

#### Course Description

This course provides the fundamental methods of statistical analysis. The course introduces the key issues and ideas in statistical inference with the aim that MBA students will grasp the potential of statistics as an essential tool for assisting managers in the process of decision-making. The course will begin with a focus on the basic elements of exploratory and qualitative data analysis followed by thorough introduction to various methods of statistical inference. With this as a foundation, it will proceed to explore the use of a key statistical methodology known as regression analysis for solving business problems, such as the prediction of future sales and the response of the market to price changes. The class presentations and tutorials will include examples that will require students to work on either Excel or statistical software such as SPSS or Stata.

## Course Objectives

Upon completion of the course, the student will be able to:

1. Understand the notion of errors in statistical analysis.
2. Understand probability distributions such as: Normal, t-distribution and their relevance to statistical analysis.
3. Understand the notion of statistical inference.
4. Determine sample size, confidence intervals and margin of error.
5. Perform simple hypothesis tests on population mean and proportion.
6. Use the least squares method for curve fitting and forecasting.
7. Use Excel (or SPSS) for statistical purposes.

## Assessment and Grade Distribution

Percentage	Assignment	Date	Group Size/Comments
10%	TA assignments	Before each tutorial	One assignment per subject
90%	Final exam	5 Feb 2017	

\*According to University regulations, a student must be present in every lesson (Article 5).

\* The lecturer reserves the right to have a student removed from a course if the student is absent from a class with mandatory participation or did not actively participate in class. (The student will remain financially responsible for the course irrespective of his/her removal from the course)

## Course Assignments

There will be 1 home assignment for each subject in the course. You will have 1 week to complete each assignment. The assignments are to be completed personally and not in groups. The aim of the assignments is to make sure that you have understood the main topics of each subject and that you practice different problems in each subject. Each assignment will be checked, corrected, graded and returned to the students. Thereafter, a full solution for each assignment will be uploaded to the course website.

At the end of the course there will be a final exam covering all material taught in the course. All the material that is described in the syllabus and all the material that appears in the class presentations are required for the final exam. Note, that material that was covered orally in class but did not appear in the presentations is also part of the course material and is required for the exam.

Should a student become unable to complete an assignment or course requirement, s/he must notify the TA of the course in advance via email
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## Grading Policy

As of the 2008/9 academic year the Faculty has implemented a grading policy for all graduate level courses.

This policy applies to all graduate courses in the Faculty, and will be reflected in the final course grade.

Accordingly, the final average of the class for this course (which is a core course) will fall between 78-82%.

Additional information regarding this policy can be found on the Faculty website.

## Evaluation of the Course by Student

Following completion of the course students will participate in a teaching survey in order to evaluate the instructor and the course for the benefit of the students and the university.

## Course Site (Moodle)

The course site will be the primary tool used to communicate messages and material to students. It is, therefore recommended to periodically check the course site in general, periodically, before each lesson, at end of the course as well. (For example: exam details and updates regarding assignments)

Course slides will be available on the course site.

Please note that topics, which are not covered in the slides, but are discussed in class are considered an integral part of the course material and may be tested in examinations.

## Course Outline\*

Lesson	Date	Topic(s)
1+2	14 Dec 18 Dec	<ul style="list-style-type: none"><li>• Introduction to descriptive and inferential statistics</li><li>• Elements of descriptive statistics (Ch. 1.4-1.5, pp. 10-12/Ch. 2, pp. 22-42)/Ch. 3, pp. 47-85)</li></ul>
3	21 Dec	<ul style="list-style-type: none"><li>• Sampling and sampling distributions The normal distribution and the central theorem (Ch. 6.2+7, pp. 152-161, 172-195)</li></ul>
4	25 Dec	<ul style="list-style-type: none"><li>• Interval Estimation of population mean and proportion and sample size evaluation (Ch. 8, pp. 296-219)</li></ul>
5+6	28 Dec 8 Jan	<ul style="list-style-type: none"><li>• Hypothesis Testing (Ch. 9-10, pp. 220-288)</li></ul>
7+8	11 Jan 15 Jan	<ul style="list-style-type: none"><li>• Experimental design and the analysis of variance (Ch. 13, pp. 327-365)</li></ul>
9+10	18 Jan 22 Jan	<ul style="list-style-type: none"><li>• Simple linear regression analysis (Ch. 14, pp. 366-420)</li></ul>
11+12	25 Jan 29 Jan	<ul style="list-style-type: none"><li>• Multiple linear regression analysis (Ch. 15, pp. 421-469)</li></ul>
Review		<ul style="list-style-type: none"><li>• Review session at 12:30</li></ul>

\*Subject to change

## Required Reading

Anderson, D. R., Sweeney, D. J., Williams, T. A., Freeman, J., & Shoemith, E. (2014). *Statistics for business and economics* 3<sup>rd</sup> edition.