
APPLIED STATISTICS I in Fall 2019 (MA1020D)

Course Code	MA1020D	Professor(s)	Jessica Valle Orero
Prerequisites	None	Office Number	TBD
Class Schedule	F: 12:10-13:30 in PL-5 TW: 12:10-13:30 in PL-1	Office Hours	Tuesday & Friday mornings
Credits	4	Email	jvalleorero@aup.edu
Semester	Fall 2019	Office Tel. Ext.	

Course Description

COURSE DESCRIPTION: MA 1020 *Applied Statistics* introduces the basic tools of descriptive and inferential statistical analysis. In this course, we will cover the data-analysis concepts and procedures used in economics, business and other social sciences. Emphasis will be given to the manipulation of real data sets to obtain useful and meaningful statistical results, to the qualitative interpretation of such results and to the effective communication in numbers, graphs and words of the insights thus developed. Theory will be combined with data collection and curation, as well as computer lab work with a statistical software package. Students will be encouraged to develop an attitude of mind that accepts uncertainty and variability as part of problem analysis and decision making.

Computer package: Extensive use of real-world case studies will be made to show students how to apply the mathematical concepts taught in concrete situations and the effectiveness of the computer will be shown. The software package will be introduced through labs and projects. It is of increasing importance that, beyond developing computational skills, you learn to manipulate the abstract concepts to interpret data and to solve concrete problems - model building - originating in different fields.

Course Learning Outcomes

Use descriptive statistics to describe samples, populations, and relationships between variables (independence, regression) (LO5)
Use techniques of inferential statistics appropriately (confidence intervals, hypothesis tests for proportions, means, chi-squared tests and linear regression) (LO6)
Take into account uncertainty and ethics applied to statistics.(LO7)
Have familiarity and fluency in using a statistical software package.(LO8)

General Education

General Education: The general education program at AUP consists of four requirements: Speaking the World, Modelling the World, Mapping the World, and Comparing Worlds Past and Present. MA 1020 *Applied Statistics* fulfils the *Modelling the World – Quantitative Reasoning* requirement, and as such has the following learning objectives:

- Develop a positive approach to mathematics and to appreciate its use in modeling the world
- Reason with quantitative information – in words, numbers and graphs and charts
- Clearly communicate quantitative information in words, in numbers and with graphs
- Develop strategies for solving problems

Course Outline

PROPOSED CLASS SCHEDULE: See over page. Typical class sessions consist of the introduction of a new concept or skill, worked out in a number of different examples or case studies, interspersed with similar exercises to give students the chance to practise skills on their own and in small group situations. Active participation in class activities and discussion is necessary for students to master the concepts and skills. Over half of the semester's classes will take place in the computer lab where students learn to use the statistical software package Datadesk/Excel.

Students are expected to work six to twelve hours per week outside the classroom, including at least 2 hours per week of computer work outside class times. *Late work will not be accepted without a valid excuse.*

Class quizzes: There will be a quiz every two weeks on the material covered in the previous weeks. The quiz questions will be related to, and similar to, the homework and lab questions. They may involve both handwritten responses and computer work using the Datadesk statistical software package. If the questions required DataDesk the quiz will take place during the computer lab session (Fridays).

Homework. Written homework will be set on a Tuesday/Wednesday class, and you will have a week to complete the question sheet. ***Homework is not group work.*** While you may work with other students to understand the material, your answers must be written up individually.

Computer Lab work. Most Fridays there will be a computer lab session. Each lab, you will have a Datadesk worksheet to work through, and at the end you will have a DSK (Datadesk) file, and often a Word/Excel or other presentation document. Save your work with appropriate

file names in order to find your work easily at a later date.

Final Examination: The final examination will be on the material covered throughout the whole semester. A student *must pass the final examination* (that is, obtain more than 50%) in order to pass the course.

Blackboard site: Students will find all class handouts and other related information on the course *Blackboard* site.

Textbooks

Title	Author	Publisher	ISBN	Required
Stats: Data and Models	De Veaux, Velleman, Bock	Pearson (3rd or 4th edition)	9780321986498	No

Attendance Policy

Students studying at The American University of Paris are expected to attend ALL scheduled classes, and in case of absence, should contact their professors to explain the situation. It is the student's responsibility to be aware of any specific attendance policy that a faculty member might have set in the course syllabus. The French Department, for example, has its own attendance policy, and students are responsible for compliance. Academic Affairs will excuse an absence for students' participation in study trips related to their courses.

Attendance at all exams is mandatory.

IN ALL CASES OF MISSED COURSE MEETINGS, THE RESPONSIBILITY FOR COMMUNICATION WITH THE PROFESSOR, AND FOR ARRANGING TO MAKE UP MISSED WORK, RESTS SOLELY WITH THE STUDENT.

Whether an absence is excused or not is ALWAYS up to the discretion of the professor or the department. Unexcused absences can result in a low or failing participation grade. In the case of excessive absences, it is up to the professor or the department to decide if the student will receive an "F" for the course. An instructor may recommend that a student withdraw, if absences have made it impossible to continue in the course at a satisfactory level.

Students must be mindful of this policy when making their travel arrangements, and especially

during the Drop/Add and Exam Periods.

Grading Policy

Grading:

Attendance	10 points
Homework/Project/Lab Work	40 points
Class quizzes (including computer)	25 points
Final examination	25 points

Other
