# Statistics for Management

**Lecturer**: José Trashorras
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**Department:** LSO
**Semester**: 1 and 2

**Course level**: L3 Undergraduate
**Domain**: Business (quantitative methods)
**Teaching language**: English
**Number of in-class hours**: 27
**Number of course sessions:** 10
**ECTS**: 3

## Course description and objectives

The main goal of this course is to acquire the fundamental concepts and tools of inferential statistics used in management science, with a particular emphasis on developing an intuitive understanding of the topics covered. Through a variety of applications drawn primarily from the field of management, the course aims to develop the ability to interpret and analyze quantitative data from a sample drawn from a population of interest.

## Prerequisites

Students are expected to have a solid grounding in basic mathematical concepts, including derivatives, integrals, and probability theory.
They should also be familiar with introductory statistics, covering topics such as random variables, expected value, variance, probability density and distribution functions, and cumulative distribution functions

## Learning outcomes

Upon completion of the course, students will have learned to infer information about a statistical population from a sample, while accounting for the risks and margins of error involved.

## Assignments and grading

The overall grade is determined by averaging the grades from the continuous assessment and the final exam.
The continuous assessment grade is based on a written exam, adjusted by the teaching assistant's evaluation of the student's participation in problem-solving sessions.
The final exam consists of a series of exercises that must be solved in a timed written test.

The numerical grade distribution will dictate the final grade. The passing grade for a course is 10/20.

**Attendance**
Attendance is mandatory. Students are expected to attend all classes, arrive on time, and stay for the entire session. Repeated absences or lateness may affect the final grade.

**Class Participation**
Active participation is encouraged, as it contributes to making classes more engaging and instructive. Students are expected to come prepared and contribute thoughtfully to discussions. When participation is part of the course assessment, it is evaluated based on the quality of contributions rather than their quantity.

**Exam Policy**
Students are not allowed to bring any materials into exams, except those explicitly authorized by the instructor. Unexcused absences from exams or failure to submit assigned cases will result in a grade of zero when calculating final averages. All exams must be submitted at the end of the examination period.

**Communication and Grading**
All questions or concerns regarding grading or course policies must follow the official procedures. No direct negotiation with instructors about grades or assessments is permitted.

## Course structure

| Session | Topic |
|---|---|
| **1** | Review of Probability and Random Variables |
| **2** | Review of Probability and Random Variables |
| **3** | Introduction to Inferential Statistics / Point Estimation |
| **4** | Point estimation |
| **5** | Confidence Interval Estimation |
| **6** | Hypothesis Testing |
| **7** | Hypothesis Testing |
| **8** | Introduction to Linear Regression |
| **9** | Introduction to Linear Regression |
| **10** | **Final Exam** |

## Bibliography


- Sheldon Ross «A first course in probability » Prentice Hall
- Larry Wasserman « All of statistics » Springer-Verlag


## Lecturer's biography

José Trashorras received a PhD in Applied Mathematics from Paris-Diderot University in 2001. He was a visiting assistant professor at the University of Massachusetts Amherst (USA) in 2002-2003 and a Marie Curie Fellow at the University of Warwick (UK) in 2003-2004.

## Moodle

This course is on Moodle: **No**
Slides, exercises sheets and on-line quizzes are available on **Teams**

## Academic integrity

Be aware of the rules in Université Paris Dauphine about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. Working as part of a group implies that you are an active participant and fully contributed to the output produced by that group.