FUNDAMENTALS OF PROBABILITY AND
STATISTICS

ASIGNATURAS CONVERGENTES
Professor: FELIX LADSTATTER
E-mail: fladstatter@faculty.ie.edu

- Academic year: 19-20
- Degree course: FIRST
- Semester: 1º
- Category: BASIC
- Number of credits: 6.0
- Language: English

PREREQUISITES
Basic knowledge of Algebra.
SUBJECT DESCRIPTION
Are numbers unexciting and lacking in relevance to everyday life? No! Who is most likely to win an election? Does hiring a new coach typically lead to better performance by a football team in its next season? Is it true that certain restaurant locations are doomed to failure? Should we be convinced by new evidence associating the consumption of red wine with better health? Discovering patterns, testing ideas and making sense of numbers are important aspects of everyday life.

Statistics is the science of data. It uses mathematical tools to collect, organize, analyze, interpret and present data. In the business world, statistics is used to predict sales of a new product, assess the attractiveness of a business opportunity, increase customer satisfaction, choose between different investment possibilities, analyze and improve production processes, etc… In the social sciences, statistics helps identify interesting questions, explore data sets, and correctly interpret results to make solid, evidence-based conclusions. In addition, an understanding of statistics is critical when reading and interpreting research articles and when conducting your own research.

In this introductory course, we will focus on understanding some of the foundational concepts in statistics. In the first part of the course, we will cover descriptive statistics of a single variable and the relationship between variables which provide a way to work with data that is more compact and easier to interpret than working with all of the data at once. In the second part of the course, we will focus on probability theory which includes random variables, and the most important probability distributions. This will give us the basic knowledge and tools to understand inferential statistics. In the third part of the course, we will learn about inferential statistics and the process of using data in order to develop research hypotheses and to draw conclusions. The third part also covers several important methods that allow research hypotheses to be tested.

As a first course in statistics, Fundamentals of Probability and Statistics is designed to be accessible. Although you will learn a set of important mathematical definitions that serve as foundations of basic statistics, the emphasis of the course will be on statistical concepts and logic, statistical thinking, and the use of statistics, including hand-on skills in using statistical software (SPSS), rather than on theory and mathematics.

Students enrolled in this course will learn how to examine, organize, and read data and how to make informed decisions. In addition, this course provides the theoretical and practical bases for other courses in the data and social science degrees, such as Fundamentals of data analysis, Simulating and modelling to understand change, Probability and statistics for data management and analysis, and others.
OBJECTIVES AND SKILLS
The objective of this course is to provide students with the tools to delve into data sets and to make use of this information in business, social and behavioral applications. At the end of the course; students should be able to:

- Describe data by means of graphs or numbers, and understand in which context each of these descriptive tools is useful;
- Improve their skills in reading, understanding, and explaining to others the results and statistical analyses reported in research articles;
- Acquire the necessary knowledge to select and apply the appropriate statistical procedures for several basic research situations;
- Understand patterns of randomness that can affect business and social activities and relate them to known probability distributions;
- Understand the differences between population and sample distributions;
- Read the most common distribution tables;
- Develop basic skills in conducting statistical tests using computer software (SPSS).

Additionally, the course will focus on the acquisition or reinforcement of generic skills such as the ability to:

- summarize and present information in a meaningful way;
- build an abstract model to address an economic or social problem;
- quickly identify the tools that need to be used in business situations.
METHODOLOGY

This 30-sessions course will span 15 weeks, each week consisting in general of a double session. This format is designed to provide sufficient time to: (1) carefully work through the main topics presented in the weekly reading, (2) discuss concepts that are particularly challenging, and (3) practice interpreting, using and applying statistics via in-class problem sets and SPSS exercises. Three sessions of the course have been reserved for the two exams (one session for the first exam and two sessions for the final exam). Two sessions (27&28) will be used as review sessions to prepare for the final exam. The sessions will combine various teaching methodologies including lectures, interactive discussion, and individual and group exercises using SPSS.

Bringing your laptop is mandatory to all sessions, although its use (or not) will be decided by the professor.

Prior to all sessions, you should read assigned textbook sections. Reading the textbook in advance will allow you to get the most out of each lecture. When reading the textbook sections prior to each lecture, you must look at the examples but you do not need to solve them.

Throughout the course, a group project has to be elaborated. This project is an integral part of the Fundamentals of Probability & Statistics course. It consists of the identification of a real-world problem, formulation of appropriate hypotheses, collection and statistical analyses of data, and presentation and interpretation of obtained results. Throughout the semester, each group (composed of 4-5 students) will be asked to submit 4 sections. These sections will be reviewed by the professor and returned to the group. All the corrections and suggestions provided by the professor should be incorporated into subsequent sections. A final report and video are due at the end of the course.

On weekly basis, a brief quiz covering previously taught material will be given. These quizzes are meant to test your overall understanding of the material and will help the professor assess the overall performance and evolution of the class.

Mystatlab

Students will have access to Mystatlab, an interactive learning platform for students. The exercises in Mystatlab reflect the approach and learning style of your textbook, and regenerate algorithmically to give you unlimited opportunity for practice and mastery.

Most exercises include learning aids such as guided solutions, sample problems, and extra help as you’re working through them, and they offer helpful feedback when you enter incorrect answers. A variety of multimedia resources are also available in the study plan exercises. You can link to the ebook, video clips, and animations to improve your understanding of key concepts. For more information go to: www.pearsonmylabandmastering.com/northamerica/mystatlab/

In the beginning of the course, you will be given student registration instructions.
<table>
<thead>
<tr>
<th>Teaching methodology</th>
<th>Weighting</th>
<th>Estimated time a student should dedicate to prepare for and participate in</th>
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<tbody>
<tr>
<td>Lectures</td>
<td>30.0 %</td>
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<tr>
<td>Discussions</td>
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<tr>
<td>Exercises</td>
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<td>30 hours</td>
</tr>
<tr>
<td>Group work</td>
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</tr>
<tr>
<td>Other individual studying</td>
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<td>30 hours</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100.0 %</strong></td>
<td><strong>150 hours</strong></td>
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PROGRAM

PART 1: DESCRIPTIVE STATISTICS

CONTENT
The theoretical content of this course consists of three parts and each part is divided into several units. The first part covers descriptive statistics and focuses on the graphical and numerical procedures that are used to summarize, organize, and process data. The second part discusses probability axioms and basic discrete and continuous probability distributions. The third part covers the basic concepts of inferential statistics such as samples and populations, hypothesis testing and specific statistical test such as the t-test (related and unrelated), the F-test, and ANOVA (one-way and two-way).

All the required readings are from the compulsory textbook “Statistics for Business and Economics”, Macclave, Benson & Sincich, 13th global edition. Reading a section means reading the text and doing the examples.

Note: The following description of the material covered is tentative. An attempt will be made to cover all listed topics. However, the pace in the classes will depend on the group performance.

SESSION 1
Statistics, Data, and Statistical Thinking
Content:
Introduction and presentation of the course syllabus and objectives. Basic statistical concepts. Variables and levels of measurement. Data cleaning and preparation. Introduction of the statistical software package SPSS on a basic level including the creation of variables, the usage of the pull-down menus and the different graphical user interfaces.

Reading:
Chapter 1: Sections 1.1 – 1.7.

Assignments to prepare for class:
Do the reading of chapter 1, 2 & 3.
Install, if available, the software SPSS on your laptop computer.

SESSION 2
Statistics, Data, and Statistical Thinking
Content:
Introduction and presentation of the course syllabus and objectives. Basic statistical concepts. Variables and levels of measurement. Data cleaning and preparation. Introduction of the statistical software package SPSS on a basic level including the creation of variables, the usage of the pull-down menus and the different graphical user interfaces.

Reading:
Chapter 1: Sections 1.1 – 1.7.
Assignments to prepare for class:
Do the reading of chapter 1, 2 & 3.
Install, if available, the software SPSS on your laptop computer.

SESSION 3
Methods for Describing Sets of Data Part 1
Content:

Reading:
Chapter 2: Sections 2.1 – 2.5

Group project:
Submit Section 1 of your group project (Title, objectives, population of interest, type of sampling and sample size, proposed information gathering strategy, and survey questions; if applicable).

SESSION 4
Methods for Describing Sets of Data Part 1
Content:

Reading:
Chapter 2: Sections 2.1 – 2.5

Group project:
Submit Section 1 of your group project (Title, objectives, population of interest, type of sampling and sample size, proposed information gathering strategy, and survey questions; if applicable).

SESSION 5
Methods for Describing Sets of Data Part 2
Content:
Skewness and Kurtosis. Outliers. Relationship between two variables. Time series plot. Data presentation errors. Perform the statistical analyses covered in the sessions using SPSS.

Reading:
Chapter 2: Sections 2.6 – 2.10

SESSION 6
Methods for Describing Sets of Data Part 2
Content:
Skewness and Kurtosis. Outliers. Relationship between two variables. Time series plot. Data presentation errors. Perform the statistical analyses covered in the sessions using SPSS.

**Reading:**
Chapter 2: Sections 2.6 – 2.10

**PART 2: PROBABILITY**

**SESSION 7**

**Probability**

**Content:**

**Reading:**
Chapter 3: Sections 3.1 – 3.6

**SESSION 8**

**Probability**

**Content:**

**Reading:**
Chapter 3: Sections 3.1 – 3.6

**SESSION 9**

**Random Variables and Probability Distributions Part 1**

**Content:**
Random Variable: Definitions. Discrete random variables: probability functions and properties (expected value and variance). Simulation of a sampling distribution using SPSS.

**Reading:**
Chapter 4: Sections 4.1 – 4.4

**SESSION 10**

**Random Variables and Probability Distributions Part 1**

**Content:**
Random Variable: Definitions. Discrete random variables: probability functions and properties (expected value and variance). Simulation of a sampling distribution using SPSS.

Reading:
Chapter 4: Sections 4.1 – 4.4

SESSION 11
Random Variables and Probability Distributions Part 2
Content:
Continuous random variables. The normal distribution. Uniform distribution. Exponential distribution. Simulation a sampling distribution using SPSS.
Reading:
Chapter 4: Sections 4.5 – 4.8
Group project:
Submit Section 2 of your group work (Data cleaning and preparation).

SESSION 12
Random Variables and Probability Distributions Part 2
Content:
Continuous random variables. The normal distribution. Uniform distribution. Exponential distribution. Simulation a sampling distribution using SPSS.
Reading:
Chapter 4: Sections 4.5 – 4.8
Group project:
Submit Section 2 of your group work (Data cleaning and preparation).

SESSION 13
Sampling Distributions
Topics:
The Concept and properties of sampling Distributions. Sampling distribution of the sample mean and the central limit theorem. Sample proportion.
Reading:
Chapter 5: Sections 5.1 – 5.4

SESSION 14
Sampling Distributions
Topics:
The Concept and properties of sampling Distributions. Sampling distribution of the sample mean and the central limit theorem. Sample proportion.
Reading:
Chapter 5: Sections 5.1 – 5.4

SESSION 15
Midterm Exam
The midterm exam includes the content of Part 1 and Part 2.

PART 3: INFERENTIAL STATISTICS

SESSION 16
Inferences Based on a Single Sample: Estimation with Confidence Intervals
Topics:
Core concepts of inferential statistics. Confidence interval for a population mean. Normal $z$ statistic. Student's $t$-statistic. Large-sample CI for a population proportion. How to determining the sample size. SPSS: z-scores,

Reading:
Chapter 6: Sections 6.1 – 6.6

SESSION 17
Inferences Based on a Single Sample: Estimation with Confidence Intervals
Topics:
Core concepts of inferential statistics. Confidence interval for a population mean. Normal $z$ statistic. Student's $t$-statistic. Large-sample CI for a population proportion. How to determining the sample size. SPSS: z-scores,

Reading:
Chapter 6: Sections 6.1 – 6.6

Group project:
Submit Section 3 of your group work (descriptive statistics).

SESSION 18
Inferences Based on a Single Sample: Estimation with Confidence Intervals
Topics:
Core concepts of inferential statistics. Confidence interval for a population mean. Normal $z$ statistic. Student's $t$-statistic. Large-sample CI for a population proportion. How to determining the sample size. SPSS: z-scores,

Reading:
Chapter 6: Sections 6.1 – 6.6

Group project:
Submit Section 3 of your group work (descriptive statistics).

SESSION 19
Inferences Based on a Single Sample: Tests of Hypotheses

Topics:
The elements of a hypothesis test. Formulating hypotheses. Rejection area. Level of significance: p-value. Test of hypothesis about a population mean: Normal (z) statistic and Student’s t-statistic. Large-sample test of hypothesis about a population proportion. Test of hypothesis about a population variance.

Reading:
Chapter 7: Sections 7.1 – 7.7

SESSION 20

Inferences Based on a Single Sample: Tests of Hypotheses

Topics:
The elements of a hypothesis test. Formulating hypotheses. Rejection area. Level of significance: p-value. Test of hypothesis about a population mean: Normal (z) statistic and Student’s t-statistic. Large-sample test of hypothesis about a population proportion. Test of hypothesis about a population variance.

Reading:
Chapter 7: Sections 7.1 – 7.7

SESSION 21

Inferences Based on Two Samples: Confidence Intervals and Tests of Hypotheses

Topics:

Reading:
Chapter 8: Sections 8.1 – 8.5

SESSION 22

Inferences Based on Two Samples: Confidence Intervals and Tests of Hypotheses

Topics:

Reading:
Chapter 8: Sections 8.1 – 8.5

SESSION 23

One-Way Analysis of Variance

Topics:
Comparing two population variances: independent sampling. The F-test. Elements of a designed experiment. Response (dependent) variable, factors (independent variables), and treatments. Experimental units. The completely randomized design with a single factor (one-way unrelated ANOVA). Multiple comparisons of means. Bonferroni method

Reading:
SESSION 24

One-Way Analysis of Variance

Topics:
Comparing two population variances: independent sampling. The F-test. Elements of a designed experiment. Response (dependent) variable, factors (independent variables), and treatments. Experimental units. The completely randomized design with a single factor (one-way unrelated ANOVA). Multiple comparisons of means. Bonferroni method.

Reading:
Chapter 8: Sections 8.6; Chapter 9: Sections 9.1 – 9.3

SESSION 25

Two-way Analysis of Variance

Content:
Randomized block design (matching). Factorial experiments: two factors (two-way ANOVA). Main effects and interaction effect. Conditions Required for Valid F-Tests in Factorial Experiments.

Reading:
Chapter 9: Sections 9.4 – 9.5

SESSION 26

Two-way Analysis of Variance

Content:
Randomized block design (matching). Factorial experiments: two factors (two-way ANOVA). Main effects and interaction effect. Conditions Required for Valid F-Tests in Factorial Experiments.

Reading:
Chapter 9: Sections 9.4 – 9.5

SESSION 27

General review

Content:
Revision of the most relevant topics.

Group project:
Presentation of group projects. Each group will be asked to prepare a short video of their project.

SESSION 28

General review

Content:
Revision of the most relevant topics.

Group project:
Presentation of group projects. Each group will be asked to prepare a short video of their project.
SESSION 29

Final Exam
The final exam includes the content of the whole course (i.e., part 1, part 2, and part 3).

SESSION 30

Final Exam
The final exam includes the content of the whole course (i.e., part 1, part 2, and part 3).
BIBLIOGRAPHY

COMPULSORY
Title: Statistics for Business and Economics
Authors: Mcclave, J.T, Benson, P.G., & Sincich, T.
Publisher / Edition / Year: Pearson Education Limited / 13th edition / 2018
ISBN / ISSN: 978-1-29-222713-9
Medium: PRINT and ELECTRONIC

Required
Title: OpenIntro Statistics, 2nd Edition
Authors: Diez, David; Barr Christopher; Cetinkaya-Rundel, Mine
This textbook is supplementary and can be used to review some of the topics presented in class, to find extra exercises, etc. The textbook is offered under a Creative Commons license at https://www.openintro.org/.
Additional documents, including lecture slides, problem sets, extra readings, etc… will be posted on Campus Online throughout the semester.

For your interest
Author: Kaiser Fung
Publisher / Edition / Year: McGraw Hill / 1st / 2010
ISBN / ISSN: 9780071626538
Medium: PRINT and ELECTRONIC

Title: SuperFreakonomics: Global Cooling, Patriotic Prostitutes, and Why Suicide Bombers Should Buy Life Insurance
Author: Steven D. Levitt; Stephen J Dubner
Publisher / Edition / Year: William Morrow Paperbacks/ 1st / 2011
ISBN / ISSN: 9780060889586
Medium: PRINT and ELECTRONIC

26th June 2019
EVALUATION CRITERIA

Statistics is for most students a highly conceptual and difficult topic that typically requires a significant investment of time and energy to understand. Although doing all of the work in a course a day or two before an exam is never a good approach to learning, it would be particularly perilous in this course. It is very unlikely that you will pass this course if you do not do the reading and the exercises on a weekly basis. In this course your weekly task will be to do the reading and data analysis using SPSS. Although the chapters in the textbook are typically no longer than 20-25 pages of actual reading (excluding filler material, unassigned material and exercises), you will need to read them carefully and thoughtfully to understand the concepts.

Evaluation for the course will be determined by your performance on: (1) the weekly post quizzes, (2) the weekly assignments (SPSS exercises), (3) your group project, and (4) two exams.

<table>
<thead>
<tr>
<th>Criteria</th>
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<th>Comments</th>
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<tr>
<td>Post-quizzes</td>
<td>18 %</td>
<td>180 pts. (15 pts. per post quiz)</td>
</tr>
<tr>
<td>SPSS exercises</td>
<td>18 %</td>
<td>180 pts. (15 pts. per assignment)</td>
</tr>
<tr>
<td>Group project</td>
<td>20 %</td>
<td>200 pts.</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>15 %</td>
<td>150 pts.</td>
</tr>
<tr>
<td>Final Exam</td>
<td>29 %</td>
<td>290 pts.</td>
</tr>
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</table>

Class preparation, post quizzes and SPSS assignments

To provide an incentive to do the reading and exercises on a weekly basis, a large percentage of your grade will be based on your continuous level of preparation and proficiency. Each week up to 30 points can be achieved based on two factors:

SPSS assignments

Demonstrating knowledge of the material and SPSS skills on a weekly data analysis assignment. You can achieve up to 15 points per assignment. Assignments are announced before each class on the IE online campus.

Post quizzes

Demonstrating an understanding of the weekly material on a (computer aided) post quiz given at the end of each class. You can achieve up to 15 points per post quiz. The post quizzes consist of multiple choice questions related to the material covered in class (theory and SPSS). You have 10 minutes to complete the post quizzes.

No make up for post-quizzes will be permitted.

Group project

The overall project grade will form 20% of your overall course grade. These 20% are mainly distributed as follows:

1. Report Continuous Evaluation: 35%. The criteria for the continuous evaluation involve submitting sections on time, incorporating the professor’s suggestions in subsequent sections; respecting suggested format, and participating in the group work.
2. Final Written Report: 25%. Criteria involve format, content, and originality.
3. Video: 25% equally split between the in-class presentation and the video clip.
4. Peer Evaluation: 15%. At the end of the semester, you will be asked to give your personal evaluation of the participation of your group companions to the project. This should be done on a scale from 1 (very bad) to 10 (very good). Be as objective as possible!

Exams

26th June 2019
You will have an opportunity to demonstrate your understanding of the material in two exams, the midterm exam covers part I and the final exam will cover the material of all parts (part I+II+III). You will have one hour to complete the midterm exam and 2 hours to complete the final exam. All exams will be in the form of (computer aided) multiple choice tests with four answer possibilities of which only one answer will be the correct one. There will be a penalty for wrong answers. All exams will consist of two sections:

The first section will test your understanding of the statistical concepts covered in the assigned readings and lectures. The questions of the first section will be similar to the questions in the post quizzes.

The second section will test your ability to analyze data using SPSS and/or to understand and interpret the outcomes of these analyses. The questions of the second section will be similar to the questions in the SPSS assignments.

In order to pass the course, you need a minimum grade of 3.5 in the final exam. If your grade in the final exam does not reach the threshold value of 3.5, you will fail the course, even in the case in which your weighted average (computed using the table above) exceeds 5.0.

Notice that the date of the midterm could change and need to be considered with flexibility. The precise date will be communicated to students two weeks ahead of time.

**Before the exam starts**

Students must arrive at the exam venue in time for the start of their exam. The instructor/supervisor will not allow the entrance of students who are late, unless there is a justified cause. If the instructor/supervisor allows the students who are late to sit for the exam, they will not be granted extra time to make up for the time lost.

Students should bring all the materials needed for the completion of the exam (i.e., pens, paper, etc.) as well as all the materials expressly authorized in the syllabus. Students may not bring to the exam any electronic devices such as mobile phones, laptops or tablets. Any electronic device must be switched off and placed away from the student’s exam desk where the instructor/supervisor points out. No responsibility will be taken by the instructor/supervisor or the University in case of loss, theft or damage of any of these electronic devices.

The instructor/supervisor may indicate the students the seat designated for the completion of the exam.

Students should have nothing on their desk other than a pen and an empty piece of paper and any authorized materials needed to complete the exam. No pencil cases, wallets, ID cards or any other objects that can hide written notes will be allowed on the exam desks at the time of the examination.

**During the completion of the exam**

Once the exam has started, students will not be allowed to leave the examination room. Any student who leaves the examination room must hand over the exam, except in those cases where there is a duly justified cause and the instructor/supervisor expressly authorizes the student to return to the examination room. During the first 30 minutes of the exam, students will not be allowed to leave the examination room under any circumstances.

Students must be quiet. Once the exam has started, students cannot engage in any kind of conversation, swap exam papers, copy from their peers’ exams, etc. Additionally, students are not allowed to change their seat unless the instructor/supervisor expressly indicates so.

The instructor/supervisor must ask for silence in the event that some students talk during the completion of the exam. If the situation persists, the instructor/supervisor will write a description of the incident in the exam paper and it will be his/her choice to ask the students involved in the situation to leave the examination room.

Students are not allowed to use any electronic equipment (laptops, mobile phones, tablets, etc.) unless it has been previously authorized. Students are not allowed to use headphones.
If the instructor/supervisor suspects that a student is using fraudulent means during the completion of the exam, the instructor/supervisor must continue to observe the student closely and make him/her understand that is being watched. Any unauthorized material on the student’s desk will be confiscated by the instructor/supervisor, who will interrupt the exam and will write a description of the incident in the exam paper.

Retake exam
Those students who failed the subject in the first regular period will have to do a retake in July (except those not complying with attendance rules who are banned from this possibility).
Dates and location of the July retakes will be posted in advance and will not be changed. Please take this into consideration when planning your summer.
The maximum grade that a student may obtain in the 2nd exam session is 8 out of 10.

Bonus points
Bonus points which will be accumulated separately and will not be disclosed to the student during the course can be earned for exceptional participation and performance in the classroom and on the assignments and are included in the final grade calculation.

Class participation
Class participation will be evaluated based on the following criteria:
Quality (not quantity) of your participation in class discussion: The most important dimension of participation concerns what it is that you are saying. A high quality comment reveals depth of insight, rigorous use of case evidence, consistency of argument, and realism. Frequency refers to the attainment of a threshold quantity of contributions that is sufficient for making a reliable assessment of comment quality. The logic is simple: if contributions are too few, one cannot reliably assess the quality of your remarks. However, once threshold quantity has been achieved, simply increasing the number of times you talk does not automatically improve your evaluation. Beyond the threshold, it is the quality of your comments that must improve. In particular, one must be especially careful that in claiming more than a fair share of “airtime”, quality is not sacrificed for quantity. Finally, your attempts at participation should not be such that the instructor has to “go looking for you”. You should be attempting to get into the debate on a regular basis.
You might want to avoid being classified as one of the following types of students:
Repeaters, i.e., students that, consciously or unconsciously, make comments that are really just repeats/rephrasing of what has already been said (by other students, or you). This wastes time and adds nothing to learning.
Ramblers, i.e., students that take a lot of time to say simple things or they may tell long personal/professional stories, or they roam into topics that are not relevant, or simply make low-quality comments just to participate. They waste valuable time and prevent other students from being able to participate.
Students that have been distracted (by Facebook, etc.) or who have stopped paying attention and then, later on, when they realized they have missed a term or concept, they ask you about it.

Class attendance
Students who are enrolled for the course the first time must meet a minimum of 70% attendance. If this minimum requirement is not met, the student is automatically dropped from the course and has to repeat the course the next year.
Students who repeat the course must meet a minimum of 50% attendance. If the course schedule overlaps with other courses and the student cannot assist, the student needs to actively approach and discuss the matter with the instructor timely to work out an alternative arrangement (tutorials, projects etc.) to pass the course.
Professor: FELIX LADSTATTER
E-mail: fladstatter@faculty.ie.edu

Research Interests
Felix Ladstätter’s research focuses on intelligent data analysis techniques for the social sciences. In particular, he is interested in methods of the artificial intelligence realm such as artificial neural networks, genetic algorithms, fuzzy logic and swarm intelligence. He is also interested in occupational health psychology, particularly in burnout and how personal resources such as hardiness can modulate the development of burnout. His approach to the study of burnout integrates classical statistical analysis, computational modeling using intelligent techniques and simulation.

Academic Background
Associate Professor, IE University, Spain
PhD in Methodology, UAM, Spain (in progress)
MSc in Methodology in Behavioral Sciences, UNED, Spain
MSc in Applied Computer Science, University of Salzburg, Austria
BSc in Computer Science, University of Salzburg, Austria

Professional Experience
Production manager and President Assistant, Krono Jiangsu wood based panels Co. Ltd. (Danyang, Jiangsu, China: 2008-2010)
President Assistant, Krono Jiangsu flooring Co. Ltd. (Danyang, Jiangsu, China: 2008-2010)
Technologist, M.Kaindl (Salzburg, Austria: 1997-2000)

OTHER INFORMATION
WHEN QUESTIONS ARISE OUT OF CLASS:

Email:
If you have a question that was not answered in class, you are welcome to ask your question via email. I can be reached at: fladstatter@faculty.ie.edu. Although I will make every effort to respond to your question as quickly and thoroughly as possible, please recognize that I may not be available when you send an email. Thus, please allow me up to 48 hours to respond before sending a follow-up email.

Office Hours:
If your question cannot be properly answered via email and/or you would prefer to meet in person, please make an appointment to meet with me before or after class.
CODE OF CONDUCT IN CLASS

1. **Be on time:** Students arriving more than 5 minutes late will be marked as “Absent.” Only students that notify in advance in writing that they will be late for a specific session may be granted an exception (at the discretion of the professor).

2. **If applicable, bring your name card and strictly follow the seating chart.** It helps faculty members and fellow students learn your names.

3. **Do not leave the room during the lecture:** Students are not allowed to leave the room during lectures. If a student leaves the room during lectures, he/she will not be allowed to re-enter and, therefore, will be marked as “Absent.” Only students that notify that they have a special reason to leave the session early will be granted an exception (at the discretion of the professor).

4. **Do not engage in side conversation.** As a sign of respect toward the person presenting the lecture (the teacher as well as fellow students), side conversations are not allowed. If you have a question, raise your hand and ask it. If you do not want to ask it during the lecture, feel free to approach your teacher after class.

If a student is disrupting the flow of the lecture, he/she will be asked to leave the classroom and, consequently, will be marked as “Absent”.

5. **Use your laptop for course-related purposes only.** The use of laptops during lectures must be authorized by the professor. The use of Social Media or accessing any type of content not related to the lecture is penalized. The student will be asked to leave the room and, consequently, will be marked as “Absent”.

6. **No cellular phones:** IE University implements a “Phone-free Classroom” policy and, therefore, the use of phones, tablets, etc. is forbidden inside the classroom. Failing to abide by this rule entails expulsion from the room and will be counted as one absence.

7. **Escalation policy: 1/3/5.** Items 4, 5, and 6 above entail expulsion from the classroom and the consequent marking of the student as “Absent.” IE University implements an “escalation policy”: The first time a student is asked to leave the room for disciplinary reasons (as per items 4, 5, and 6 above), the student will incur one absence, the second time it will count as three absences, and from the third time onward, any expulsion from the classroom due to disciplinary issues will entail 5 absences.

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26th June 2019