SUBJECT: Statistics for data analysis

MASTER DEGREE: Big Data analytics ECTS: 3 QUARTER: 1

| TIME | TABL    | E FOR THE SUBJECT  |                   |   |  |  |                        |                                     |
|------|---------|--|-------------------|---|--|--|------------------------|-------------------------------------|
|      | SESSION | DESCRIPTION OF EACH SESSION  | GROUP<br>(X mark) |   | Indicate if a different lecture                          | HOMEWORK PER WEEK  |                        |                                     |
| WEEK |         |  | 1                 | 2 | room is<br>needed<br>(computer,<br>audiovisual,<br>etc.) | DESCRIPTION  | ATTEND<br>ING<br>HOURS | HOMEW<br>ORK<br>Max.<br>7H/WEE<br>K |
| 1    | 1       | Course presentation.  Chapter 1: Descriptive statistics Introduction to Statistics. Description of one variable. | Х                 |   |  | Working on the class material.                           | 1,5                    | 7                                   |
| 1    | 2       | Chapter 1: Descriptive statistics Theoretical and computational exercises.                                       |                   | Х |  | Working on the class material.  Computational exercises. | 1,5                    |                                     |
| 2    | 3       | Chapter 1: Descriptive statistics<br>Relation between two variables.   | Х                 |   |  | Working on the class material.  Computational exercises. | 1,5                    |                                     |
| 2    | 4       | Chapter 1: Descriptive statistics Theoretical and computational exercises.                                       |                   | Х |  | Working on the class material.  Computational exercises. | 1,5                    | 7                                   |
| 3    | 5       | Chapter 2. Probability theory<br>Introduction to Probability. Random variables.                                  | Х                 |   |  | Working on the class material.  Computational exercises. | 1,5                    |                                     |
| 3    | 6       | Chapter 2. Probability theory Theoretical and computational exercises.   |                   | х |  | Working on the class material.  Computational exercises. | 1,5                    | 7                                   |
| 4    | 7       | Chapter 2. Probability theory Discrete and continuous random variables.  | Х                 |   |  | Working on the class material.  Computational exercises. | 1,5                    |                                     |
| 4    | 8       | Chapter 2. Probability theory Theoretical and computational exercises.   |                   | х |  | Working on the class material.  Computational exercises. | 1,5                    | 7                                   |

| 5         | 9   | Chapter 3. Statistical inference Estimation methods. Inference under normality assumptions. | Х |          | Working on the class material.                           | 1,5 |   |
|-----------|-----|---|---|----------|--|-----|---|
|           |     | , ,   |   |          | Computational exercises.                                 |     |   |
| 5         | 10  | Chapter 3. Statistical inference Theoretical and computational exercises.                   | X | :        | Asimilar y entender la clase  Computational exercises.   | 1,5 | 7 |
|           |     |   |   |          |  |     |   |
| 6         | 11  | Chapter 3. Statistical inference<br>Inference for large samples                             | × |          | Working on the class material.  Computational exercises. | 1,5 |   |
| 6         | 12  | Chapter 3. Statistical inference<br>Theoretical and computational exercises.                | x |          | Working on the class material.  Computational exercises. | 1,5 | 7 |
| 7         | 13  | Chapter 3. Statistical inference<br>Chi-square tests. Correlation and dependence.           | Х |          | Working on the class material.  Computational exercises. | 1,5 |   |
| 7         | 14  | Chapter 3. Statistical inference Theoretical and computational exercises.                   | х |          | Working on the class material.  Computational exercises. | 1,5 | 7 |
| SUBTO     | TAL |   | • | <u> </u> |  |     |   |
| 15        |     | Tutorial classes and projects deadlines.  |   |          | Individual and group tutorial classes.                   | 3   |   |
| 16-<br>18 |     | Presentation of the project in groups   |   |          | Presentation of the project in groups                    | 3   |   |
| TOTAL     |     |   | 1 |          |  |     | 1 |