Course guide
230816 - BDR - Big Data and R Programming

Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 749 - MAT - Department of Mathematics.

Degree: BACHELOR’S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Optional subject).
BACHELOR’S DEGREE IN ELECTRONIC ENGINEERING AND TELECOMMUNICATION (Syllabus 2018). (Optional subject).

Academic year: 2022 ECTS Credits: 6.0 Languages: English

LECTURER
Coordinating lecturer: Consultar aquí / See here: https://telecos.upc.edu/ca/estudis/curs-actual/professorat-responsables-coordinadors/responsables-assignatura
Others: Consultar aquí / See here: https://telecos.upc.edu/ca/estudis/curs-actual/professorat-responsables-coordinadors/professorat-assignat-idioma

PRIOR SKILLS
Probability and Statistics

REQUIREMENTS
PROBABILITY AND STATISTICS - Prerequisite

TEACHING METHODOLOGY
Lectures
Application classes
Laboratory classes

LEARNING OBJECTIVES OF THE SUBJECT
Programming in R. Data modeling. Big Data methods and examples.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>98,0</td>
<td>65.33</td>
</tr>
<tr>
<td>Hours small group</td>
<td>52,0</td>
<td>34.67</td>
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</tbody>
</table>

Total learning time: 150 h
## CONTENTS

### Introduction to R
**Description:**

**Full-or-part-time:** 8h  
Laboratory classes: 8h

### Data modeling
**Description:**

**Full-or-part-time:** 12h  
Laboratory classes: 12h

### Big Data overview
**Description:**
A general description of the Big Data paradigm/problems/methods.

**Full-or-part-time:** 8h  
Laboratory classes: 8h

### Big Data methods
**Description:**
Predictive analytics, machine learning, data mining.

**Full-or-part-time:** 10h  
Theory classes: 10h

### Examples
**Description:**
Case example problems

**Full-or-part-time:** 14h  
Theory classes: 14h

## GRADING SYSTEM

Laboratory assessments: 100%
BIBLIOGRAPHY

**Basic:**