1. OVERVIEW

Subject area	Integration project: Open Data I and II
Degree	Bachelor's Degree in Data Science
School/Faculty	*Faculty of Science, Engineering and Design*
Year	Second
ECTS	6 ECTS (first semester); 6 ETCS (second semester)
Type	Core
Language(s)	Spanish
Delivery Mode	On campus
Semester	First and second semester

2. INTRODUCTION

Open Data Integration Project is a single project where students apply the knowledge learnt in Enhanced Computer Science and other subjects such as Skills Development. This project is divided into two parts - “Project: Open Data I' and 'Project: Open Data II' which include the content below.

The project will be set by a coordinating professor in the subject with the help of specialist lecturers in related subjects. The aim is for students to put into practice the knowledge acquired in the second-year subjects of the syllabus.

The project will have a basic common structure in accordance with the relevant content. Students will be able to propose a specific field of application. For the final assessment students will present a record of the project, describing the work done and the prototype developed. It will also be necessary to defend the project to the subject coordinator and possibly other panel members. These may include professors from related subjects.

3. SKILLS AND LEARNING OUTCOMES

Skills	Learning outcomes
Specific skills (CE, by the acronym in Spanish)	CE6. Capacity to apply the fundamental principles and basic techniques of intelligent systems. CE17. Ability to organise, complete and defend a project in the field of data science.
Basic skills	CB1: Students have shown their knowledge and understanding of a study area originating from general secondary school education, and are usually at the level where, with the support of more advanced textbooks, they may also demonstrate awareness of the latest developments in their field of study. CB2: Students can apply their knowledge to their work professionally and possess the necessary skills, usually demonstrated by forming and defending opinions, as well as resolving problems within their study area. CB3: Students must have the ability to gather and interpret relevant data (usually within their study area) to form opinions which include reflecting on relevant social, scientific or ethical matters. CB4: Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences. CB5: Students have developed the learning skills necessary to undertake further study in a much more independent manner.
Cross-curricular skills (CT, by the acronym in Spanish)	CT01: Ethical values: Ability to think and act in line with universal principles based on the value of a person, contributing to their development and involving commitment to certain social values. CT03 - Teamwork: ability to integrate and collaborate actively with other people, areas and/or organisations to reach common goals. CT04 - Written/spoken communication: ability to transmit and gather information, ideas, opinions and attitudes to

	understand and be able to act, spoken through words or gestures or written through words and/or graphic elements. CT05 - Analysis and problem-solving: be able to critically assess information, break down complex situations, identify patterns and consider different alternatives, approaches and perspectives in order to find the best solutions and effective negotiations. CT06 - Adapting to change: be able to accept, consider and integrate different perspectives, adapting your own approach as required by the situation at hand, and to work effectively in ambiguous situations. CT07. Leadership: be able to direct, motivate and guide others by identifying their skills and abilities, in order to effectively manage their development and common interests. CT08. Entrepreneurial spirit: ability to take on and carry out activities that generate new opportunities, foresee problems or lead to improvements.
Learning outcomes	•Undertake a group project to apply artificial intelligence techniques to a real case. • Gather information relative to the project field and analyse and synthesise it to understand its field of application. • Apply agile methods to develop projects, plan tasks, assign responsibility, deadlines and end products. • Hold work meetings where students use critical thinking to reflect on where they and their colleagues stand and propose innovative solutions and develop objective arguments which lead to a unified decision-making process. • Adapt to new situations by reconsidering ideas and reformulating them to reach the final objective in the most suitable way. •Generate a well-structured report which includes any conclusions reached.

	•Present the results to a specialised audience. • Defend the quality of the project before a non-specialised audience using explanatory videos of very short duration.

4. CONTENTS

Open Data I and II Integration project

1. Principles of Open Data projects
2. Metadata.
3. Statistical tools.

5. TEACHING/LEARNING METHODS

- Collaborative learning: students learn to work with other people (colleagues and professors) to find creative, comprehensive and constructive solutions to questions and problems that arise from the given case studies, using relevant knowledge and available resources in relation to each subject.
- Problem-based learning: students face problems they must solve either working as a team or independently.
- Master Lecture: presentations by the professor using the appropriate technological tools to facilitate understanding of the subject matter.
- Directed academic activities: more independent tasks (individual or in groups), involving search for information, written summaries, debates and public defence of work.

6. LEARNING ACTIVITIES

On campus:

Learning activity	Number of hours
Master classes	30
Problem-solving and case studies	10
Seminars, debates and discussions	10

Integration projects	142
Field work	8
Learning contract	4
Independent working	71
Tutorials	25
TOTAL	**300**

7. ASSESSMENT

The assessment methods, plus their weighting in the final grade for the subject area, are as follows:

Assessment system	Weighting
Project journals	40%
Self- and co-assessment (learning contract, learning outcomes)	10%
Attitude assessment tests (attitude assessment rules, class participation)	10%
Presentations and oral defence of projects	40%

On the Virtual Campus, when you open the subject area, you can see all the details of your assessment activities and the deadlines and assessment procedures for each activity.

8. BIBLIOGRAFÍA

8 principios del Open Government Data (https://opengovdata.org)

Ley 37/2007, de 16 de noviembre, sobre reutilización de la información del sector público (https://www.boe.es/buscar/act.php?id=BOE-A-2007-19814)

Mapa mundial de portales de datos abiertos (https://opendatainception.io)

Portal Europeo de Datos (https://www.europeandataportal.eu/es)

Casos de éxito alojados en el portal datos.gob.es (https://datos.gob.es/es/casos-exito)

Iniciativa de Datos Abiertos del Gobierno de España (http://datos.gob.es/es)

Open Data Charter (https://opendatacharter.net)

What is Open Data? (opendatahandbook.org)