

Degree programme	Type	Course
Bachelor in Artificial Intelligence	OB	3

Contact lecturer

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Teaching staff

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Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

No pre-requisites are needed.

Objectives

The subject's main objective is to introduce the basic concepts of social innovation, as a motor of progress, in the broadest sense. Students will be provided with the necessary tools and skills to direct and develop innovation and entrepreneurship problems, based on the valorization of AI technologies to solve real problems.

Innovation will be studied from the point of view of its social impact, both in the idea, development and commercialization of disruptive products and services based on AI, as well as in the organization and efficiency of value chains and ecosystems. Multi-actor collaboration models will be studied, in the connection of the multiple-helix (academy, business, public administration and citizenship, from the vision of territory and sustainability).

On the other hand, the potential of AI as a factor of change in social dynamics will be studied. Given the social repercussion that is analyzed, special attention will be paid to the role of citizens in this type of process, explicitly including co-creation instruments, citizen science and living labs. This course will offer a panoramic vision of the concepts and theories that allow us to understand the social repercussions of technological innovation processes in a broad sense, and of AI, in a specific way tools for co-creation of impactful solutions for/with and by the society will be provided.

Learning outcomes

- CM24 (Exercise autonomy and initiative by collaborating in diverse teams in the design and development of innovative solutions with artificial intelligence.) Exercise autonomy and initiative by

collaborating in diverse teams in the design and development of innovative solutions with artificial intelligence.

- CM25 (Critically assess the social and ethical impact to promote the inclusive and sustainable development of AI-based innovations.) Critically assess the social and ethical impact to promote the inclusive and sustainable development of AI-based innovations.
- CM26 (Integrate ethical and social responsibility into the design and development of artificial intelligence applications.) Integrate ethical and social responsibility into the design and development of artificial intelligence applications.
- CM27 (Design innovation and citizen participation processes to respond to challenges posed by different social and economic actors.) Design innovation and citizen participation processes to respond to challenges posed by different social and economic actors.
- KM39 (Describe the basic principles, mechanisms and methodologies of innovation and entrepreneurship processes.) Describe the basic principles, mechanisms and methodologies of innovation and entrepreneurship processes.
- KM40 (Identify the principles of open science, citizen participation and collaborative innovation.) Identify the principles of open science, citizen participation and collaborative innovation.
- SM51 (Discover innovation opportunities related to artificial intelligence applications in different fields using open innovation tools.) Discover innovation opportunities related to artificial intelligence applications in different fields using open innovation tools.
- SM52 (Use tools and procedures for user-centred design in the development of artificial intelligence applications with social impact.) Use tools and procedures for user-centred design in the development of artificial intelligence applications with social impact.
- SM53 (Effectively communicate entrepreneurial and innovative ideas and projects to different types of audiences.) Effectively communicate entrepreneurial and innovative ideas and projects to different types of audiences.

Contents

1. Open Innovation and social impact.
2. Science / technology / society framework. Technological innovation and social change,
3. Democratization of AI technology
4. Open innovation 2.0: quadruple helix, "social readiness level" (SRL), innovation ecosystems, public policies, the European model for AI.
5. Citizen participation processes.
6. Open innovation structures and tools: living labs.
7. Citizen Science for the generation of knowledge.
8. Science shops, Fab labs, DIY and collaborative software development platforms.
9. Creation, management, storage, annotation of data generated by the individual. Digital common good.
10. Innovative design of human-machine interaction. User experience.
11. Evidence-based policy recommendations: regulatory sandboxes

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Analysis of the innovation process	32	1.28	CM24, CM25, CM26, CM27, KM39, SM52
Open debates with experts	10	0.4	CM25, KM39, KM40, SM53
Development of the study cases	37	1.48	CM24, CM25, CM26, SM52
Project development	18	0.72	CM24, CM25, SM51, SM52, SM53
Analysis of the theoretical context	15	0.6	KM39, KM40, SM51
Individual work	20	0.8	CM24, CM25, SM52

The students will work from a methodology based on challenges, under the methodology CHALLENGE-DEVICE-SYNTHESIS, and will be carried out in work groups.

The groups will use the projects developed in other subjects of the degree as a work case, in order to develop the social impact of the results obtained.

From this point of view, Social Innovation complements the technical development of AI with a responsible approach to the identification of its potential social impacts.

The project developed by the groups will have as a deliverable a document within one of the following options (other options can be proposed by the groups):

1. A piece of software, art installation or exhibition.
2. A platform for a Citizen Science project.
3. A living lab proposal for the co-creation process of an application.
4. A scientific article on the expected social impact of the proposed technology.

To carry out the deliverable, the groups will be able to interact with students from other degrees such as Smart Cities or Computer Engineering.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

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Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Final deliverable	70%	4	0.16	CM24, CM25, CM26, KM39, SM51, SM52, SM53
State of the art and context	30%	4	0.16	CM24, CM27, KM39, KM40, SM52, SM53

There will be 2 deliverables for the evaluation:

1. Article deliveries the state of the art and context (SoA).
2. Delivery of the final deliverable (FI)

The final grade will be the result of applying the following formula:

$$\text{FINAL SCORE} = \text{SoA} \cdot 0.30 + \text{PI} \cdot 0.70$$

To pass, it will be necessary for the evaluation of each of the parts to exceed the minimum required (5) and for the total evaluation to exceed 5 points. In case of not passing the subject, the numerical grade of the file will be the lowest value between 4.5 and the weighted average of the grades. There is no single evaluation option.

Positive contributions in discussions will round the decimal places in the grade up. To qualify for the Honors Degree, it is necessary to have had a participatory attitude in class discussions. The honors resulting from calculating five percent or fraction of the students enrolled in all the teaching groups of the subject will be

awarded globally. They can only be awarded to students who have obtained a final grade equal to or greater than 9.

In case of suspending any of the deliveries, you will have the opportunity to recover the partial grade by re-sending the corrected document before the day determined by the professor. Repeating students will be able to validate the parts approved in previous years.

Failure to submit either of the two deliverables will result in a grade of "Not assessable".

The dates of continuous evaluation and delivery of work will be published on the Caronte website (<http://caronte.uab.es>) and may be subject to changes in the programming for reasons of adaptation to possible incidents. The Caronte website will always be informed of these changes, since it is understood that the Caronte website is the usual mechanism for exchanging information between teachers and students.

For each evaluation activity, a review place, date and time will be indicated in which the student will be able to review the activity with the teacher. In this context, claims may be made about the grade for the activity, which will be evaluated by the teaching staff responsible for the subject. If the student does not show up for this review, this activity will not be reviewed later.

Without prejudice to other disciplinary measures deemed appropriate, and in accordance with current academic regulations, irregularities committed by the student that may lead to a variation in the grade of an evaluation act will be graded with a zero. Therefore, plagiarizing, copying or allowing a practice or any other evaluation activity to be copied will imply failing it with a zero and it will not be possible to recover it in the same academic year. If this activity has a minimum associated mark, then the subject will be suspended.

Bibliography

- J. Moya-Kohler, F. Vilariño (2025) THE CHALLENGE-DEVICE-SYNTHESIS APPROACH: ENHANCING AI EDUCATION THROUGH INTERDISCIPLINARY ASSESSMENT, EDULEARN25 Proceedings, pp. 5963-5968. <https://doi.org/10.21125/edulearn.2025.1469>
- Eric von Hippel. Democratizing Innovation. MIT Press 2005.
- Henry Chesbrough, Wim Vanhaverbeke and Joel West. Open Innovation: researching a new paradigm. Oxford University Press. 2006.
- Ash Maurya. Running Lean. O'Reilly 2012.
- Tim Brown. Change by Design. Harper Collins, 2009.
- Thomas Lockwood. Design Thinking. Integrating Innovation, Costumer Experience, and Brand Value. Alworth Press. 2009.
- Anna Ståhlbröst and Marita Holst. The Living Lab Methodology Handbook. Luleå University Press. 2012.
- Penny Evans, Dimitri Schuurman, Anna Ståhlbröst and Koen Vervoort. Living Lab Methodology Handbook. U4IoT Consortium. 2017.
- Citizen Science: Innovation in Open Science, Society and Policy. UCL Press. 2018.

Software

- LaTeX: Software for professional text processing. <https://www.latex-project.org>
- Overleaf: Web tool for LaTeX edition. <https://www.overleaf.com>

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course

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