



FICHA TÉCNICA DE LA ASIGNATURA

Datos de la asignatura	
Nombre completo	Mind and Artificial Intelligence
Código	E000012236
Nivel	Intercambio
Cuatrimestre	Semestral
Créditos	6,0 ECTS
Carácter	Optativa
Departamento / Área	Departamento de Psicología

Datos del profesorado	
Profesor	
Nombre	Luis De Sebastián Quetglas
Departamento / Área	Departamento de Psicología
Correo electrónico	ldesebastian@comillas.edu
Profesor	
Nombre	Meritxell Pérez Ramírez
Departamento / Área	Departamento de Sociología y Trabajo Social
Despacho	303
Correo electrónico	mpramirez@comillas.edu

DATOS ESPECÍFICOS DE LA ASIGNATURA

Contextualización de la asignatura
Aportación al perfil profesional de la titulación
<p>At the end of the course the student will be able to:</p> <ul style="list-style-type: none">Clearly recognize the essential elements of artificial intelligence in the activities of daily life using a language specific to the field of artificial intelligence.Learn to think critically about the difference between mind, brain and artificial intelligence.Understand how the brain is believed to work on the cellular, network and systems level.Learn about cognitive phenomena related to brain activity.Reconstruct in detail a process of a brain activity in the form of a "process" or in the form of a "decision tree" in such a way that it can be reproducible by a programmer.Justifiably identify how artificial intelligence can help humanity to understand the world, to understand the human condition, to improve the current world, to solve problems, to create new occupations, and to improve human capabilities.Align a set of data so that it can be used in the creation of artificial intelligence applications while avoiding common pitfalls in data aggregation with AI applications.Evaluate the prospective role of artificial intelligence in different domains of people's lives (family, school, health, sports...) and

estimate its usefulness in people's daily activities.

- Reflect on the limits, ethics and future of AI.

Prerequisitos

No specific requirements.

Competencias - Objetivos

BLOQUES TEMÁTICOS Y CONTENIDOS

Contenidos – Bloques Temáticos

Topic 1. INTRODUCTION TO MIND AND ARTIFICIAL INTELLIGENCE

Topic 2. COGNITIVE SCIENCE AND AI

Topic 3: NEUROSCIENCE AND AI

Topic 4: ARTIFICIAL INTELLIGENCE

Topic 5: PROBLEM SOLVING, KNOWLEDGE REPRESENTATION AND MACHINE REASONING

Topic 6: MACHINE LEARNING, DEEP LEARNING AND NEURAL NETWORKS

Topic 7: LANGUAGE, SPEAKING AND TRANSLATION APPLICATIONS TO AI

Topic 8: INTELLIGENT AGENTS AND ROBOTS

Topic 9: SOCIAL LIFE AND AI

Topic 10: PRESENT AND FUTURE APPLICATIONS OF AI

METODOLOGÍA DOCENTE

Aspectos metodológicos generales de la asignatura

Metodología Presencial: Actividades

During the course we will carry out a series of classroom activities, including the following:

1. Knowledge Building Activity Types

1.1. Read maps, texts, charts and tables.

1.2. View images and presentations

1.3. Take notes

1.4. Discuss

1.5. Debate

1.6. Engage in a Simulation



2. Convergent Knowledge Expression Activity Types

Answer Questions

3. Participatory Divergent Knowledge Expression Activity Types

3.1. Present

3.2. Roleplay

3.3. Perform

Metodología No presencial: Actividades

During the course we will do some of the following activities at home that aim to consolidate many of the learning experiences that take place in the classroom.

1. Written Divergent Knowledge Expression Activity Types

1.1. Write an Essay

1.2. Write a Report

1.3. Generate a Narrative

2. Visual Divergent Knowledge Expression Activity Types

2.1. Create an Illustrated Map

2.2. Create a Picture/Mural

2.3. Draw a Cartoon

3. Conceptual Divergent Knowledge Expression Activity Types

3.1. Develop a Knowledge Web

3.2. Generate Questions

3.3. Develop a Metaphor

4. Product-Oriented Divergent Knowledge Expression Activity Types

4.1. Produce an Artifact

4.2. Build a Model

4.3. Design an exhibition

4.4. Create a Newspaper/News Magazine

4.5. Create a Film

4.6. Knowledge Expression Activity Types

5. Participatory Divergent Knowledge Expression Activity Types

5.1. Engage in civic actions



RESUMEN HORAS DE TRABAJO DEL ALUMNO

SUMMARY/DIVISION OF STUDENT WORK HOURS			
HORAS PRESENCIALES			
Theory Classes	Practical Classes	Academically Guided Activities	Assessments
30.00	20.00	5.00	5.00
HORAS NO PRESENCIALES			
Self-study of Theoretical Content	Self-study of Practical Content	Group Work Exercises	Revision
40.00	30.00	40.00	10.00
ECTS CREDITS			6 (180 hours)

EVALUACIÓN Y CRITERIOS DE CALIFICACIÓN

Assessment Activities	Criterion	Weighting
Exam	Pass the exam with a 5 out of 10	50%
Coursework	Upload in Moodle the exercises carried out in class	20%
Project work	Deliver and present in class a project work about one of the topics proposed in class	30%

BIBLIOGRAFÍA Y RECURSOS

Bibliografía Básica

Boden M. (2008). *Mind as Machine: A History of Cognitive Science*. Oxford: Clarendon.

Carter, M. (2007). *Minds and Computers: An Introduction to the Philosophy of Artificial Intelligence* (1st ed.). Edinburgh: Edinburgh University Press.

Russell, S. J., Norvig, P., Canny, J. F., Malik, J. M., & Edwards, D. D. (2003). *Artificial intelligence: a modern approach*. Prentice Hall Upper Saddle River.

Bibliografía Complementaria

Bechtel, W. (1998). *Philosophy of Mind: An Overview for Cognitive Science*. Hillsdale, N.J.; Hove: L. Erlbaum Associates.

Boden M. (ed.) (1990). *The Philosophy of Artificial Intelligence*. Oxford: Oxford University Press.



COMILLAS

UNIVERSIDAD PONTIFICIA

ICAI

ICADE

CIHS

GUÍA DOCENTE

2022 - 2023

Thagard, P. (2007). *Philosophy of psychology and cognitive science* (handbook of the philosophy of science). North Holland.