



COMILLAS

UNIVERSIDAD PONTIFICIA

ICAI

ICADE

CIHS

GUÍA DOCENTE

2026 - 2027

FICHA TÉCNICA DE LA ASIGNATURA

Datos de la asignatura	
Nombre completo	Fundamentos del diseño de la investigación / Foundations of research design
Código	E000014096
Título	Máster Universitario en Métodos de Investigación para Gestión Empresarial, Economía y Finanzas / Master in Research Methods for Management, Economics and Finance por la Universidad Pontificia Comillas [MIGEEF 25]
Impartido en	Máster Universitario en Métodos de Investigación para Gestión Empresarial, Economía y Finanzas [Primer Curso]
Nivel	Posgrado Oficial Master
Cuatrimestre	Semestral
Créditos	6,0 ECTS
Carácter	Obligatoria
Departamento / Área	Departamento de Gestión Empresarial
Responsable	María Jesús Belizón Cebada
Horario	Check Syllabus
Horario de tutorías	On request by email.
Descriptor	This course introduces students to the onto-epistemological foundations of research, the different views of causality and their correspondence with research design. It presents the research design process from the research question and purpose through to the method and contribution. It also covers the major ethical challenges of academic activity, from choosing a topic to the dilemmas that may arise while carrying out studies, while also examining how to conduct impactful research and how to measure research impact. The course concludes with an introduction to the legal framework governing copyright and data protection, as well as the regulation of the academic career in our country and the procedures associated with both accreditation and participation in national or European projects.

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DATOS ESPECÍFICOS DE LA ASIGNATURA

Contextualización de la asignatura
Aportación al perfil profesional de la titulación
This course lays the epistemological and ethical foundations that underpin the student's development as a rigorous, self-aware researcher. By engaging with onto-epistemological positions and their implications for research design, students build the critical judgement needed to justify methodological choices rather than apply them mechanically, a capability that distinguishes strong researchers in both academic and applied settings. The module's treatment of research ethics, impact, and the legal and institutional framework of the academic career equips students to navigate the practical realities of a research-based profession: designing meaningful and impactful research, publishing responsibly, protecting data appropriately, and understanding the accreditation and funding pathways that shape an academic trajectory. Together, these elements support the dual professional orientation of the master programme, preparing students equally for doctoral study and academic careers and for knowledge-generation roles in the private, public, or civil-society sectors.

Competencias - Objetivos	
Competencias	
Conocimientos o contenidos	
CN01	Los fundamentos, controversias, retos y contextos del trabajo de investigación, desde principios y valores democráticos, de justicia y de cuidado y con orientación hacia el logro de los Objetivos de Desarrollo Sostenible.
CN02	Las posiciones onto-epistemológicas, metodológicas y axiológicas que representan el contexto del trabajo de investigación.
CN03	Los principios y elementos integrantes del diseño de una investigación en el ámbito de la Gestión, la Economía y la Empresa.
CN04	Los principales enfoques, métodos y técnicas de investigación que permiten responder a problemas de investigación propios de la diversidad de áreas y disciplinas ligadas al territorio de la Gestión, la Economía y la Empresa.



Competencias

CM01	Identificar y formular de modo claro, fundamentado y consistente problemas de investigación relevantes tanto desde la perspectiva científico-académica como social, desde los principios y valores democráticos y el marco de los Objetivos de Desarrollo Sostenible como referentes.
CM02	Desarrollar el proceso completo de diseño y ejecución de un proyecto de investigación (en elementos y fases del proceso), consistentes con el problema de investigación, generadores de contribución científica relevante, y orientados por el impacto social.
CM04	Reportar y difundir resultados fundamentados de la investigación a través de una comunicación eficaz, oral y escrita, tanto a la comunidad de investigadores y de profesionales relacionados con las problemáticas estudiadas, como a una diversidad de públicos no especializado.

Habilidades o destrezas

HA02	Apreciar las implicaciones de los enfoques metodológicos alternativos (y sus fundamentos onto-epistemológicos y axiológicos) sobre el diseño de la investigación, sobre el análisis, interpretación y reporte de datos, y sobre la construcción de teorías.
HA03	Evaluar críticamente los diversos métodos y técnicas de investigación, así como discernir su utilidad para cada contexto de investigación.
HA04	Ser consistentes en el uso de las herramientas de investigación en el conjunto dentro del diseño y el contexto de un proyecto de investigación.
HA05	Mantener una actitud reflexiva y consciente sobre sus posiciones como investigadores y de sus necesidades formativas en términos de investigación

BLOQUES TEMÁTICOS Y CONTENIDOS

Contenidos – Bloques Temáticos

FOUNDATIONS OF RESEARCH

This block includes the following themes:

Foundations of Scientific Inquiry

1. The research process and the research onion: how philosophy shapes every choice
2. Ontology: assumptions about reality, with the practical positioning exercise
3. Epistemology: the five paradigms, positivism through social constructivism
4. Causality and axiology: how each paradigm explains cause-effect, and the role of values/reflexivity in research

Critical Thinking and Argumentation

1. Reasoning, cognitive bias, and barriers to critical thinking
2. Building and identifying arguments: structure, fallacies, evidence
3. From topic to research question: narrowing, focusing, question types



4. Evaluating sources critically: research quality and hierarchies of evidence

From Epistemology to Research Design

1. Translating paradigms into methodology: quantitative, qualitative, mixed-methods choice
2. Research strategies overview: experiments, case study, ethnography, grounded theory, action research, narrative inquiry, archival
3. AI as a research tool: usefulness, epistemological blind spots and academic integrity
4. Positioning and defending your own research proposal

ETHICS AND RESEARCH

The block is structured around four themes, each guided by one or more key questions that encourage critical reflection on research practice.

1. Introduction to Ethics in and of Research

This theme addresses the ethical foundations of research and raises the questions What is ethics in research? For what and for whom do we conduct research? It invites reflection on the public and transformative function of academic research, the role of the researcher as an agent of change, and the tensions between academic freedom and social responsibility. Key ethical frameworks and guidelines are introduced for research involving both human and non-human subjects (e.g., the Belmont Report, the Declaration of Helsinki, the European Code of Conduct for Research Integrity, and Directive 2010/63/EU of the European Parliament and Council on the protection of animals used for scientific purposes).

2. Scientific Integrity, Authorship, and the Ethical Use of Technologies

Guided by the questions How do we conduct research with integrity? How do we share and acknowledge knowledge?, this block focuses on good scientific practices, the prevention of plagiarism, data fabrication and manipulation, and responsible authorship. It also addresses conflicts of interest, ethical criteria for academic collaboration and publication, and the ethical, transparent, and critical use of digital tools and generative artificial intelligence.

3. Ethical Data Collection and Management

This theme revolves around the questions How do we relate to research participants (both human and non-human)? What do we protect, and how? It covers the principles of informed consent, confidentiality, data protection, and the ethical treatment of vulnerable populations. It also examines the role of ethics committees, the preparation of the Ethics Annex, current data protection regulations, and emerging challenges related to open science and data reuse.

4. Critical Perspectives and Situated Epistemologies

Guided by the questions From where and for what purpose do we produce knowledge? What kind of world do we help shape?, this theme invites participants to challenge the presumed neutrality of scientific knowledge and to incorporate critical perspectives such as epistemic justice, intersectional feminism, ethics of care, decolonial ethics, and emerging approaches such as animal ethics, environmental ethics, and spiritual ethics. The aim is to reflect on the ethical-political conditions under which research is conducted, with an emphasis on the transformative responsibility of knowledge.

RESEARCH CAREER PATHWAYS

This block is designed for research students interested in understanding the structure, dynamics, and professional pathways associated with research-oriented careers. The course provides a practical and strategic overview of academic and research careers across academia, industry, and the public sector, while introducing participants to the institutional, professional, and personal dimensions of research development.

The contents are structured into the following themes:



1. Research careers

- What is a research career?
- Academia, industry, and the public sector
- Evaluation criteria in academic careers

2. Academic and Professional Development

- Structure and dynamics of the PhD program
- Role of the supervisor and the institutional environment
- Building professional networks: conferences, research stays, and academic societies
- Career transitions: PhD applications and the academic job market

3. Foundations of a sustainable research career

- Collaboration and co-authorship
- Continued learning
- Time management and wellbeing

CITIZEN SCIENCE AND SCIENCE FOR CITIZENS

This block includes the following themes:

CITIZEN SCIENCE

Citizen Science

- a. Models of participation: contributory, collaborative, and co-created.
- b. Levels of citizen involvement in the research cycle.
- c. Open science, social innovation, and the quadruple helix model (university-business-government-society).

Project Design and Management

- a. Participatory methodologies: co-creation, living labs, scientific crowdsourcing.
- b. Collection, validation, and management of citizen data: biases, data quality, and ethics.
- c. Use of technologies (apps, digital platforms, open data).

Impact, Evaluation, and Governance

- a. Social, environmental, educational, and political impacts of projects
- b. Evaluation of results and impact (policy impact, community impact)
- c. Governance, ethics, and recognition of participants.

SCIENCE FOR CITIZENS

Science-Society Relations and Public Perception

- a. Scientific culture and literacy
- b. Social perception of science and trust in institutions
- c. Science communication and the fight against misinformation



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Knowledge Transfer, Impact, and Decision-Making

- a. Knowledge transfer (policy making, evidence for decisions)
- b. Science as the basis for public policy (evidence-based policy)
- c. Science applied to social challenges (sustainability, health, inequality)

Science, citizenship, and democratic engagement

- a. Science as a tool for democratic participation
- b. Rights, inclusion, and equity in access to knowledge
- c. The university's role as a social actor

METODOLOGÍA DOCENTE

Aspectos metodológicos generales de la asignatura

A combination of lectures, seminars and workshops will be used. Students are expected to engage in the proposed pre- and post-class work.

Regarding the use of artificial intelligence, this course is classified as Level 3 (permitted with special conditions), in accordance with the institutional AI Assessment Scale (Perkins et al., 2024). This means that students may use AI to collaborate in specific tasks, provided that they critically evaluate and modify any AI-generated content and thoroughly document the use of AI. Unrestricted or uncontrolled use of AI is not allowed. Students must demonstrate critical capacity in order to ensure academic integrity and their own learning.

For non-generative AI, students must specify which tools were used and in which parts of the work they were applied. For generative AI, students must specify which tools were used, the prompts or instructions provided, and the exact sections of the work where they intervened. The use of generative AI for producing written text or doing data analysis is strictly prohibited.

RESUMEN HORAS DE TRABAJO DEL ALUMNO

HORAS PRESENCIALES		
AF1. Lecciones de carácter expositivo. Sesiones en las que los/as docentes exponen contenidos concretos, que pueden estar apoyados o no por recursos tecnológicos, en la que existirán periodos de explicación a cuestiones o dudas planteadas por los/as estudiantes.	AF2. Exposición pública de temas o trabajos. Los/as estudiantes presentarán en el aula de manera individual o en grupo, con apoyo de medios audiovisuales, los temas que les hayan encargado los/as docentes o que hayan elegido libremente, dentro de un conjunto de contenidos de la asignatura.	AF3. Ejercicios y resolución de casos y de problemas. Sesiones en las que los/as docentes realizan de manera individual o junto con los/as estudiantes problemas, casos o cualquier tipo de ejercicio pertinente vinculado con la actualidad de la materia y/o con empresas u organizaciones reales, para la adquisición de competencias de las asignaturas.
20.00	20.00	20.00
HORAS NO PRESENCIALES		



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AF3. Ejercicios y resolución de casos y de problemas. Sesiones en las que los/as docentes realizan de manera individual o junto con los/as estudiantes problemas, casos o cualquier tipo de ejercicio pertinente vinculado con la actualidad de la materia y/o con empresas u organizaciones reales, para la adquisición de competencias de las asignaturas.	AF7. Estudio y lectura organizada. Tiempo de estudio por parte del estudiante dedicado a preparar, profundizar y analizar en los contenidos de las asignaturas o materias, así como realizar ejercicios prácticos.	AF8. Trabajos monográficos y de investigación, individuales o colectivos. Los/as estudiantes trabajan de manera individual o colectiva un tema objeto de estudio relacionado con una asignatura o materia y/o con empresas u organizaciones reales, mediante la búsqueda de información, el análisis y la elaboración de documentos.
50.00	20.00	30.00
CRÉDITOS ECTS: 6,0 (160,00 horas)		

EVALUACIÓN Y CRITERIOS DE CALIFICACIÓN

El uso de IA para crear trabajos completos o partes relevantes, sin citar la fuente o la herramienta o sin estar permitido expresamente en la descripción del trabajo, será considerado plagio y regulado conforme al Reglamento General de la Universidad.

Actividades de evaluación	Criterios de evaluación	Peso
Block 1 MCQ Test (30%) First draft of your research proposal (35%) Second draft of your research proposal (35%)	Students will be assessed on their knowledge of the first theme: foundations of scientific inquiry. Students will be assessed on their abilities to (i) chose a relevant research topic based on the inquiry of high quality sources and (ii) to justify its impactful contribution. Students will be evaluated in their ability to incorporate feedback from the first round and to identify and justify the most suitable methodology for their research questions.	50 %



Block 2 Active participation in class (20%) Individual ethical reflection (40%) Ethics integration in research (40%)	Students will be assessed on their engagement in the discussion of real-world ethical dilemmas, their contributions to collective debates, and their respect for diverse perspectives. Students will submit a written reflection (approximately 2 pages) that identifies an ethical dilemma relevant to their research and proposes strategies to address it. Assessment will focus on the clarity of argumentation and the student's capacity for critical analysis. Students will prepare a document related to their own research project or, where appropriate, to a case study provided during the course, addressing the main ethical considerations relevant to the design and conduct of the research. The nature and format of the document will be tailored to the project's characteristics and stage of development. The assessment will focus on the student's ability to identify specific ethical implications and translate them into methodological decisions that support the responsible conduct of research.	17 %
Block 3 Participation and engagement in class activities (30%) Research Portfolio (70%)	Active participation in discussions, workshops, and reflective activities related to research-oriented careers and academic development. Quality, coherence, and professional relevance of the portfolio materials developed throughout the course.	17 %
Block 4 Class participation and assignments (60%) Research proposal (40%)	Critical Analysis Design and impact	17 %

BIBLIOGRAFÍA Y RECURSOS

Bibliografía Básica

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- Perkins, M., Furze, L., Roe, J., & MacVaugh, J. (2024). The AI Assessment Scale (AIAS): A framework for ethical integration of generative AI in educational assessment. *Journal of University Teaching & Learning Practice*, 21(6). <https://doi.org/10.53761/q3azde36>