UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Transferable Research Skills Laboratory - Turn A

2627-2-F5109P011-T1

Learning area

RESEARCH METHODS IN EXPERIMENTAL PSYCHOLOGICAL SCIENCES

Learning objectives

Knowledge and Understanding

At the end of the course, students will acquire knowledge of the main phases of scientific research design and management, including literature review, funding opportunities, proposal writing, ethical aspects of research, dissemination strategies, and peer-review processes. Students will understand the principles underlying the development, evaluation, and communication of research projects in psychological sciences.

Applying Knowledge and Understanding

At the end of the course, students will be able to identify research gaps, formulate research questions and objectives, develop a research proposal, select appropriate methodological approaches, evaluate funding opportunities, and prepare effective strategies for disseminating scientific results through conferences and scientific publications.

Making Judgement

At the end of the course, students will be able to critically evaluate scientific literature, assess the quality and impact of scientific publications, identify strengths and weaknesses of research projects, and formulate independent judgments regarding methodological choices, ethical implications, and the scientific relevance of research proposals.

Communication Skills

Students will acquire communication skills that allow effective interaction with professionals from different cultural and scientific backgrounds. Through oral presentations, poster presentations, peer-review activities and group discussions, students will learn how to present research projects and communicate scientific findings clearly and effectively to both specialist and non-specialist audiences, using appropriate scientific terminology.

Learning Skills

Students will develop the ability to independently search, evaluate and use scientific literature and bibliographic resources. They will acquire skills necessary for the autonomous development of research projects, continuous updating of scientific knowledge, and critical reflection on research practices throughout their professional and academic careers.

Contents

The course will provide the tools to design and execute a research project. Students will be presented with the entire path leading to a research project, from literature review to result dissemination. The course will illustrate how to modulate the project at the different steps from the formulation of the initial proposal to the communication of the results. Students will have the opportunity to practice their knowledge designing a project, evaluating their peers' proposals, and practicing the different styles of disseminating the research results

Detailed program

1. Writing an effective research proposal

- Identify a research issue and the gap in the literature
- How to fund your research: identifying the “producer” of the project
- Outline the state-of-the-art of the theoretical and methodological framework
- Identify objectives and deliverables
- Defining the method to achieve the research objectives
- Ethical Implications
- Research impact, risk analysis and contingency plans
- Time management and project planning

2. Disseminating and Communicating research results

- The research products in a conference: talks and posters
- The journal article: preparing the manuscript (sections and formats)
- The journal article: the submission process (APA style and the guidelines for the authors)
- LLM applications in scientific research and communications
- Peer review
- Science communication and public engagement

Prerequisites

Students are expected to possess basic knowledge of research methods and scientific reasoning in psychology. Familiarity with reading scientific articles in English is recommended.

Teaching methods

The course will be held in presence and attendance is required.

Teaching with frontal lessons and laboratory activities:

12 2-hour classes combining Didactic Delivery (DE) and Didactic Interaction (DI). Lectures will introduce the theoretical and methodological aspects of research proposal development, funding opportunities, research dissemination and science communication. Interactive activities will include discussion of published research, exercises on research proposals, peer-review activities and group discussions.
1 8-hour Didactic Interaction (DI) activity with students: hands-on conference simulation including paper evaluation, preparation of a talk and/or poster presentation, peer-review activities and discussion of research projects.

No remote teaching activities are planned

Assessment methods

The last class will host the simulation of a conference: students will be asked to prepare their own contribution for the simulated conference, on the basis of the work carried out during the course. By doing so they will demonstrate the ability to identify relevant information for the development of a research project, critically evaluate scientific literature, prepare a research proposal, and communicate research ideas and results through oral and/or poster presentations.

The course is assessed on a pass/fail basis and no numerical grade is assigned.

Successful completion of the course requires:

attendance of at least 70% of the scheduled teaching activities;
timely submission of the assignments, as requested during the course;
active participation in the practical exercises, discussions, peer-review activities and conference simulation activities carried out during the course;
positive evaluation of the activities and materials developed during the course;
attendance and participation in the final conference simulation session.

The assessment reflects the achievement of the learning outcomes described in the syllabus, with particular reference to critical evaluation of scientific literature, development of research proposals, scientific communication skills, and collaborative work within a research environment.

Textbooks and Reading Materials

Detailed information about the teaching material will be published on the e-learning page associated with the course.

Sustainable Development Goals

QUALITY EDUCATION | GENDER EQUALITY