



DIPARTIMENTO di BIOLOGIA



UNIVERSITÀ
DI PISA

CORSO DI DOTTORATO IN BIOLOGIA

Ph.D. COURSES

Offerta didattica esclusiva

2024/2025

RESEARCH PROFESSIONAL SKILLS

Course coordinator: Alessandro Massolo (Università di Pisa)

Schedule: yearly course 2024/2025

Duration: 36 hours

Description: The course focuses on core skills that are fundamental for a young researcher to achieve in early stages of her career. The course is organized in three blocks: I) one on scientific writing; II) one on literature search and management, and ethical aspect related to it; III) the last in on general skills on project proposal writing, scientific communication and formal assessment of scientific contributions.

The course is hands-on based, and students will be asked to write up pieces of papers, projects, presentations and to run literature searches and organize their literature using specific software for literature management.

Prerequisites: None required.

Program divided in Blocks:

Specifically, the first block will be centered on the structure, content and style in scientific writing. This will include writing of projects, reports, PhD thesis, and scientific publications. It will be minimally focused on the use of the English language, just provide some basic suggestions on how to improve the writing style in scientific writing to ensure clarity and synthesis.

The second block will deal on where and how to search for scientific literature, and on how to organize it. It will introduce to the three most used citations platforms (Scopus, Web of science, PubMed) and how to elaborate a search string. It will also include a component related to the ethical use of literature, editorial copyright and plagiarism.

The third block is intended to be general in nature and will include lectures and activities related to how to prepare an efficient presentation of a scientific work, and on the statistics used in scientometry to estimate the impact and quality of scientific journals, publications and of the overall production of a researcher. It will also provide lectures on how to prepare the research project proposal needed at the beginning of the program, and to carry out and write up a literature review, starting from the various types of reviews and their structures to the way to actually run it using standard international protocols.



DIPARTIMENTO di BIOLOGIA



UNIVERSITÀ
DI PISA

CORSO DI DOTTORATO IN BIOLOGIA

ADVANCES IN BIOLOGY I

Course coordinator: Daniele Campa (Università di Pisa)

Schedule: yearly course 2024/2025

Duration: 12 hours

Description: The course focuses on cutting edge topics in the field of Biology. The course will be structured as oral presentations that will be held online. The aim of the course is to give to young researchers an overview on what's new in Biology in order to help them to broaden their horizon and show how renown scientists overcome obstacles in the multidisciplinary landscape of Biology.

Prerequisites: None required.

EXPERIMENTAL AND SAMPLING STUDY DESIGN

Course coordinator: Fabio Bulleri (Università di Pisa)

Schedule: January 2025

Duration: 12 hours

Description: The course focuses on the design of studies and experiments in biology, a fundamental skill for young researchers in biological sciences

The course is hands-on based and students will be asked to write up and present their experiments

Prerequisites: None required.

Preliminary program: The hypothetico-deductive approach; Hypothesis testing; Correlative versus experimental studies; Procedures for selecting observational units; Common pitfalls and mistakes underpinning confounded studies; Retrospective and prospective studies; Cohort studies.