

Strategies for Research: Project Development and Paper Writing (C002825)

Course size (nominal values; actual values may depend on programme)

Credits	3.0	Study time	90 h	Contact hrs	60.0 h
---------	-----	------------	------	-------------	--------

Course offerings and teaching methods in academic year 2018-2019

A (semester 1)	English	lecture: plenary exercises	20.0 h
		seminar: coached exercises	40.0 h

Lecturers in academic year 2018-2019

de la Pena, Eduardo	WE11	lecturer-in-charge
Perry, Roland	WE11	co-lecturer

Offered in the following programmes in 2018-2019

	crdts	offering
International Master of Science in Agro- and Environmental Nematology	3	A

Teaching languages

English

Keywords

Scientific journals, scientific books, project proposals, evaluation, refereed papers

Position of the course

Research is funded via competitive research calls by national and international agencies to which proposals have to be submitted. Research proposals can only be successful if their strategy and content meet the requirements of innovation and quality. The outcome of research is published in scientific journal and books. Publications in peer research journals prove the expertise of the scientist in the area of the research proposal, and increase the value of a proposal.

Contents

Introduction to and discussion of:

- National and international research funding agencies: programmes for young researchers, funding, conditions
- EU funding
- International funding programmes
- Research programs: basic, applied, research consortia
- Development of a research strategy: literature, ideas, research methods
- Writing of a research proposal: hypotheses, goals, research methods, milestones, deliverables, intellectual property, partners, time schedule
- Reporting
- Scientific journals: science citation index, impact factor, books, review process
- Process of paper writing: definition of goals, collection of data, analysis, literature study, development of frame of paper
- Critical evaluation of research papers: review papers, taxonomy, ecology, physiology, molecular interaction, management, etc.
- Science communication and social media
- Science and international cooperation and development

Initial competences

Students should have: (1) a basic academic knowledge of biology (acquired in bachelors and 1st year classes), (2) a logic mind, (3) access to scientific literature on nematology (data mining, processing and communication, 1st year) .

Final competences

- 1 Develop and conduct innovative research and report on it in a scientific way.
- 2 Demonstrate a thorough understanding of the most recent scientific developments of at least one of the subjects of the disciplines present in the program and relate it to other subjects.
- 3 Show creativity to formulate hypotheses and to discover new relationships and to formulate an opinion derived from basic data and information which may be limited, incomplete or contradictory.
- 4 Plan and execute target orientated experiments or simulations and critically evaluate the collected data.
- 5 Collect, register, process, analyse in a quantitative and structured way the collected data.
- 6 Assimilate, analyse, critically evaluate and synthesize information in a structured way from published international scientific literature and complex information sources.
- 7 Be able to deal with changes in conditions or planning of a research process.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture: plenary exercises, seminar: coached exercises

Extra information on the teaching methods

Formal lectures with discussions of papers and projects. Exercises in
(1) writing a short research proposal following the guidelines of FWO
(2) critical analysis of research papers
(3) bibliometric analysis of scientific literature

Learning materials and price

- Programs of research funding agencies
- Papers on various research subjects

References

Course content-related study coaching

Eduardo de la Pena and Roland Perry discuss the course content and guide the students through the different topics presented in the course

Evaluation methods

continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Examination methods in case of periodic evaluation during the second examination period

Examination methods in case of permanent evaluation

Assignment

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

Extra information on the examination methods

Based on the result of the exercises.

Calculation of the examination mark

100% based on the result of the final assignment which is a 5-pages project proposal