

Course Unit: 93508 - Research methodologies applied to technology

Year 1 Semester 2 ISCED Code: 721 ECTS: 2.5

Type of Course Unit: Compulsory Delivery Mode: Face-to-face Language of Instruction: Portuguese

COURSE COORDINATOR: Olga Maria Reis Pacheco de Amaral

HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
62.5	0	30	0	0	0	0	0	0	32.5

Prerequisites (if applicable): Not applicable.

LEARNING OUTCOMES (knowledge, skills and competence)

Through this course intended that each student is able to:

Acquire the basics of scientific inquiry, the scientific method and the different research methodologies.

Search, select and organize data and information using current tools and techniques.

Analyze data and relevant information, interpret and critically analyze research articles in applied technologies.

Develop research projects, reports and scientific papers, communicating research results.

CONTENTS

1. The investigation process.
2. Research methods.
3. Organization of a technical or scientific work:
 - Literature search;
 - Reading, analysis and interpretation of texts;
 - Organization of information;
 - Collect elements;
 - Design of project work;
 - Collection and processing of data.
4. Results of the study: thesis, dissertation, thesis, project, report, conference, seminar, poster, article or news.

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

Through this UC is intended that students know organizing and developing a research project from data collection to reporting of results.

TEACHING METHODOLOGIES

This course will consist of lectures and mainly case studies on the various topics addressed.

Classes are taught using appropriate hardware and software, predominantly direct access. During the discussion of the various

themes will be explored resources provided by the Library of IPB.

DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

The learning will be based on the practical use of various resources and tools that are available to students applying to specific situations within the course.

EVALUATION METHODS

The evaluation will be performed through theoretical and practical final exam.

MAIN BIBLIOGRAPHY

Frada, J. J. C., 1993 (3ª edição), Guia prático para elaboração e apresentação de trabalhos científicos, Lisboa, Edições Cosmos

Madeira, A. C., Abreu, M. M., 2004, Comunicar em ciência, Lisboa, Escolar editora

Silva, E. E., 2008, Investigação passo a passo. Disponível em: www.apmcg.pt. Acesso em: 21 de Setembro de 2012.

NP 405 – 1, 1994, Informação e documentação – Referências bibliográficas: documentos impressos.

NP 405 – 2, 1998, Informação e documentação – Referências bibliográficas. Parte 2: materiais não livro.

NP 405 – 3, 1998, Informação e documentação – Referências bibliográficas. Parte 3: documentos não publicados.

NP 405 – 4, 2003, Informação e documentação – Referências bibliográficas. Parte 4: documentos eletrónicos.

Year of implementation: 2013/2014 | Date of approval by the Technical-Scientific Board: 2012-10-10