ENGINEERING RESEARCH METHODS

Code: 20905

Main Scientific Area: Health, Environment and Industrial Technologies

Lecturer: Cátia Filipa Veiga Alves

Language of Instruction: Portuguese

Regime: S2

Contact Hours: 30h Total Workload: 130h

ECTS: 6,0

Objectives

The CU of Engineering Research Methods presents the following objectives:

Assimilation processes, methodologies and methods related to scientific research;
Development of scientific critical spirit;
Development of the ability to produce a scientific text and the work plan of the dissertation.

Learning Outcomes

Students who successfully complete the CU of Engineering Research Methods should possess the following knowledge and skills:

Understand the major research methodologies and methods;
Be able to identify a research problem and conduct a literature review;
Define a scientific methodology and research methods;

Prepare a work plan.

Course Contents

Introduction to the research process
Formulation and clarification of the research topic
Critical Literature Review
Referencing systems and means of research
Research philosophies, approaches and strategies
Research ethics
Research methods
Project report writing

Recommended Bibliography

Apontamentos fornecidos pelo docente.
Saunders, M., Lewis, P. Thornhill, A. (2012) Research methods for business students. Sixth edition. Pearson.

Sekaran, U., Bougie, R. (2016).Research methods for business: A skill building approach. 7th Edition. John Wiley Sons.

Learning and Teaching Methods

The contents are presented in order to explore a sustained manner necessary to supplement the training of students in the field of engineering research methods seeking to deepen concepts related to areas of most importance to the activities of demand and scientific research materials. The content of the proposed program addresses the various essential aspects of meeting these targets, particularly with regard to current topics and recent developments.

Assessment Methods

The calculation of the final grade will be obtained by the contribution of each of the evaluation elements:

Class participation (10%)
Dissertation work plan (individual report) (70%)
Final Presentation (20%)

All evaluation elements will be graded from 0 to 20 points.

The student will be approved with a final grade >= 9.5 points.

According to the evaluation methodology there will be no final exam.