

## **SYLLABUS**

### ***Ethics and academic integrity in scientific research and dissemination of findings***

Advanced academic study programme for doctoral students  
- academic year 2018-2019 -

**Semester 2: 7 x 2 lecture hours and 7 x 2 seminar hours, 7 x 2 conference participation hours ..... 15 credits**

#### **A. OBJECTIVES**

i) Knowledge of ethics and academic integrity in scientific research and dissemination of findings; ii) Application of professional standards concerning scientific research and communication, in accordance with the objectives, strategies and methods specific to research activities, and respectively, with the means of presentation and assessment of research findings used by the international scientific community; iii) Elaboration of the doctoral research project to be delivered before the advisory panel in September 2019.

#### **B. LECTURE TOPICS**

1. Science. Technology. Knowledge. Basics of scientific research. Academic ethics and integrity. Deontology of research. The scientific researcher.
2. Scientific research in engineering. The doctoral research project – systemic approach.
3. Operational models in scientific research. Presentation of the research findings.
4. Dissemination of research findings – Part I – Ethics in scientific communication. Communication strategies and the deontology of communication.
5. Dissemination of research findings – Part II - Competitiveness.
6. Dissemination of research findings – Part III – Integration within the scientific community.
7. Completion of doctoral research – The doctoral thesis. Citation ethics; complete and correct citation.

#### **C. Lectures on related topics.**

1. Bibliographical research methods and quality assessment criteria for documentation sources;
2. Creativity, originality and personal contributions in doctoral research – a deontological approach;
3. From the research project to scientific papers: development and selection of ideas and findings;
4. PhD in engineering, where to?;
5. How shall I do valuable research and not pseudo-science?;
6. Modelling techniques in data mining;
7. The young researcher: resources, forms and instruments for affirmation.

#### **C. SEMINAR TOPICS**

1. Public presentation of a scientific paper;
2. Editing the following sections of a scientific paper: 'Materials and methods' and 'Results';
3. 'Poster' presentation of a scientific paper;
4. Writing scientific papers: title, keywords, work plan and abstract;
5. Computer editing of a scientific paper;
6. Writing the 'Discussions' section of a scientific paper. Cooperation with reviewers;
7. Selection and use of bibliographical resources.

#### **D. EVALUATION PROCESS**

Evaluation through oral, interactive examination based on the presentation of two documents:

- a) A draft proposal for a research project, previously discussed with the PhD supervisor;
- b) A draft proposal for a scientific paper, for a conference or journal.