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**Title of the course**

- **230504 Academic writing in Engineering**

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**Organizing center/area leading the course**

Deusto International Research School (DIRS) – PhD program in Engineering for the Information Society and Sustainable Development

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**Training category**

AF7. Methodology and research techniques

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**Professor/Coordinator of the training course**

Coordinator: Pablo Garaizar Sagarminaga

Lecturers: Diego Casado Mansilla

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**Priority group**

1<sup>st</sup> year PhD students, but it can be taken by 2<sup>nd</sup> and 3<sup>rd</sup> year students too

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**Competences**

SPECIFIC COMPETENCE SC1. Identify the distinct alternatives accepted by the scientific community to elaborate scientific articles, including the factors to better position those articles among the scientific community.

SPECIFIC COMPETENCE SC2. Understand the different types of scientific articles which can be produced and the structure that they have to exhibit.

SPECIFIC COMPETENCE SC3. Comprehend other key factors for the publication of scientific articles (cover letters, reviewers' letters, reviews obtained analysis ...).

SPECIFIC COMPETENCE SC4. Domain the basics of Latex and BitTex to edit scientific papers and manage bibliographic references.

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**Pre-requisites / prior knowledge**

Awareness of the need to write scientific papers in a PhD. Attendance to module Design of Research Plan in Engineering.

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**Contents**

**Unit 1. Introduction to scientific writing** (1 hour – Antonio Masegosa). Introduction to the tools accepted by the scientific community (Word, Latex, distinct frameworks where Latex templates can be encountered). Factors for the good positioning of articles (Name, affiliation, keywords). The importance of those factors will be checked making use of the most famous scientific publication repositories: WOS, Scopus, IEEExplore, Google Scholar...). Acknowledgements (importance of such section).

**Unit 2. Basic structure of a scientific article** (3 hours – Antonio Masegosa). Analysis of the different types of scientific articles (letters, short papers, reviews, surveys, conference articles ...). Scientific article analysis structure (key sections that must be included in a scientific article). Mathematic writing.

**Unit 3. Letter to reviewers, Cover letters and revisions** (2 hour – Antonio Masegosa). Cover Letters and letter to reviewers (describe and analyse the importance of these documents, showing examples). Scientific reviews.

**Unit 4. Tools for Academic Writing** (4 hour – Ondiz Zarraga). Tutorial on Latex and BibTex. Selection of a template for writing a small review paper. Edition and reference insertion.

**Unit 5. Preparation of short paper and revision** (2 hour – Ondiz Zarraga). Students edit a small survey article. A review is sent by the lecturer to the students and discussed with them.

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### Level of the course

Intermediate

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### Methodology

The methods and techniques used during the course are summarized and the research strategy is defined as follows:

- *Lecture*. The lecturer presents the contents of the course in a detailed and organized manner, within the lecture room. The contents, available during the lectures, will be made available in advance to the students (as slides) and classified by units.
- *Practical cases*: exposition, analysis and sharing of practical cases
- *Individual work*. The students will carry out a set of guided practical activities associated to the course units.

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### Language of instruction

English

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### Mode of instruction

In-class

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### Number of places

PhD students: 30

Personnel: 10

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### Assessment

Be able to edit a short scientific survey paper in Latex and BibTex.

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### Number of hours

12 hours

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## **Bilbao Campus**

- Month when the course begins: November 2023
  - Dates:
    - Monday, 6 November 2023 (15:00-18:00)
    - Tuesday, 7 November 2023 (15:00-18:00)
    - Wednesday, 8 November 2023 (15:00-18:00)
    - Thursday, 9 November 2024 (15:00-18:00)
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