USMC84 - Scientific Communication I - Disseminating

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Code : USMC84

Unité spécifique de type cours

2 crédits

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Présentation

Prérequis

Être inscrit à l'un des Masters internationaux des EPN scientifiques et technologiques du Cnam ayant programmé l'UE spécifique. L'ensemble de ce cours est dispensé en anglais,

Be enrolled in one of the international Masters programs of the EPN Scientifiques et Technologiques at Cnam proposing this course. This course is entirely taught in English.

Programme

Contenu

This course offers an introduction to the fundamentals of scientific communication, both oral and written. The aim is to develop a clear, structured, and rigorous approach to presenting research work, using tools and practices aligned with academic and professional standards.

The course is organized around four parts:

1. Oral Scientific Presentation

Focus is placed on designing a talk that fits the intended audience --whether specialists, peers, or non-experts-- while ensuring clarity, coherence, and engagement.

Work will be done on structuring content, effectively managing time, and creating clear visual supports using tools like PowerPoint or Beamer. Common pitfalls—such as overloaded slides or unclear messaging—will be identified and discussed, with emphasis on good practices for impactful delivery.

2. Bibliographic Research and Source Evaluation

This part introduces key tools for academic literature search (HAL, ArXiv, Scopus, IEEE Xplore, etc.), along with methods to assess the reliability and relevance of scientific sources.

Core bibliometric indicators (impact factor, h-index, journal quartiles, altmetrics) will be discussed, not as absolute metrics, but as useful reference points for critically evaluating publications, researchers, or institutions.

3. Presenting Results and Visualizing Data

A clear and accurate visual representation of data is essential in scientific communication. This section explores how to choose the right type of graph depending on the nature of the data, with a focus on readability, consistency, and avoiding misleading visuals.

A short introduction to \textit{confidence intervals} will be included, to highlight how uncertainty can --and should-- be clearly conveyed in the context of results, particularly in experimental or quantitative work.

4. Introduction to LaTeX

The course concludes with a hands-on introduction to \LaTeX, the standard tool for scientific writing in many fields.

Basic document structure, equation formatting, figure insertion, and bibliography management will be covered. The use of Beamer will also be introduced, providing a foundation for creating professional-quality scientific presentations.

Modalités de validation

- Contrôle continu
- Projet(s)
- Mémoire