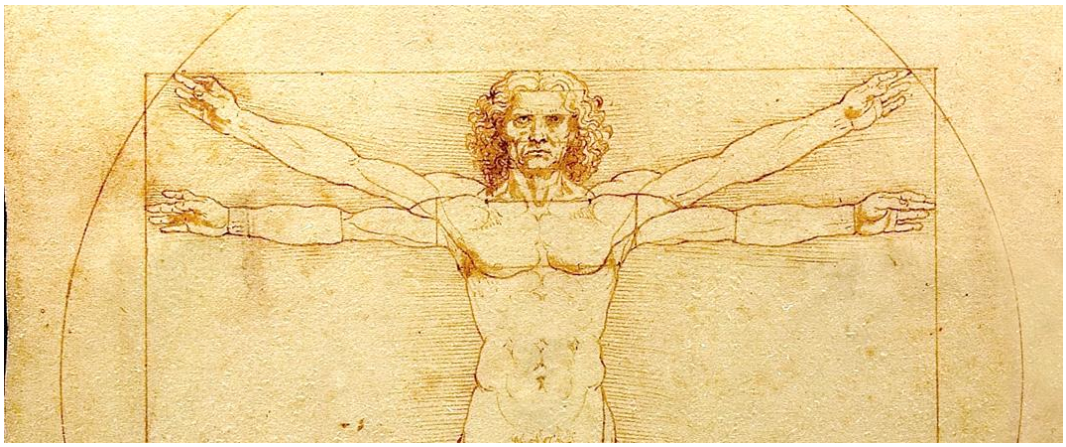
COMMUNICATING SCIENCE VISUALLY COURSE



Course Description
Every area of scientific research produces results that must be communicated. Scientists are thus required to present their work and often realize that visual elements (forms, pictures, diagrams, letters and colors) are unavoidable. The correct understanding and mastering of these elements, through various communication media, can determine the efficiency of knowledge transmission and dissemination of results. This course aims to convey the basics of visual communication and its specific adaptation to science communication.

With this course, students are expected to develop skills in preparing their visual or graphic materials. Throughout the course, students will be exposed to a broad discussion on the creation of visual presentations, which are based on the relationship between text and image. The course will have practice-based moments, where students are asked to develop and improve the materials they use in communicating their research, such as posters, slide presentations, or graphical abstracts. The course includes tips for effective oral presentations. After each practical moment, students will benefit from group discussions on the different visual options used by their colleagues.

Requirements
Ideally, students should have started their research project and have enough information to produce communication materials, such as a slide presentation or a poster.
Students must bring their own laptop with basic image treatment software.

Activities
Theoretical sessions: 12h
Practical sessions: 12h
Reading/self-study: 4h

Course coordinator
Ana Sanchez

Teachers
Marco Neves
Ana Margarida Nunes
Ana Sanchez

Assessment
Evaluation will take into account the student's ability to transfer the obtained knowledge into visual form. The end result should reflect the acquired skills.
The following will be considered: development of clear visual design; ability to create communication concepts; execution and visual presentation.

Expected outcomes

- Understand visual communication and its several elements, learn how to manage and organize their use;
- Comprehend the importance of images, regardless of technologies and the practical aspects of their function;
- Develop working skills with type, acknowledging the relevance of good text composition and its consequence in an effective communication;
- Master visual communication when working with several media, to ensure coherence;
- Demonstrate the synthesis of visual information as a value for the transmission of complex messages, understanding at the same time various diagrams and schemes.
- Complete at least one visual communication object that integrates the subjects taught with the research project.

Suggested Reading

Duarte, N (2008) slide:ology: The Art and Science of Creating Great Presentations. O'Reilly Media

Duarte, N (2010) Resonate: Present Visual Stories that Transform Audiences. Wiley

Frankel, FC and DePace, A (2012) Visual Strategies: A Practical Guide to Graphics for Scientists and Engineers. Yale University Press

Mijksenaar, P 1997, *Visual function: an introduction to information design*, 010 Publishers, Rotterdam.

Spiekermann, E & Ginger, E M 1993, *Stop stealing sheep & find out how type works*, Adobe Press, Mountain View, CA.

Tufte, E 1990, *Envisioning information*, Graphics Press, Cheshire.