



Course on “Tools for Communicating Science Visually”

In this course, students will learn **visual communication principles and software skills** to create professional, appealing, and effective graphics for any audience.

The course combines theory and practice in sessions covering design concepts, hands-on exercises, and software tools. It focuses on teaching fundamental principles and transferable functions applicable across various platforms, incorporating them throughout all sessions. Additionally, up to two optional critique sessions will provide valuable feedback on student projects, fostering growth and enhancing creativity.

Target: Master’s students, PhD students, and early career researchers.

Host University: Universidad Miguel Hernández de Elche (UMH).

Instructor: Dr. Efrén Álvarez.

Dates: 31 March and 1, 3, 7, 8, 10, and 11 April 2025.

Schedule: 16:30-18:30 h

Contact: neurotecheu@umh.es

Place: Online (Google Meet)

NeurotechEU
The European University
of Brain and Technology

Tools for Communicating Science Visually

March-April, 2025 | Online Course

Co-funded by the Erasmus+ Programme of the European Union

UNIVERSITAS Miguel Hernández

neurotech.eu





Content:

Unit 1	Getting the message right
What is visual communication? Explore why visual design is ideal for conveying information and how it benefits scientific communication.	
Understanding your audience: Address essential questions to identify your audience type.	
Defining your message: Learn narrative structures and principles for clear, engaging communication.	
The design process. Key steps to plan graphics effectively.	
Unit 2	Perception of graphics
Importance of aesthetics and simplicity: How aesthetics shape perception and improve communication.	
Color: Basics of color theory, matching colors to meaning, and accessibility principles.	
Illustration and entertainment: Techniques to enhance graphic appeal and effectiveness.	
Unit 3	Clarity, less is more
Negative space: The role of empty spaces in improving communication and graphic clarity.	
Typography: Fundamentals of text design for readability and consistency.	
Labels, abbreviations, and consistency: Tips for uniformity and clarity in figures.	
Unit 4	Layout and Presentation
Hierarchy and flow: Organizing elements for intuitive understanding using grid systems.	
Representing relationships with contrast: Principles for visually showcasing connections or distinctions.	
Unit 5	Figure Preparation
Why vector graphics? Advantages over bitmap graphics for print and publication.	
Creating and exporting files: Setting up canvases, working with real sizes and color profiles, and exporting in the right formats.	
Axes, labels, and legends: Design tips for presenting scientific data clearly and effectively.	
Unit 6	Critique sessions
Showcase and feedback: Presentation of students' submitted works for feedback and discussion.	
Ongoing support: Opportunities for additional feedback and group discussions beyond the course.	

