

Course Introduction

CREATIVE RESEARCH AND
SCIENCE COMMUNICATION

25/02/2026

SELECT A SCIENTIFIC
IMAGE FOR
PRESENTING
YOURSELF



<https://padlet.com/isleitalia/present-yourself-with-a-scientific-picture-l32j8iqnvmunpvcz>



$$B_i A_i = E_i A_i + \rho_i \sum_j B_j A_j F_j \quad \nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t} \quad \vec{F} =$$

$$dU = \left(\frac{\partial U}{\partial S}\right)_V dS + \left(\frac{\partial U}{\partial V}\right)_S dV$$

$$F_j = \sum_{k=0}^{N-1} f_k e^{2\pi i y_k / N} \quad \nabla^2 \psi = \frac{\partial u}{\partial t}$$

$$P_{n+1} = \Gamma(\dots)$$

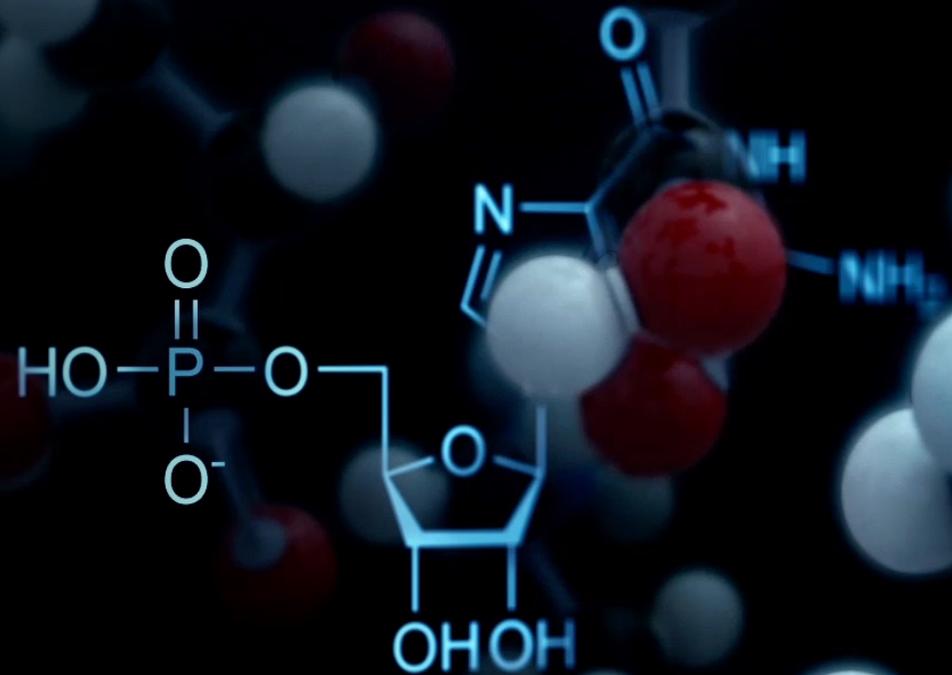
$$\vec{\nabla} \cdot \vec{D} = \rho$$

$$\vec{H} = \frac{\partial \vec{D}}{\partial t} + \vec{J}$$

$$\vec{B} = 0$$

$$\frac{\hbar^2}{2m} \nabla^2 \Psi(r,t) + V \Psi = -\frac{\hbar}{2} \frac{\partial \Psi(r,t)}{\partial t}$$

WHY DO WE COMMUNICATE SCIENCE?



I want to help people to take informed decisions in matters where science and technology are involved

I want to help schools to teach better science and math

I want to motivate young people to choose a scientific career

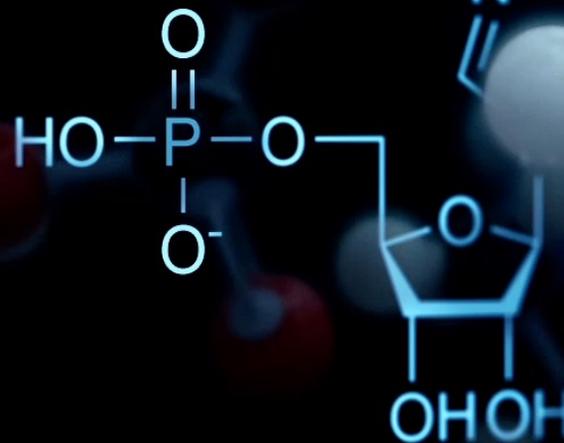
I want to share my passion for science and maths with the public

I want to help people to understand the benefits of science and math for their lives

I want to make people understand how scientific knowledge is produced and promote critical thinking

- **to improve the dialogue between science and society**
- **to increase the public role of scientists and researchers**
- **to improve your career opportunities**
- **to give you professional tools to communicate your research**

TO WHOM DO WE
COMMUNICATE
SCIENCE?



-
- **young researchers**
 - **future teachers and educators**
 - **anyone who wants to improve their communication skills**
 - **anyone who want to know more about communication of science**

COURSE DESCRIPTION



This course offers an in-depth understanding of science communication, emphasizing its best practices and societal effects. Students will reflect on the crucial role scientists play in the public arena, explore the objectives of effective science communication, and address the challenges of engaging diverse audiences. The course motivates researchers to define their own communication goals, develop flexible strategies, and refine their unique style to adapt to the changing needs in various contexts. The course provides students with an introduction to the essentials of science communication, highlighting its significance in society and the ethical considerations it entails. It encompasses audience analysis, storytelling techniques, and various communication media, including both traditional and digital platforms. Students will explore strategies for public engagement and methods to assess the effectiveness of their communication efforts. The course concludes with a final project in which students develop a science communication strategy or create a multimedia presentation.

Knowledge and understanding:



Demonstrate an understanding of the principles, goals, and ethical considerations of science communication.



Recognize the historical and societal role of scientists in public discourse.



Identify different audiences and tailor science communication strategies accordingly.



Applying knowledge and understanding:



Develop and implement effective science communication strategies in various media and formats.



Adapt communication approaches to engage with diverse audiences in different contexts.



Apply storytelling and narrative techniques to make complex scientific ideas more accessible.

Making judgments:



Critically evaluate the effectiveness of science communication strategies and their societal impact.



Assess ethical considerations in science communication and make informed decisions.



Reflect on the scientist's role in shaping public perception and policy.



Communication skills



Develop clear and engaging science communication materials for different platforms, including written, visual, and oral communication.



Engage in public discussions, debates, and outreach activities effectively.



Utilize digital and social media for effective science communication.



Learning skills



Independently explore new science communication tools and methodologies.



Adapt communication strategies to new challenges and evolving public expectations.

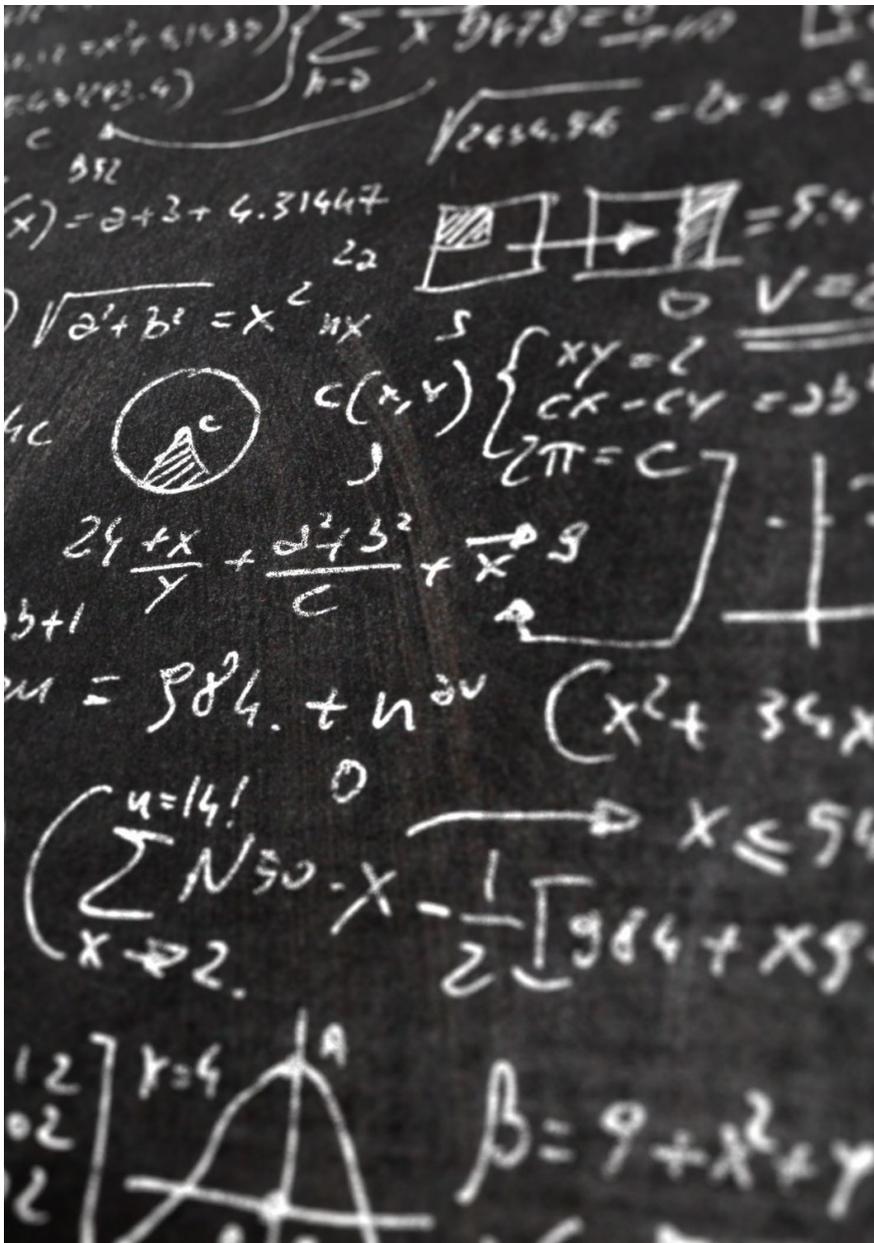


Continuously refine personal communication style through feedback and self-reflection.



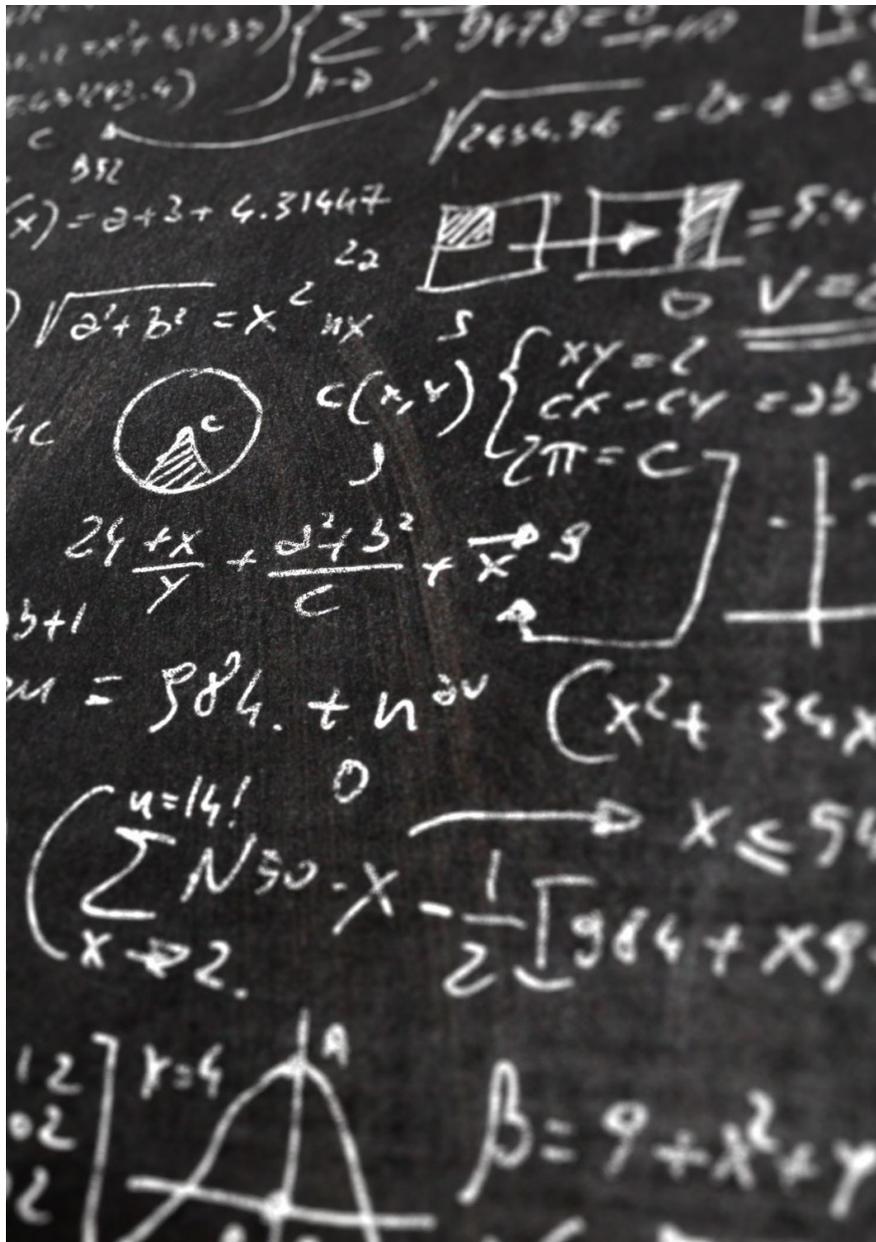
COURSE ASSESSMENT





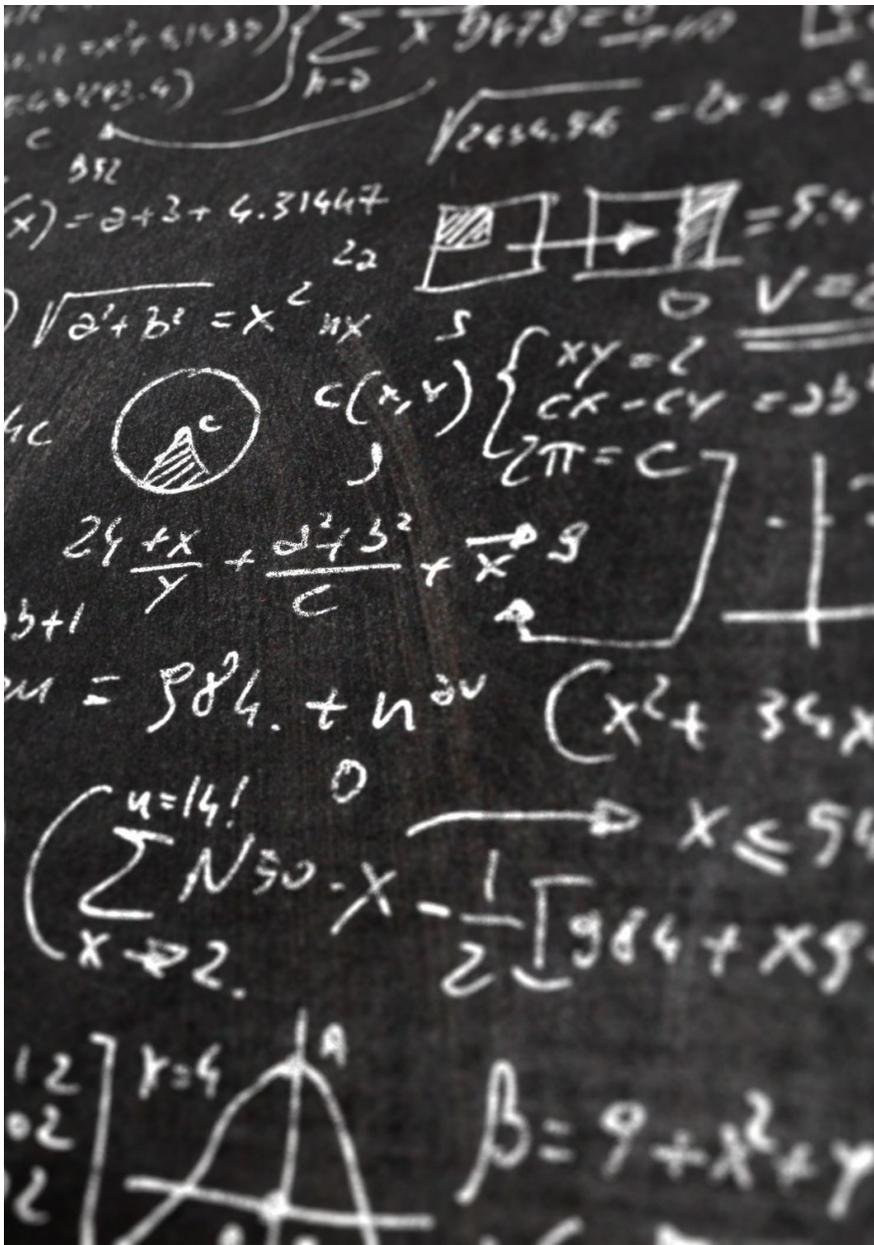
WRITTEN PART: One of the following (at least two pages A4), submitted one week before the examination:

- Provide examples of effective science communication strategies.
- Compare and contrast different communication models used in engaging scientific and non-scientific audiences.
- Analyze a recent science communication campaign. What were its strengths and weaknesses? How would you improve it?
- For a general audience, write a brief science communication article on a recent scientific discovery.



ORAL PART: One of the following to be presented in the oral examination:

- Develop a short video or infographic explaining a complex scientific concept engagingly.
- Prepare a public engagement plan for a scientific outreach event, including audience analysis, key messages, and communication methods.
- Create a social media campaign promoting awareness of a scientific issue, outlining key posts and engagement strategies.
- Prepare a science communication exposition



OR

SEMINAR PART: Instead of (WRITTEN OR ORAL PART)

Presenting a book concerning Maths for public outreach aims in a seminar during the course.



EXAMPLES

CONDORCET'S PARADOX