



***Scientific research skills (F. Ciencias)***

Guía docente 2023-24

## INTRODUCTION

This subject comprises two modules: a practical module on presentation skills and a theoretical module based on selected scientific topics.

The **presentation skills** module aims to provide students with the language and presentation skills required to deliver their final year project in English to an academic jury.

The theoretical module is based on series of seminars in English on a wide range of scientific subjects. The '**Frontiers in Science**' seminar program is designed to provide the students with an opportunity to engage with and participate in current topics in science today.

- **Titulación:**
- **Módulo/Materia:**
- **ECTS:** 3
- **Curso, semestre:** 3º, 4º, primer y segundo semestre
- **Carácter:** Optativa
- **Idioma:** Inglés (Requirement: B2 level of General English; e.g. Cambridge First Certificate).

### Módulo A: Frontiers in Science

- Profesor responsable:

Angel Garcimartín Montero (Dpto. de Física y Mat. Apl.). e-mail: angel@unav.es

- Este módulo corresponde a un 30% de los ECTS de la asignatura.  
Hay 20 horas de clases presenciales.
- Horario: 1er semestre, Aula 12 (Edificio Ampliación Biblioteca de Ciencias), los Viernes a las 12:00. La primera sesión será el 22 de septiembre.

### Módulo B: Presentation Skills

- Profesora responsable:

María Teresa López Vázquez (Instituto de Idiomas). e-mail: mtlopez@unav.es

- Este módulo corresponde a un 30% de los ECTS de la asignatura.  
Hay 20 horas de clases presenciales.
- Horario: Aula 16, Edificio Biblioteca de Ciencias. Los jueves 12 enero 2024 - 16 marzo 2024.

## COMPETENCIAS

### Knowledge

- To understand a scientific presentation.
- To learn scientific strategies.



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- To acquire a basic knowledge of different scientific disciplines.
- To understand the difference between written and spoken discourse.
- To understand and use functional notions of language in spoken discourse.
- To understand, identify and use phonological features of spoken language.
- To understand basic slide design principles.
- To learn and use phrases used in transitions and referencing during a presentation.

## Skills

- To be able to get the most important messages after attending a seminar.
- To acquire the skills to ask questions in a public audience.
- To select, plan and organise material for an oral presentation.
- To implement slide design principles when creating a slide presentation.
- To match spoken commentary to projected slides.
- To acquire voice control during public speaking.
- To control body language in the delivery of a presentation.
- To implement techniques to create audience rapport.
- To manage time effectively during a presentation.
- To be able to answer and respond to questions effectively.

## Learning Outcomes

- To be able to follow a mid-level scientific presentation and ask appropriate questions.
- To be able to successfully plan, prepare and deliver a scientific academic presentation based on a final year undergraduate research project.

## PROGRAMME

### Frontiers in Science Seminars (3rd year degree students)

For the year 2021/22, the seminars will be

- 1st semester: **Fridays**, at **Aula 12** (Edificio Biblioteca de Ciencias), **from 12:00 to 13:00**.
- 2nd semester: **Mondays** at **Aula 12** (Edificio Biblioteca de Ciencias) **from 13:00 to 14:00**.

*Dates and confirmed speakers are listed below. The programme may be updated or changed.*

22-sep	Sesión introductoria	Angel Garcimartín
29-sep	Development of novel therapeutics for multi-drug resistant bacteria	Tomás Maira



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06-oct	Cómo tomar apuntes de un seminario	José Ramón Isasi
13-oct	---	---
20-oct	El cuaderno de laboratorio	José Antonio Rodríguez García
27-oct	Gut microbiota	Fermín Milagro
03-nov	Forensic chemistry in art	Adrián Durán
10-nov	Plan de lecturas	Javier Novo
24-nov	Bioinformatics	Mikel Hernández

15-ene	The genetic basis for cancer therapeutics	Rubén Pío
22-ene	Impact of climate change on perennial crops. Can food prices get any higher?	Johan Martínez Lüscher
29-ene	Frontiers in Ecology XVI: Ecoengineering	Arturo Ariño
05-feb	Gráficos de calidad	Sergio Ardanza-Trevijano
12-feb	Cómo leer un artículo	Iker Zuriguel
19-feb	La carrera investigadora	Idoia Ochoa
26-feb	Methodological approaches to investigate mechanisms of neurodegeneration	Montse Arrasate



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04-mar	<b>The use of laboratory animals in biomedical research</b>	<i>Amaia Rodríguez Murueta-Goyena</i>
11-mar	<b>Investigating in neurodegenerative diseases</b>	<i>Marisol Aymerich</i>
18-mar		

**Presentation Skills** (4th year degree students)



**Course Outline Jan - March 2024**

**Course Programme - Presentations Skills in English Module**

1. Presentation Planning

1.1 Selecting materials; differentiating between written and spoken discourse

1.2 Organising material

1.3 Balancing speaker notes with visuals

2. Presentation Design

2.1 Presentation principles; assertion-evidence model

2.2 Design principles: signal-to-noise ratio, images and space.

2.3 Slide design: contrast, repetition, alignment, proximity

2.4 Highlighting: images, data, text

3. Presentation Language

3.1 Choosing language: word level

3.2 Choosing language: sentence level

3.3 Using discourse markers

3.4 Using language to convey functions

4. Presentation Delivery

4.1 Learning voice control techniques

4.2 Using effective timing

4.3 Controlling body language

4.4 Creating audience rapport

4.5 Online presentation skills

5. Presentation Questions

5.1 Asking direct and indirect questions

5.2 Asking negative and subject questions

5.3 Answering questions effectively

5.4 Dealing with difficult questions

## ACTIVIDADES FORMATIVAS

Please see programme



## EVALUACIÓN

FINAL DEGREE PROJECT: 40% of the mark.

FRONTIERS IN SCIENCE (30%)

20% of the mark: seminar attendance.

80% of the mark: final exam (multiple choice test with one question per seminar).

ENGLISH PRESENTATION SKILLS (30%)

The English Presentation Skills Module makes up 30% of the final course grade for the subject Scientific Research Skills, with 70% of the final course grade based on English Seminars and related activities.

The Presentations Skills module comprises 4 course submissions and 1 oral presentation in the second semester.

Each submission of the Presentations Skills Module is graded out of 10 and corresponds to 10% of the English grade. The oral presentation corresponds to 60% of the English grade.

## HORARIOS DE ATENCIÓN

**María Teresa López Vázquez**

- Office 3050, Edificio Biblioteca de Ciencias.
- By arrangement (please email: mtlopez@unav.es)

**Angel Garcimartín Montero**

- Office O-140, Dpto. de Física y Mat. Apl., Edificio Los Castaños.
- By arrangement (please email: angel@unav.es)

## BIBLIOGRAFÍA

- Duarte, N. (2008) *Slide:ology* Sebastopol CA: O'Reilly [Find it in the Library](#)
- Lebrun J. (2010) *When the Scientist Presents* London: World Scientific [Find it in the Library](#) (electronic resource)
- Powell, M. (2010) *Dynamic Presentations* Cambridge:Cambridge Univiersity Press [Find it in the Library](#)
- Powell, M. (2011) *Presenting In English* Andover:Heinle [Find it in the Library](#)
- Reynolds, G. (2012) *Presentation Zen* Berkely CA: New Riders [Find it in the Library](#) ; [Find it in the Library](#)
- Zanders, E and Macleoad, L. (2010) *Presentation Skills for Scientists* Cambridge: Cambridge University Press [Find it in the Libray](#)

The essays by Edward Tufte concerning the display of scientific data are thought-provoking and challenging. You will probably find them both interesting and different:

- The visual display of quantitative information [Localízalo en la Biblioteca](#)
- Visual explanations : images and quantities, evidence and narrative [Localízalo en la Biblioteca](#)