Universidad de Navarra

Scientific research skills (F. Ciencias)

Guía docente 2025-26

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. Se cursa en 3º.
- Lugar y horario para el curso 2025/26 : Aula 34, edif. Biblioteca de Ciencias
  - 1er semestre, los lunes de 13:00 a 14:00, del 22 de septiembre al 10 de noviembre
  - 2º semestre, los viernes de 12:00 a 13:00, del 16 de enero al 20 de marzo

Módulo B: **Presentation Skills**

- Profesor responsable: Dr Martín Aoiz (Instituto de Idiomas). e-mail: maoiz@unav.es
- Este módulo corresponde a un 30% de los ECTS de la asignatura. Hay 20 horas de clases presenciales. Se cursa en 4º
- Horario: Los jueves de 18:00 a 20:00.
- Lugar: Aula 16, Edificio Biblioteca de Ciencias.

RESULTADOS DE APRENDIZAJE (Competencias)

Knowledge

- To understand a scientific presentation.
- To learn scientific strategies.
- 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 prinicples.
- 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 2025/26, the seminars will be

- 1st semester: **Mondays**, at **Aula 34** (Edificio Biblioteca de CIencias), **from 13:00 to 14:00**.
- 2nd semester: **Fridays** at **Aula 34** (Edificio Biblioteca de Ciencias) **from 12:00 to 13:00**.

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

22-sep	**Sesión introductoria**	*Angel Garcimartín*
29-sep	**Cómo tomar apuntes de un seminario**	*José Ramón Isasi*
6-oct	**El cuaderno de laboratorio**	*José Antonio Rodríguez*
13-oct	**Gut microbiota**	*Fermín Milagro*

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20-oct	**The genetic basis for cancer therapeutics**	*Rubén Pío*
27-oct	**Bioinformatics**	*Mikel Hernáez*
03-nov	**The Perfect Match: Physics, Medicine and Biology in harmony**	*Marina García Cardosa*
10-nov	**The use of laboratory animals in biomedical research**	*Amaia Rodríguez*

16-ene	**Research in neurodegenerative diseases**	*Marisol Aymerich*
23-ene	**Food security, climate change and the science behind**	*Johann Martínez Lüscher*
30-ene	**Engineering immunity: The rise of synthetic antibodies in cancer therapy**	*Antonio Pineda*
06-feb	**Frontiers in Ecology XVII**	*Arturo Ariño*
13-feb	**Cómo leer un artículo**	*Iker Zuriguel*
20-feb	**Química forense en obras de arte y patrimonio**	*Adrián Durán*
27-feb	--	--
06-mar	**Mesa redonda: la carrera investigadora**	*Idoia Ochoa*
13-mar	**Novel approaches for the treatment of cardiovascular diseases**	*Beatriz Pelacho*
20-mar	**Lecturas**	*Javier Novo*

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Presentation Skills (4th year degree students)

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

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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

Dr Martín Aoiz

- Teacher's Room at the Institute of Modern Languages, Edificio Amigos. Students should arrange a meeting (**maoiz@unav.es**)
- Before and after every session, the teacher will be available to discuss any academic matter with the students.

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 Unviersity Press Find it in the Library
- Powell, M. (2011) *Presenting In English* Andoever:Heinle Find it in the Library
- Reynolds, G. (2012) *Presentation Zen* Berkely CA: New Riders Find it in the Library ; Find in in the Library
- Zanders, E and Macleoad, L. (2010) *Presentation Skills for Scientists* Cambridge: Cambridge University Press Find it in the Libray

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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