# COURSE DESCRIPTION

## COURSE DETAILS

Title (of the course): **COMUNICACIÓN Y DIVULGACIÓN DE LA CIENCIA (T)**
Code: 138009
Degree/Master: **TRANSVERSALES MÁSTERES UNIVERSITARIOS** Year: 1
ECTS Credits: 4.0 Classroom hours: 0
Face-to-face classroom percentage: 0.0% Study hours: 100
Online platform: Moodle

## LECTURER INFORMATION

Name: AGUILAR URBANO, MIGUEL R. (Coordinador)
Department: BOTÁNICA, ECOLOGÍA Y FISIOLOGÍA VEGETAL
Area: FISIOLOGÍA VEGETAL
Office location: Edificio C4, 3ª planta. Campus de Rabanales
E-Mail: bb2aguim@uco.es Phone: 608342158

Name: GÓMEZ PARRA, MARÍA ELENA
Department: FILOLOGÍAS INGLESA Y ALEMANA
Area: FILOLOGÍA INGLESA
Office location: Facultad de Ciencias de la Educación
E-Mail: ff1gopam@uco.es Phone: 957 21 25 63

## PREREQUISITES AND RECOMMENDATIONS

**Prerequisites established in the study plan**

None

**Recommendations**

None specified

## INTENDED LEARNING OUTCOMES

| | |
|---|---|
| CU1 | Be able to manage sources of scientific information and useful resources for study and research. |
| CU3 | Develop skills for proper spoken, written and graphic communication. |
| CU4 | Communicate conclusions, and the knowledge and rationale underpinning these, TO specialist AND non-specialist audiences clearly AND unambiguously. |
| CU7 | Be able to write and present the results of research in the form of a scientific paper to a specialized audience. |

## OBJECTIVES

The objective of this subject is that the students acquire the following competences:
- Knowledge of the tools that are necessary for the presentation of research results.
- Ability to communicate the results of research to the scientific community.
- Knowledge of the social media system and the fundamentals of its operation.
- Ability to elaborate journalistic information with scientific content.

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## CONTENT

### 1. Theory contents

Scientific communication occupies a key place in the development of today's society, immersed in the era of knowledge and information. Science influences all a pects of human life. Understanding of advances in science and technology is therefore essential in order to increase the critical capacity of citizens, both in small everyday decisions and in different professional fields, not to mention the relation to the application of certain technologies and the ethical debate that they raise. The way of diffusing the new knowledge and the agents responsible for such communication are decisive in the configuration of public opinions and attitudes towards science. There is a growing social demand for this communication to be made rigorously and effectively, which requires the participation not only of journalists but also of scientists. This course presents the keys to the transmission of scientific knowledge and explains how it is generated, managed and transmitted to society, in an attempt to bring the scientist closer to the field of communication with society. In addition, it allows acquiring basic communication skills and knowledge of science, both within the scientific community and the rest of society.

Unit 1. Introduction. Objectives and Justification.
Unit 2. Basic tools for the elaboration and presentation of results.
Unit 3. Syntactic structure and organization of academic texts in English.
Unit 4. The oral presentation in English of the investigation before an international audience.
Unit 5. Elaboration of scientific and technical reports.
Unit 6. Scientific dissemination. Internal Report. Communication to congress. Conference. Websites. PhD thesis. Book and book chapter.
Unit 7. Publication subject to evaluators. Original article. Review article. Response to editor and evaluators. Response to the international evaluator. The role of reviewer.
Unit 8. Concept, need and problem of the dissemination of science.
Unit 9. Scientific journalism. Definition, origin and evolution.
Unit 10. The figure of the promoter. The scientific journalist.
Unit 11. The social media system (press, radio, television and the Internet).
Unit 12. The construction of the news. Sources. Language. Journalistic writing. Genders. Contents. Sections.
Unit 13. Dissemination in audiovisual media (radio and television). The scientific documentary and its production.
Unit 14. Centers for the dissemination of science.
Unit 15. Audiences and their characteristics (the logic of audiences).
Unit 16. Social function of scientific journalism. Scientific literacy.
Unit 17. Criticism and social control of science.
Unit 18. Practical communication guide for scientists.

### 2. Practical contents

Task 1. Preparation of a conference communication abstract.
Task 2. Preparation of a conference communication in poster format or oral communication.
Task 3. Preparation of an original scientific article or review article.
Task 4. Elaboration of a newspaper page with extensive information, brief information and an opinion piece.
Task 5. Writing a press release on a scientific topic.
Task 6. Open a blog with scientific content.
Task 7. Opening a Twitter account and writing a tweet of scientific content on Twitter.
Task 8. Editing and publishing a scientific picture in Instagram.

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## METHODOLOGY

**Clarifications**

Teachers will try to find alternative methodologies to help part-time students, if necessary.

**Face-to-face activities**

**Off-site activities**

| Activity | Total |
|---|---|
| *Analysis* | 20 |
| *Exercises* | 30 |
| *Information search* | 20 |
| *Reference search* | 20 |
| *Self-study* | 10 |
| ***Total hours*** | ***100*** |

## WORK MATERIALS FOR STUDENTS

Coursebook
Dossier
Oral presentations
References

## EVALUATION

| Tools | Percentage |
|---|---|
| **Assignments and projects** | 40% |
| **Placement reports** | 30% |
| **Writing tests** | 30% |

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**Period of validity for partial qualifications:**

Las calificaciones parciales tendrán un valor indefinido.

## BIBLIOGRAPHY

### 1. Basic Bibliography

AA. VV. Percepción social de la ciencia y la tecnología en España; 2004. FECyT, Madrid, 2005.
ALONSO, A y GALÁN, C (eds.). La tecnociencia y su divulgación: un enfoque transdisciplinar. Anthropos, Barcelona, 2004.
BELENGUER JANÉ, Mariano. Introducción al periodismo científico . Sevilla Padilla Libros DL, 2002.
CALVO HERNANDO, Manuel. Manual de Periodismo Científico. Bosch, Barcelona, 1997.
CALVO HERNANO, Manuel. Divulgación y Periodismo científico: entre la claridad y la exactitud. UNAM, México, 2003.
COHN, Víctor. Ciencia, periodismo y público. Grupo Editor Latinoamericano, Buenos Aires, 1993.
DAY, R.A; GASTEL, B. Cómo escribir y publicar trabajos científicos. 4ª ed., Organización Panamericana de la Salud, Washington, 2008.
ELÍAS, Carlos. La ciencia a través del periodismo. Nivola, Madrid, 2003.
FERNÁNDEZ DEL MORAL, Alfonso Javier. Fundamentos de la información periodística Especializada. Editorial Síntesis, Madrid, 1993.
GUTIÉRREZ RODILLA, Bertha M. El lenguaje de las ciencias, Gredos, Madrid, 2005.
HOOVER, Hardy. Essentials for the scientific and Technical Writer. Dover Publications, Inc. New York, 1980.
LEE, M.; STEPHENSON, G.; ANDERSON, M.; LEE, L. A. The Handbook of Technical Writing: Form and Style. Harcourt Brace Jovanovitch, Nueva York, 1995.
LOCKE, David. La ciencia como escritura. Cátedra, Madrid, 1997.
LÓPEZ, Manuel. Cómo se fabrican las noticias. Paidós, Barcelona, 1995.
MARTÍNEZ ALBERTOS, José Luis. Curso general de redacción periodística. Paraninfo, Madrid, 1993.
MATHEWS, J.R.; BOWEN, J.; MATHEWS, R.W. Successful Scientific Writing. A Step-by-Step Guide for the Biological an Medical Sciences, 3rd edition. Cambridge University Press, New York, 2007.
NELKIN, Dorothy. La ciencia en el escaparate. Fundesco, Madrid, 1990.
QUESADA, Montserrat. Periodismo especializado. Ediciones Internacionales Universitarias, Madrid, 1998.
ZIMAN, John M. ¿Qué es la ciencia? Cambridge University Press, Madrid, 2003.

### 2. Further reading

ÁLVAREZ, T.; CABALLERO, M. Vendedores de imagen. Los retos de los nuevos gabinetes de comunicación. Paidós, Barcelona, 2001.
BOWKER, L.; Pearson, J. 2002. Working with Specialized Language: A practical guide to using corpora. London: Routledge.
CONGOST MAESTRE, N. 1994. Problemas de la traducción técnica: los textos médicos en inglés. Alicante: Universidad de Alicante.
CORNELL, James. The International Popularization of Science. International Science Writers Association, Cambridge, M A, 1986.
ECO, Humberto. Cómo se hace una tesis: técnicas, procedimientos de estudio, investigación y escritura (6ª ed.), GEDISA, Barcelona, 2001.
FRIEDMAN, Samuel. Sciences and Journalists. Reporting Science as News. Free Press, New York, 1986.
GONZALO GARCÍA, G.; GARCÍA YEBRA, V. (eds.). Manual de documentación y terminología para la traducción especializada. Madrid: Arco/Libro, 2004.
HALL, Sean. Esto significa esto, esto significa aquello. Semiótica: guía de los signos y su significado. Editorial Blume, Barcelona, 2007.
LÓPEZ CEREZO, José A.; SÁNCHEZ RON, José Manuel. Ciencia, tecnología, sociedad y cultura en el cambio de

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PABLOS, José Manuel de. La infografía, magnífica herramienta de apoyo al periodismo científico. Revista Quark, Universidad Pompeu Fabra, Barcelona, 1998.
SÁNCHEZ MORA, Ana M. La divulgación de la ciencia como literatura. UNAM, México, 2000.
TRIMBLE, L. English for Science and Technology: a discourse approach. Cambridge: Cambridge University Press. 1985.

The methodological strategies and the evaluation system contemplated in this Course Description will be adapted according to the needs presented by students with disabilities and special educational needs in the cases that are required.