

Course guide

2500060 - 2500060 - Communication Techniques

Last modified: 01/10/2023

Unit in charge: Barcelona School of Civil Engineering
Teaching unit: 751 - DECA - Department of Civil and Environmental Engineering.

Degree: BACHELOR'S DEGREE IN CIVIL ENGINEERING (Syllabus 2020). (Optional subject).

Academic year: 2023 **ECTS Credits:** 4.5 **Languages:** English

LECTURER

Coordinating lecturer: ESTHER REAL SALADRIGAS

Others: ITSASO ARRAYAGO LUQUIN, ESTHER REAL SALADRIGAS

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

- 14406. Ability to analyze the problem of safety and health in construction sites. (Common module to the Civil branch)
- 14410. Knowledge of the typology and calculation bases of prefabricated elements and their application in manufacturing processes. (Specific technology module: Civil Construction)
- 14411. Knowledge about the project, calculation, construction and maintenance of building works in terms of structure, finishes, facilities and own equipment. (Specific technology module: Civil Construction)
- 14413. Capacity for the construction and conservation of roads, as well as for the dimensioning, the project and the elements that make up the basic road equipment. (Specific technology module: Civil Construction)
- 14414. Capacity for the construction and conservation of railway lines with knowledge to apply specific technical regulations and differentiating the characteristics of the mobile material. (Specific technology module: Civil Construction)
- 14415. Ability to apply construction procedures, construction machinery and construction planning techniques. (Specific technology module: Civil Construction)
- 14416. Capacity for the construction of geotechnical works. (Specific technology module: Civil Construction)

TEACHING METHODOLOGY

The subject consists of 3-hour face-to-face lessons a week. Typically, each 3-hour session will be divided into two 1.5-hour sub-sessions, separated by a break. The first sub-session corresponds to the expository theoretical class, in which the teacher exposes the basic concepts and materials of the subject and establishes a participatory debate. The second sub-session is dedicated to the resolution of practical cases by the students. Practical exercises are carried out in order to consolidate the general and specific learning objectives. Support material is used in the form of a detailed teaching plan through the ATENEA virtual campus: content, programming of evaluation and directed learning activities, and bibliography.

Although most of the sessions will be given in the language indicated, sessions supported by other occasional guest experts may be held in other languages.

LEARNING OBJECTIVES OF THE SUBJECT

1. Escriure i revisar per parells un article manuscrit o un document de conferència.
2. Realitzar una presentació oral d'una conferència o xerrada de treball.
3. Aprendre sobre les normes professionals per a processos com la recerca de feina o publicacions acadèmiques.

Familiaritzar l'estudiant amb les pautes que l'ajudaran a crear una comunicació acadèmica ben elaborada. Practicar les habilitats de comunicació. Escriure i revisar per parells un article manuscrit o un document de conferència i presentar un document de conferència o una xerrada de treball. Aprendre sobre les normes professionals per a una varietat d'activitats com, per exemple, el procés de publicació acadèmica i el procés de recerca de feina.

1. Escribir y revisar por pares un artículo manuscrito o un documento de conferencia.
2. Realizar una presentación oral de una conferencia o charla de trabajo.
3. Aprender sobre las normas profesionales para procesos como la búsqueda de empleo o publicaciones académicas.

Familiarizar al estudiante con las pautas que lo ayudarán a crear una comunicación académica bien elaborada. Practicar las habilidades de comunicación. Escribir y revisar por pares un artículo manuscrito o un documento de conferencia y presentar un documento de conferencia o una charla de trabajo. Aprender sobre las normas profesionales para una variedad de actividades como, por ejemplo, el proceso de publicación académica y el proceso de búsqueda de empleo.

1. Write and peer review a manuscript article or conference document.
2. Make an oral presentation of a conference or work talk.
3. Learn about professional standards for processes such as job search or academic publications.

To familiarize the student with the guidelines that will help him create a well-developed academic communication. Practice communication skills. Write and review in pairs a handwritten article or a conference document and present a conference document or a work talk. Learn about professional standards for a variety of activities, such as the academic publishing process and the job search process.

STUDY LOAD

Type	Hours	Percentage
Self study	63,0	56.00
Guided activities	4,5	4.00
Hours medium group	22,5	20.00
Hours large group	22,5	20.00

Total learning time: 112.5 h

CONTENTS

1. Introduction

Description:

Course presentation. Description of the Oral and Written Competence. Brief history and theory of communication
Individual presentation of each student

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Practical classes: 1h 30m

Self study : 4h 11m

2. Communication with clients and administrations

Description:

Hierarchies, confidentiality. Conflicts Formal / informal communication depending on the interlocutor and content of the message (response to a request for information, delivery of the final result, directors / employees).

Practice on communication with clients and administrations

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Practical classes: 1h 30m

Self study : 4h 11m

3. Crisis communication

Description:

Describe the main strategies for communicating a crisis situation within an organization, both internally and externally. Balance between damage control / business reputation and transparency. Individual responsibility vs. business responsibility.

Discuss a short press release on a recent tragedy (eg infrastructure that has fallen) or a recognized failure of a product / project for sale or in progress (eg defective products, delays in project execution).

Full-or-part-time: 6h

Theory classes: 1h 30m

Laboratory classes: 1h

Self study : 3h 30m

4. Communication on tv and radio

Description:

Keys and answers in front of an interview as an expert on radio or television. Tools for effective communication of complex technical concepts to the general public. Balance between simplicity and credibility. The use of analogies

Discuss with the guest about the advantages and disadvantages of different media

Preparation in pairs (interviewer and interviewee) for an interview about a crisis situation

Full-or-part-time: 13h 12m

Theory classes: 1h 30m

Practical classes: 1h 30m

Laboratory classes: 2h 30m

Self study : 7h 42m

5. Written communication

Description:

Basic principles for writing a scientific journal article or for a congress. Description of the state of the art, presentation of research questions and work methodology. Presentation of results and conclusions. References and academic integrity. Preparation of graphic support material (creation of figures and tables: poster vs. written document).

Identify the bases for writing an article in a scientific journal or in a congress and write an article.

Description of the basic principles for the realization of a summary poster of a scientific communication

Identify the bases for the preparation of a poster in a congress and make said poster.

Preparation of technical reports, evaluations as an external expert on technical reports. Tools for the preparation of technical reports in the framework of engineering. Strategies to guarantee criteria of clarity, rigor and effectiveness. Description of the background and scope of the report. Tools for the correct management of reports in multi-author work environments (collaboration, version control).

Practical class in which the strengths and weaknesses of a technical report on an engineering topic are discussed.

Full-or-part-time: 28h 47m

Theory classes: 7h 30m

Practical classes: 4h 30m

Self study : 16h 47m

6. Oral communication

Description:

Training of students for the preparation of the presentation of work. Elaboration of the basic documentation (presentation in powerpoint / prezzi, video etc.) and strategies for effective oral communication. Adaptation of the tools / skills acquired during the course to the creation of support tools for oral presentation

Preparation in class of the powerpoint or video chosen for the communication topic

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Practical classes: 1h 30m

Self study : 4h 11m

7. Videoconferences and Remote Collaborative Work

Description:

Introduce students to the principles of using videoconferences as a communication and work tool in multidisciplinary teams.

Advantages and disadvantages. Keys to efficient, professional and non-strenuous video conferencing

Class discussion on video conferencing and remote collaborative work

Full-or-part-time: 9h 36m

Theory classes: 1h 30m

Laboratory classes: 2h 30m

Self study : 5h 36m

8. Competitions and competitive calls

Description:

Keys for drafting documents for an administration competition, a grant application, an official accreditation or a call for research projects or public funding. Strategies to maximize your chances of success. Documentation to present, writing and presentation of supporting documentation.

Choose an open call and prepare an application.

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Practical classes: 1h 30m

Self study : 4h 11m

9. Elevator pitch

Description:

Description of the elevator pitch, search for examples and preparation of one for the next session

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Laboratory classes: 1h 30m

Self study : 4h 11m

10. Social media

Description:

Strategies and use of Social media capabilities at a personal and company level. Look for examples of influencers in civil engineering in Spain and in the world and of some companies to see how they communicate.

Social media

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Practical classes: 1h 30m

Self study : 4h 11m

11. Own brand

Description:

How to create your own brand and manage your personal digital strategy in your professional career. Projection of coherence and professionalism while maintaining individuality

Own brand

Full-or-part-time: 7h 11m

Theory classes: 1h 30m

Practical classes: 1h 30m

Self study : 4h 11m

GRADING SYSTEM

The grade for the subject is obtained from the continuous assessment grades. Continuous assessment consists of doing different activities, both individual and group, of an additive and formative nature, carried out during the course (inside the classroom and outside it) and participation in the debates generated in the classroom. Due to the practical nature of the subject, the evaluation will not be carried out by means of an exam, but class attendance is compulsory.

The student body must carry out 3 practices, generally during class hours, with a total weight of 10% of the final grade (all of them of equal value). In addition, there are 5 evaluable activities with a weight of 20% each, with a weight of 90% in the calculation of the final grade. Two are made and presented in the classroom and three are delivered through Atenea. The weighted sum of the grades for these practices and activities is affected by a factor that quantifies class attendance.

BIBLIOGRAPHY

Basic:

- Hall, Richard. Brilliant Presentation. 3rd ed. Harlow, England ; New York: Pearson, 2011. ISBN 9780273762461.
- Goodlad, S. Speaking technically: a handbook for scientists, engineers, and physicians on how to improve technical presentations. London: Imperial College Press, 1996. ISBN 186094034X.
- Harvey, Gordon. Writing with Sources: A guide for students [on line]. 3rd ed. Indianapolis, Indiana: Hackett Publishing Company, 2017 [Consultation: 20/02/2023]. Available on : <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=5130714>. ISBN 9781624665561.