

Course guide

340280 - TEEE-O7P36 - Writing Techniques for Engineering

Last modified: 27/06/2023

Unit in charge:	Vilanova i la Geltrú School of Engineering
Teaching unit:	756 - THATC - Department of History and Theory of Architecture and Communication Techniques.
Degree:	BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Optional subject). BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2009). (Optional subject). BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Optional subject). BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Optional subject). BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Optional subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** English

LECTURER

Coordinating lecturer: Elisabet Arnó Macià

Others: Elisabet Arnó Macià
Joseph Edward Barr
Rachel Mary Playfair

PRIOR SKILLS

Required level of English B1.2

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Transversal:

1. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
3. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
4. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.
5. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.
6. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
7. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.
8. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.

TEACHING METHODOLOGY

Lectures and practical sessions
Cooperative learning
Practical activities and problem-solving

LEARNING OBJECTIVES OF THE SUBJECT

Upon completion of the course, students must be able to:

1. Read, understand and interpret written documents, both academic and professional, related to their own disciplines.
2. Write technical academic and professional documents in English: final thesis, technical reports, job-related texts (cv), and professional documents.
3. Participate effectively in academic activities in English related to internationalisation, at a level corresponding to B.2.2 in the Common European Framework of Reference for Languages.
4. Communicate in English correctly and appropriately, using different types of written texts, including electronic resources.
5. Manage information, and plan, draft and revise written texts in English, both individually and collaboratively, replicating real communicative situations in engineering contexts.
6. Communicate effectively in English in authentic situations related to professional engineering practice, including intercultural communication.
7. Manage and continue their own learning process, using resources and strategies acquired during the course (e.g. developing and managing a portfolio, using ICT resources, etc.)

STUDY LOAD

Type	Hours	Percentage
Hours large group	45,0	30.00
Hours small group	15,0	10.00
Self study	90,0	60.00

Total learning time: 150 h

CONTENTS

-What is Technical writing?

Description:

- Why is it important to study technical and professional communication?
- Characteristics of good technical writing.
- Common technical texts in engineering studies and professions.
- Types of discourse (narrative, expository, argumentative, descriptive)

Full-or-part-time: 15h

Practical classes: 2h

Laboratory classes: 4h 30m

Guided activities: 2h

Self study : 6h 30m

-The writing process (I) Pre-writing stage

Description:

- Planning a text: overview of the communicative situation, the plan sheet
- Analyzing audience and purpose
- Considering style and tone
- Generating ideas and outlining

Full-or-part-time: 30h

Practical classes: 3h

Laboratory classes: 9h

Guided activities: 3h

Self study : 15h



-The writing process (II): Writing technical documents

Description:

- Drafting: common rhetorical functions in technical writing (description, definition, classification, instructions).
- Paragraphs: Structuring and developing paragraphs, intra paragraph coherence
- The essay: Structuring essays and reports (parts of document, thesis statements).
- Developing essay patterns
- Providing inter-paragraph coherence
- Incorporating visual aids

Full-or-part-time: 30h

Practical classes: 3h

Laboratory classes: 9h

Guided activities: 3h

Self study : 15h

-The writing process (III): Post-writing stage (revising and editing technical texts)

Description:

- Revising content and organization of technical texts in English
- Checking for grammatical accuracy
- Editing for style
- Proofreading

Full-or-part-time: 30h

Practical classes: 3h

Laboratory classes: 9h

Guided activities: 2h

Self study : 16h

-Academic and professional documents in English: electronic documents, the technical report, the cv and the cover letter

Description:

- Application/cover letters, CVs, strategies for developing one's own professional profile.
- Electronic communication: using e-mail in professional and academic contexts
- Technical Reports: format, language structures and contents.
- Ethical aspects in technical writing in professional settings.

Full-or-part-time: 25h

Practical classes: 2h

Laboratory classes: 7h 30m

Guided activities: 2h

Self study : 13h 30m



Collaborative project: The "Trans-Atlantic and Pacific Project"

Description:

Students will develop a collaborative project, usually within the "Trans-Atlantic and Pacific Project", a multilateral collaboration with university students in other European universities and in the USA to develop authentic technical documents in English, in a real context.

It is a writing, testing and translation project with the emphasis for TEEE students on the preparation, drafting, editing after review, re-drafting, testing and final delivery of a set of 'how to' instructions.

Students collaborate and interact electronically with students in the US throughout the process.

Other than delivery of the final project, the objectives of the project are:

- to develop and simulate the professional communication skills needed for participating in a multi-partner project
- to develop and implement professional time -management skills in meeting project deadlines
- to explore and use a variety of electronic / on-line communication options
- to develop and use project management and team-building skills
- to gain awareness of intercultural communication skills and implement them

GRADING SYSTEM

Course assignments: 10%

Portfolio of written work: 15%

Collaborative project (usually through participation in the Trans-Atlantic Project and Pacific Project): 15%

Exams: 50%

Class Attendance and participation: 10%

EXAMINATION RULES.

Students are required to attend classes regularly. All assessment activities are compulsory.

In order to qualify for a course mark, students must do at least 50% of the required work for each of the course components (i.e. assignments, activities, classes). Failure to comply with this requisite will result in a final mark of "NP" ("No presentat").

Any assessed activities must be submitted by the set deadlines. Late activities CANNOT be accepted.

Academic integrity and plagiarism: It is the responsibility of each student to ensure that any work submitted is original and that it is his/her own work (i.e. not plagiarised in part or in its entirety, and carried out without external assistance). If the instructor considers that any work submitted is not original, the student will be disqualified from the activity and will get a mark of 0.

BIBLIOGRAPHY

Basic:

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- Reep, Diana C. Technical writing : principles, strategies, and readings. 8th ed. Boston [etc.]: Longman, 2011. ISBN 9780205721504.
- Woolever, Kristin R. Writing for the technical professions. 3rd ed. New York [etc.]: Longman, 2005. ISBN 0321202112.
- Sowton, Chris. 50 steps to improving your academic writing : study book. Reading, UK: Garnet Publishing Limited, 2012. ISBN 9781859646557.
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- Smith, Roger H.C. English for electrical engineering in higher education studies : Course book. Reading: Garnet, 2014. ISBN 9781907575327.
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- Lannon, John M.; Gurak, Laura J. Technical communication [on line]. Fifteenth edition, Global edition. Harlow: Pearson Education Limited, 2021 [Consultation: 14/02/2024]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=6504034>. ISBN 9781292363646.
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