



## Course guide

# 270192 - WSE - Writing Skills for Engineering

Last modified: 11/07/2025

**Unit in charge:** Barcelona School of Informatics  
**Teaching unit:** 756 - THATC - Department of History and Theory of Architecture and Communication Techniques.  
**Degree:** BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Optional subject).  
**Academic year:** 2025    **ECTS Credits:** 6.0    **Languages:** English

## LECTURER

**Coordinating lecturer:** ANTONIA SOLER CERVERA

**Others:**

## PRIOR SKILLS

In order to carry out academic and professional activities in English, students are recommended to have acquired B1 level of the Common European Framework of Reference for Languages (CEF) or higher.

## DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

### General:

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

## TEACHING METHODOLOGY

Class session combine content presentation by teacher, extensive practice and students' participation. Students' participation and involvement are critical for the development of course activities

The work on the course contents is based on the development of projects and tasks.

The activities are based on problem-solving tasks with practical exercises and analysis of samples

## LEARNING OBJECTIVES OF THE SUBJECT

1. To recognize written genres in English in academic and professional contexts
2. To read, understand and interpret written documentation in computer engineering
3. To plan and organize a text for a given communicative situation, using a plan sheet and an appropriate strategy
4. To manage information effectively to write an outline for a written document
5. To draft a document using writing techniques to construct paragraphs and to structure a text
6. To write academic and professional documents in the field of computer engineering: technical report, academic essay, technical documentation
7. To revise a draft both individually and in collaboration, reflecting on appropriateness and efficiency in a given communicative situation
8. To communicate correctly and appropriately in English in different types of written genres
9. To develop autonomous learning skills and keep on practicing writing skills using resources and strategies practised in the course (online resources, portfolio)
11. To understand and apply the principles of academic communication in engineering



## STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	20.00
Guided activities	6,0	4.00
Self study	84,0	56.00
Hours medium group	30,0	20.00

**Total learning time:** 150 h

## CONTENTS

### Resources for academic and professional writing

**Description:**

Use of online grammars, dictionaries and web-based materials for writing. Online communication in English

### Fundamentals of technical writing in academic and professional settings

**Description:**

Problem-solving and genre. Basic elements of technical writing: purpose, audience, tone and style. Writing as a process. Types of discourse

### The writing process (I): Planning technical documents

**Description:**

A plan sheet for a technical document. Gathering information. Avoiding plagiarism. Writing an outline

### The writing process (II): Drafting technical documents

**Description:**

Paragraph structure and coherence. Patterns of organization. Text structure and design. Transition signals.

### The writing process (III): Revising and editing technical documents

**Description:**

Revising content and organization. Revising language correctness and appropriateness. Revising style.

### Types of documents for professional and academic communication in engineering

**Description:**

Online writing: netiquette and e-mail communication. Report writing, correspondence and CVs for academic and professional applications. Technical documentation.



## ACTIVITIES

### Using online resources for academic and professional writing

**Description:**

Exploring web-based materials for writing. Practice in selecting and using online resources

**Specific objectives:**

9

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 13h

Self study: 6h

Theory classes: 4h

Practical classes: 3h

### Understanding the principles of technical communication

**Description:**

Becoming familiar with problem-solving approaches for communicative purposes and genre. Analyzing different examples of technical documents and the general communicative strategy used

**Specific objectives:**

1, 2, 11

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 17h

Self study: 10h

Theory classes: 4h

Practical classes: 3h



### Constructing a technical text following the writing process. Planning a text

**Description:**

Analyzing the communicative situation. Practice in selecting and managing technical information from written sources. Avoiding plagiarism. Exploring organizational patterns. Developing an outline for an academic essay. Practice in collaborative writing

**Specific objectives:**

2, 3, 4

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 22h

Self study: 12h

Theory classes: 5h

Practical classes: 5h

### Drafting technical documents

**Description:**

Practice in paragraph writing. Recognizing the structure of essays. Using patterns of organization. Practice in essay development. Practice in coherence and cohesion. Drafting an essay

**Specific objectives:**

5, 6

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 22h

Self study: 12h

Theory classes: 5h

Practical classes: 5h

### Mid-term test

**Description:**

Recognizing fundamental aspects of technical writing. Constructing a technical text, applying process writing techniques. Writing a paragraph

**Specific objectives:**

1, 2, 3, 5, 11

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 10h

Self study: 8h

Guided activities: 2h



### Revising and editing technical documents

**Description:**

Practice in revising content and organization according to the defined situation. Revising for language correctness (grammar, syntax and vocabulary). Revising punctuation. Practice in collaborative writing and peer review. Revising an essay

**Specific objectives:**

7, 8

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 19h

Self study: 11h

Theory classes: 4h

Practical classes: 4h

### Analyzing the features of different technical documents

**Description:**

Practice in recognizing document layout: technical reports, the degree thesis, the covering letter, the CV and technical documentation. Analyzing the communicative strategy in different genres according to their purpose and intended audience. Planning a technical report

**Specific objectives:**

1, 2, 6

**Related competencies :**

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

**Full-or-part-time:** 21h 18m

Self study: 11h

Guided activities: 1h 18m

Theory classes: 5h

Practical classes: 4h



## Applying for a job / a grant

### Description:

Writing a covering letter and a CV for a job / academic application

### Specific objectives:

5, 6, 7

### Related competencies :

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

### Full-or-part-time: 13h 18m

Self study: 6h

Guided activities: 2h 18m

Theory classes: 3h

Practical classes: 2h

## End-term test

### Specific objectives:

1, 2, 5, 6, 7, 8, 11

### Related competencies :

G3. THIRD LANGUAGE: to know the English language in a correct oral and written level, and accordingly to the needs of the graduates in Informatics Engineering. Capacity to work in a multidisciplinary group and in a multi-language environment and to communicate, orally and in a written way, knowledge, procedures, results and ideas related to the technical informatics engineer profession.

### Full-or-part-time: 10h

Self study: 8h

Guided activities: 2h

## GRADING SYSTEM

Course assessment is based on continuous assessment tasks (course assignments and class participation) and written tests with the following percentages:

-Course assignments. Practical assignments based on the different contents of the course: 20%. These assignments will be done either in class or as homework.

-Course project Written document: 20%.

-Class participation. Students are expected to complete activities and tasks and bring their answers to class for discussion. They are also expected to work in collaboration with others: 10%

-Mid-term test: 25%

-End-term test: 25%

-Students need to complete all the continuous assessment tasks in order to cover all the contents of the course and successfully perform in the exams.

-The average mark resulting from the exams must be a minimum of 3.5 in order to pass the subject. If the exam average is under 3.5, continuous assessment tasks will not be taken into account and the final grade will be the weighted average of the exam marks.

-Students will not get a participation mark if they do not attend a minimum of 50% of the course sessions.



## BIBLIOGRAPHY

---

### Basic:

- Bombardó, C.; Aguilar, M.; Barahona, C. Technical writing: a guide for effective communication. Edicions UPC, 2007. ISBN 9788483019276.
- Secció d'Anglès (UPC). Types of documents for academic and professional communication. CPET, 2012.

### Complementary:

- Lannon, J.M.; Gurak, L.J. Technical communication. 15th ed. Harlow: Pearson Education Limited, 2021. ISBN 9781292363646.
- Huckin, T.N.; Olsen, L.A. Technical writing and professional communication: for nonnative speakers of English. 2nd ed. McGraw-Hill, 1991. ISBN 0071126422.
- Bailey, S. Academic writing: a handbook for international students. 5th ed. Routledge, 2018. ISBN 9781138048744.

## RESOURCES

---

### Hyperlink:

- <http://www.quantumleap.cat>