270192 - WSE - Writing Skills for Engineering

Coordinating unit: 270 - FIB - Barcelona School of Informatics
Teaching unit: 756 - THATC - Department of History and Theory of Architecture and Communication Techniques

Academic year: 2018
Degree: BACHELOR’S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits: 6  Teaching languages: Catalan

Teaching staff
Coordinator: - Antonia Soler Cervera (antonia.soler@upc.edu)

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

Generical:
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

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Theory classes:</th>
<th>30h</th>
<th>20.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Practical classes:</td>
<td>30h</td>
<td>20.00%</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes:</td>
<td>0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Guided activities:</td>
<td>6h</td>
<td>4.00%</td>
</tr>
<tr>
<td></td>
<td>Self study:</td>
<td>84h</td>
<td>56.00%</td>
</tr>
</tbody>
</table>
## Content

**Resources for academic and professional writing**

| Degree competences to which the content contributes: |
| 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**

| Degree competences to which the content contributes: |
| 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**

| Degree competences to which the content contributes: |
| Description: |
| A plan sheet for a technical document. Gathering information. Avoiding plagiarism. Writing an outline |

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

| Degree competences to which the content contributes: |
| Description: |
| Paragraph structure and coherence. Patterns of organization. Text structure and design. Transition signals. |

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

| Degree competences to which the content contributes: |
| Description: |
| Revising content and organization. Revising language correctness and appropriateness. Revising style. |

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

| Degree competences to which the content contributes: |
| Description: |
| Online writing: netiquette and e-mail communication. Report writing, correspondence and CVs for academic and professional applications. Technical documentation. |
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## Planning of activities

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>Hours</th>
<th>Theory classes</th>
<th>Practical classes</th>
<th>Laboratory classes</th>
<th>Guided activities</th>
<th>Self study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Using online resources for academic and professional writing</strong></td>
<td>16h</td>
<td>4h</td>
<td>4h</td>
<td>0h</td>
<td>2h</td>
<td>6h</td>
</tr>
<tr>
<td><strong>Description:</strong> Exploring web-based materials for writing. Practice in selecting and using online resources</td>
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<td></td>
</tr>
<tr>
<td><strong>Specific objectives:</strong> 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Understanding the principles of technical communication</strong></td>
<td>18h</td>
<td>4h</td>
<td>4h</td>
<td>0h</td>
<td>0h</td>
<td>10h</td>
</tr>
<tr>
<td><strong>Description:</strong> Becoming familiar with problem-solving approaches for communicative purposes and genre. Analyzing different examples of technical documents and the general communicative strategy used</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Specific objectives:</strong> 1, 2, 11</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Constructing a technical text following the writing process. Planning a text</strong></td>
<td>22h</td>
<td>5h</td>
<td>5h</td>
<td>0h</td>
<td>0h</td>
<td>12h</td>
</tr>
<tr>
<td><strong>Description:</strong> 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</td>
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<tr>
<td><strong>Specific objectives:</strong> 2, 3, 4</td>
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</tbody>
</table>
## Drafting technical documents

**Hours:** 23h  
Theory classes: 6h  
Practical classes: 5h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 12h

**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

## Mid-term test

**Hours:** 10h  
Guided activities: 2h  
Self study: 8h

**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

## Revising and editing technical documents

**Hours:** 19h  
Theory classes: 4h  
Practical classes: 4h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 11h

**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

## Analyzing the features of different technical documents

**Hours:** 19h  
Theory classes: 4h  
Practical classes: 4h  
Laboratory classes: 0h  
Guided activities: 0h  
Self study: 11h
**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

<table>
<thead>
<tr>
<th><strong>Applying for a job / a grant</strong></th>
<th><strong>Hours:</strong> 13h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory classes: 3h</td>
<td>Practical classes: 2h</td>
</tr>
<tr>
<td>Laboratory classes: 0h</td>
<td>Guided activities: 2h</td>
</tr>
<tr>
<td>Self study: 6h</td>
<td></td>
</tr>
</tbody>
</table>

**Description:**
Writing a covering letter and a CV for a job / academic application

**Specific objectives:**
5, 6, 7

<table>
<thead>
<tr>
<th><strong>End-term test</strong></th>
<th><strong>Hours:</strong> 10h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided activities: 2h</td>
<td>Self study: 8h</td>
</tr>
</tbody>
</table>

**Specific objectives:**
1, 2, 5, 6, 7, 8, 11

**Qualification 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: 15%. 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: 5%
- Mid-term test: 30%
- End-term test: 30%

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

Basic:


Secció d'Anglès (UPC). Types of documents for academic and professional communication. CPET, 2012.

Complementary:


Others resources:

Hyperlink

http://www.quantumleap.cat