Course guide
205257 - VR2 - Professional Communication for Engineers Through Virtual Reality II

Last modified: 22/04/2024

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 756 - THATC - Department of History and Theory of Architecture and Communication Techniques.

Degree: BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN ELECTRICAL 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 TEXTILE TECHNOLOGY AND DESIGN ENGINEERING (Syllabus 2009). (Optional subject).
BACHELOR'S DEGREE IN AEROSPACE TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN AEROSPACE VEHICLE ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL DESIGN AND PRODUCT DEVELOPMENT ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).

Academic year: 2024 **ECTS Credits:** 3.0 **Languages:** English

LECTURER

Coordinating lecturer: Moncada Comas, Balbina

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 (CEFR) or higher.

TEACHING METHODOLOGY

The course consists of: Participatory lectures; Participation in role plays and simulations; Autonomous learning by means of the resolution of tasks and problems; Autonomous learning of theoretical content; and Immersive learning (through Virtual Reality activities with goggles)

LEARNING OBJECTIVES OF THE SUBJECT

Familiarise students with spoken and written professional and technical communication and enable them to communicate effectively in English in authentic situations proper of their workplace settings. These objectives will be approached by immersing students in realistic professional scenarios in an imaginary company, where they will have to participate in different simulations.
Help students develop a range of professional communication skills in bi- and multilingual and multicultural environments, thus familiarising students with intercultural competence.
Become acquainted with developing and manufacturing processes: brainstorming, finding out about technical specifications, contracts.
Understand how a company functions and its technical processes.
Develop the ability to comprehend and understand various types of written materials (e.g., leaflet)
Acquire scanning and skimming techniques to quickly identify key information in different texts.
Learn to synthesize information and present it concisely in short forms like leaflets, presentations, memos, and instructions.
Develop skills for arranging and attending meetings and presentations. Develop the ability to give oral instructions clearly and effectively. Understand and apply appropriate language for formal and informal discussions.
Enhance negotiation skills for exchanging ideas in group projects. Acquire skills for debating and expressing ideas persuasively.

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	40.00
Self study	45,0	60.00

Total learning time: 75 h

CONTENTS

Module 1: Develop & Make

Description:
This Module will take you through the following stages: from understanding various processes and how a company is structured; through to the initial outsourcing process; to drawing up product specifications; then to negotiating with suppliers all around the world to order parts; launching production; and lastly making the final presentation of the product to your Board of Directors.

Specific objectives:
Students will become acquainted with developing and manufacturing processes through activities such as brainstorming, researching technical specifications, and understanding contracts.
Students will gain an understanding of how a company functions, including the knowledge of technical processes and factories.
Students will learn vocabulary related to telephoning, business correspondence, contracts, meetings, negotiations, socializing, and technical terms for specifications, processes, figures, and numbers.
Students will practice describing sequences and stages within a process (from initial stages to final products), agreeing/disagreeing, reaching consensus, making/accepting/rejecting proposals, using time expressions, passive forms, phrasal verb adjectives, modal verbs, tenses and verb forms, comparative and superlative forms, making suggestions/recommendations, and asking for/giving opinions.
Students will develop skills in dealing and socializing with overseas visitors and suppliers, including understanding cultural differences, practicing appropriate etiquette, and effectively communicating cross-culturally.

Related activities:
Procedures (description of process)
Instructions
Telephone calls
Business emails and letters
Negotiations
Presentations
Proposals (contact potential suppliers or companies to outsource production)
Specifications (sent to other factories abroad that have to manufacture your product according to your strict specifications)
Reports

Full-or-part-time: 37h 30m
Theory classes: 15h
Self study : 22h 30m

Module 2: Selling Products & Services in Engineering

Description:
In this module, the product is already manufactured and now you want to sell it. You'll have to convince prospective buyers that your product is the best choice for them. In order to do so you will have to: practise how to use persuasive language in oral communication and in writing, show how your product responds to customers' needs, be able to show a link between technical features of the product and benefits for the customer, be aware of different modes of communication and their impact on the customer.

Specific objectives:
Students will learn how to design, order, and create effective leaflets, synthesize information in short forms such as leaflets, presentations, memos, and instructions, prepare questions for questionnaires, and summarize information in bullet points.
Students will practice arranging and attending meetings/presentations, socializing with customers, selling products to potential clients, negotiating ideas for group projects, and participating in group brainstorming sessions.
Students will distinguish and use various levels of formality and informality in spoken interactions, persuasive and argumentative phrases, meeting language, leaflet language, professional vocabulary related to the field of interest, and effectively use turn-taking phrases in spoken production.
students will develop the ability to distinguish and use persuasive pitches, personal tone, and proper intonation in questions and sentences.
Students will develop an awareness of cultural differences, particularly in terms of politeness in spoken interactions and turn-taking phrases.
Students will recognize and address various professional needs related to specific products or services in different cultural contexts.

Related activities:
face-to face conversations in debating, discussing, exchanging opinions
meetings: arranging the meeting/event/procedure/assessing clients needs, planning the process
leaflets: advertising service and products, blogs, articles, manuals
in-house memos
tables with selected technical and general information
elevator pitch: canvas or video recordings
video presentations: advertising a product, presenting ideas and concepts
instructions, manuals, technical descriptions
SWOT analysis
inquiry: asking relevant questions

Full-or-part-time: 37h 30m
Theory classes: 15h
Self study : 22h 30m

GRADING SYSTEM

The final grade will mainly consist of continuous assessment. Assessment will be based on the following activities:
Class attendance & participation: 15%
Writing module 1: 15%
Speaking module 1: 15%
Writing module 2: 15%
Speaking module 2: 15%
Final test: 25%
In order to pass the subject, it is a necessary condition to attend classes and present the assessed tasks. The student will not get an attendance and class participation grade if s/he does not attend at least 75% of the sessions. If one of the tasks is not carried out, the subject will be considered graded with a zero.

EXAMINATION RULES.

In case of partial or total copying in any of the evaluations of the subject, what is provided for in the academic regulations for undergraduate and master's studies of the UPC will apply: ''Irregular actions that can lead to a significant variation of the qualification of one or more students constitute a fraudulent performance of an evaluation act. This action entails the descriptive qualification of suspension and a numerical grade of 0 for the evaluation act and for the subject, without prejudice to the disciplinary process that may arise as a result of the acts carried out. If the student considers the decision to be incorrect, they can file a complaint with the director or the dean of the teaching center and, if the answer does not satisfy them, they can file an appeal with the rector. The total or partial reproduction of academic or research works, or their use for any other purpose, must have the explicit authorization of the authors. It is up to the director or the dean of the teaching center to resolve allegations about aspects not included in the regulations.''

BIBLIOGRAPHY

Basic:

- Sales, Hazel E. Professional communication in engineering [on line]. London: Palgrave Macmillan, 2006 [Consultation: 28/05/2024]. Available on: https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=293775. ISBN 9781403948069.
- Wang, John X. What every engineer should know about business communication. Boca Raton: CRC Press, 2008. ISBN 9780849383960.
- Beer, David F.; McMurrey, David A. A guide to writing as an engineer [on line]. 5th ed. Hoboken, NJ: Wiley, 2019 [Consultation: 25/11/2024]. Available on: https://search-ebscohost-com.recursos.biblioteca.upc.edu/login.aspx?direct=true&AuthType=ip,uid&db=nlebk&AN=3756074&site=ehost-live&ebv=EB&ppid=pp_C1. ISBN 9781119625766.