

28841 - Technical English

Información del Plan Docente

Academic Year	2016/17
Academic center	175 - Escuela Universitaria Politécnica de La Almunia
Degree	424 - Bachelor's Degree in Mechatronic Engineering
ECTS	4.0
Course	4
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning process that has been designed for this subject is based on the following:

In the learning process, the student's role will be mainly active in either group work (by working in pairs or small groups, in which they should solve a problem, make a report, comment on a text or listen to specific or general information, etc.) or individually, all that under supervision of the teacher and using online resources.

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5.2.Learning activities

The program that the student is offered to help him achieve the target results includes the following activities...

Face-to-face generic activities:

• **Theoretical and practical classes** : Theoretical concepts of the subject will be explained and practical examples to support the theory developed

• **Conversation Practices** : Students will be divided into pairs or small groups and will be supervised by the teacher.

Non-class generic activities:

• Study and assimilation of the theory presented in the lectures.

• Organization of seminars, solving suggested problems, etc.

• Scheduling written continuous assessment tests and final examinations.

Supervised autonomous activities: Targeted mainly to seminars and tutorials under the supervision of the teacher.

Support activities: Mainly, through a virtual learning portal (Moodle) different activities that reinforce the basic contents of the subject will be made. These activities can be customized or not, being monitored through the above mentioned virtual portal.

5.3.Program

Contents

Essential Contents of the subject to achieve the target learning outcomes.

1 Engineering Services . Water Systems Services. Project Management. Manufacturing Engineering. Applying for a Job in Electrical Engineering. Applying for a Job in Mechanical Engineering. **Writing:** Creating a Resume (Resume). Writing a Cover Letter for a Resume. Guided Writing (Letter). **Oral Practice:** Describing Your Company (Role-Play). Practicing Interview Skills (Role-Play)

2 Defining Objectives. Feasibility Studies. CAD (Computer-aided Design). Drafting. Comparing Engineering Systems. A Presentation to a Client. **Writing:** Reporting on the Progress of a Project - Guided Writing (E-mail). Creating a

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Presentation (Presentation) **Oral Practice:** Choosing an Engineering System (Group Activity) Describing a Site Plan (Pair Work).

3 Materials and Their Properties. Ferrous Metals. Non-ferrous Metal. Synthetic Polymers. Concrete . **Writing:** Writing a Meeting Notification- Guided Writing (E-mail). Writing a Meeting Summary (Summary). **Oral Practice:** Choosing a Metal (Pair Work). Choosing Materials for a Project (Group Activity)

4 Forces. Lift, Drag, and Torque. Compression, Tension, Load, and Shear. Thrust and Measuring Methods. Turbulence. **Writing:** Suggesting Changes to Engineering Processes (E-mail) Summarizing and Confirming Transactions - Guided Writing (Letter). **Oral Practice:** Describing Diagrams (Class Activity). Solving Engineering Problems (Group Activity)

5 Systems and Mechanisms. Hydraulic Systems. Pneumatic Systems. Mechanical Systems. Robotic Systems. Electrical Systems. Mechanisms: Gears. Mechanisms: Engines. Mechanisms: Cams and Camshafts. **Writing :** Writing A Cover Letter for a Status Report - Guided Writing (Letter). Taking Notes (Notes). **Oral Practice :** Describing Diagrams (Pair Work). Reporting Project Status and Providing Feedback (Role-Play)

6 Giving Instructions: Assembly Instructions. Disassembly Instructions. Maintenance Instructions. Troubleshooting. **Writing:** Writing a Meeting Agenda (Agenda). Writing Instructions (Instructions): **Oral Practice :** Giving Instructions (Pair Work). Defining Words (Pair Work)

7 Measurements: Taking Measurements. Calibrating the Equipment. Clean Room Sensors. Industrial Sensors. **Writing:** Informing Clients of a New Service - Guided Writing (E-mail). Providing Information on Flow Sensors (E-mail). **Oral Practice:** Giving Advice about Sensors (Role-Play). Reporting on Measurements (Role-Play)

8 Safety: Discussing Safety Procedures. Hazard Analysis and Management. Tool Usage. Reporting Safety Incidents. First-aid Instructions. **Writing:** Filling out a Safety Incident Report (Repost). Writing a Memo about Safety Issues - Guided Writing (Memo). **Oral Practice:** Giving Safety Instructions (Role-Play). Performing Hazard Analyses (Role-Play)

9 Quality Management: Performance Specifications. Testing. Quality Analysis. Documentation. Quality Audits and Certifications. System Support. Engineering Ethics. **Writing:** Writing to the Engineering Ethics Committee - Guided Writing (Letter). Refusing to Provide a Product or Service - Guided Writing (Letter). **Oral Practice:** Explaining the Quality Certification Process (Role-Play). Discussing Performance Specifications (Role-Play)

10 Green Engineering: Alternative Fuels in Industry. Energy Efficiency in Production. Industrial Recycling. Waste Management. Winning an Award in Green Engineering. **Writing:** Writing to Potential Clients (Letter). Writing a Presentation (Presentation). **Oral Practice:** Debating Alternative Fuels (Class Activity). Solving Problems on a Living Building Project (Group Activity)

5.4.Planning and scheduling

Face-to-face Sessions Schedule and presentation of tasks

The classes are held according to the schedule established by the Institution, which is published prior to the start date of the course. A more specific calendar with the activities of the subject may be scheduled and published in the ADD of the University of Zaragoza.

The teacher will inform the students of the tutorials schedule also through the ADD or other means of communication set

up by the Institution.

5.5. Bibliography and recommended resources

- Alexander, L.G.. Longman English grammar practice / L.G. Alexander London ; New York : Longman, 1990
- Bolton, David. English grammar in steps / english grammar presented, explained and practised in context by David Bolton and Noel Goodey . - [1ª ed.] London : Richmond, D. L. 2004
- Eastwood, John. Oxford practice grammar : with answers / John Eastwood . - [1st ed., 2nd. repr.] Oxford : Oxford University Press, 1992
- Murphy, Raymond. English grammar in use : a self-study reference and practice book for intermediate students : with answers / Raymond Murphy . - 1st. pub., 16th printing Cambridge : University Press, 1992
- Azar, Betty Schramper. Understanding and using english grammar / Betty Schramper Azar . - 2nd ed. New Jersey : Prentice Hall Regents, 1989
- Collins Cobuild...English language dictionary / developed and compiled in the English Department at the University of Birmingham as part of a language research project commissioned by Collins Publishers . - [1st ed., 6th repr.] London ; Glasgow : Collins ; Stuttgart : Klett, 1992
- Diccionario Oxford Avanzado para estudiantes de inglés : español-inglés, inglés-español / dirección editorial, Annella McDermott, Patrick Goldsmith, Mª Angeles Pérez Alonso ; equipo de redacción Ana Bremón ... [et al.] Oxford [etc.] : Oxford University Press, 1996
- Beigbeder Atienza, Federico. Diccionario politécnico de las lenguas española e inglesa = Polytechnic dictionary of Spanish and English languages / F. Beigbeder Atienza . - 2a. ed. Madrid : Díaz de Santos, S.A., 1997
- Dudley-Evans, Tony. Engineering / Tony Dudley-Evans, Tim Smart, John Wall . - [1st ed., 6th. imp.] Harlow, Essex : Longman, 1987
- Engineering / prepared by English Language Services ; [Contributing editor Louis de Pian] New York [etc.]: Collier-Macmillan, 1967
- Glendinning, Eric H.. Technology 2 / Eric H. Glendinning and Alison Pohl Oxford : Oxford University, 2008
- Hollett, Vicki. Tech Talk : Intermediate Student's Book / Vicki Hollett, John Sydes Oxford : Universtity Press, 2009
- Ibbotson, Mark. Cambridge English for engineering / Mark Ibbotson . - 1st ed., 4th repr. Cambridge : Cambridge University Press, 2010
- Thorn, Michael. An Introduction to technical English / Michael Thorn and Alan Badrick.. - 1ªedición New York [etc.] : Prentice Hall, 1993
- Waterhouse, Graham. English for the construction industry / Graham and Celia Waterhouse. - 1st published, repr London ; Basingstoke : Macmillan, 1985