



IDENTIFYING DATA

Methodology for the Preparation, Presentation and Management of Technical Projects

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|---------------------|---|----------|------|------------|
| Subject | Methodology for the Preparation, Presentation and Management of Technical Projects | | | |
| Code | V12G320V01905 | | | |
| Study programme | Degree in Electrical Engineering | | | |
| Descriptors | ECTS Credits | Choose | Year | Quadmester |
| | 6 | Optional | 4th | 2nd |
| Teaching language | Spanish English | | | |
| Department | | | | |
| Coordinator | Cerqueiro Pequeño, Jorge Pose Blanco, José | | | |
| Lecturers | Cerqueiro Pequeño, Jorge Pose Blanco, José | | | |
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| General description | The aim of this course is to prepare the students to handle the methods, techniques and tools that are needed for the elaboration and management of technical documents in the industrial field of Engineering. | | | |

It will also be sought to develop skills in the handling of information and communication technologies related to the professional field of the student's degree.

Furthermore, the student skills to communicate properly the knowledge, procedures and results in the Industrial Engineering field will be strengthened.

An essentially practical approach will be used, based in the solution of specific application exercises -with guidance of the subject's lecturer- that will require to apply the theoretical contents of the course.

Competencies

| | |
|------|---|
| Code | |
| B3 | CG3 Knowledge in basic and technological subjects that will enable students to learn new methods and theories, and provide them the versatility to adapt to new situations. |
| C18 | CE18 Knowledge and skills to organize and manage projects. Know the organizational structure and functions of a project office. |
| D1 | CT1 Analysis and synthesis. |
| D2 | CT2 Problems resolution. |
| D3 | CT3 Oral and written proficiency in the own language. |
| D5 | CT5 Information Management. |
| D6 | CT6 Application of computer science in the field of study. |
| D7 | CT7 Ability to organize and plan. |
| D8 | CT8 Decision making. |
| D9 | CT9 Apply knowledge. |
| D10 | CT10 Self learning and work. |
| D11 | CT11 Planning changes to improve overall systems. |
| D13 | CT13 Adaptability to new situations. |
| D14 | CT14 Creativity. |
| D15 | CT15 Objectification, identification and organization. |
| D16 | CT16 Critical thinking. |
| D17 | CT17 Working as a team. |
| D18 | CT18 Working in an international context. |

D20 CT20 Ability to communicate with people not expert in the field.

D21 CT21 Leadership.

Learning outcomes

| Expected results from this subject | Training and Learning Results | | |
|--|-------------------------------|-----|--|
| Utilization of methodologies, technics and tools for the organization and management of all technical documents other than engineering projects. | B3 | C18 | D1 D2 D7 D8 D9 D10 D14 D15 D16 D17 D21 |
| Skills in the utilization of information systems and in the communications in the industrial scope. | | | D5 D6 D9 D11 D17 |
| Skills to communicate properly the knowledge, procedures, results, abilities in the field of Engineering in Industry. | | | D3 D13 D17 D18 D20 D21 |

Contents

| Topic | |
|---|---|
| 1. Types of usual documents in the distinct fields of the professional engineering activities. | 1.1. Technical documents: Characteristics and components. 1.2. Types of technical documents according to their contents. 1.3. Types of technical documents according to their recipients and objectives. |
| 2. Methodology for writing and presenting technical documentation: assessments, valuations, expert reports, studies, reports, dossiers and other similar technical works. | 2.1. General aspects in elaborating and presenting technical documentation. 2.2. Elaboration of technical reports. 2.3. Elaboration of technical studies. 2.4. Elaboration of assessments, expert reports and valuations. 2.5. Elaboration of dossiers and other technical works. 2.6. Technical work in concurrent and/or collaborative engineering environments. |
| 3. Techniques for research, analysis, evaluation and selection of technological information. | 3.1. Typology of technological information. 3.2. Sources of technological information. 3.3. Information and communications systems. 3.4. Techniques for information research. 3.5. Methods for analyzing information. 3.6. Evaluation and selection of information. |
| 4. Documentation laws and regulations. | 4.1. Applicable laws to technical documentation according to its specific field. 4.2. Other applicable regulations. |
| 5. Processing of technical documentation. | 5.1. Processing at Government Offices of technical documentation. 5.2. Legitimization and responsibilities in the processing of documentation before Government's Offices. 5.3. Processing of documentation: Concepts, procedures and specifics. |
| 6. Presentation and verbal defence of technical documents. | 6.1. Regulations in the elaboration of technical presentations. 6.2. Preparation for the verbal defence of technical documents. 6.3. Techniques and specific tools for the performance of public presentations. |

Planning

| | Class hours | Hours outside the classroom | Total hours |
|-----------------------------------|-------------|-----------------------------|-------------|
| Master Session | 29.5 | 44.25 | 73.75 |
| Laboratory practises | 29.5 | 44.25 | 73.75 |
| Long answer tests and development | 1.2 | 0 | 1.2 |

Practical tests, real task execution and / or simulated.

1.3

0

1.3

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

| Methodologies | |
|----------------------|---|
| | Description |
| Master Session | Presentation by the lecturer of the contents of the topic to be studied, the theoretical bases and/or guidelines of a specific work, exercise or project to be developed by the student. |
| Laboratory practises | Activities that require applying theoretical knowledge to specific situations in order to acquire basic and procedural skills related to the topic that is being studied. These activities will be developed in special spaces with specific equipment (laboratories, computer rooms, etc.). |

Personalized attention

| Methodologies | Description |
|----------------------|-------------|
| Laboratory practises | |

| Assessment | | | | | |
|--|---|---------------|-------------------------------|-----|---|
| | Description | Qualification | Training and Learning Results | | |
| Laboratory practises | Interdisciplinary exercises and problems -as close to real cases as possible- will be solved in groups of students, with lecturer orientation and enforcing active participation by the students. | 60 | B3 | C18 | D1 D2 D3 D6 D7 D8 D9 D10 D11 D13 D14 D15 D16 D17 D18 D21 |
| Long answer tests and development | Development of theoretical topics and concepts related to the subject's contents, in the scope of the subject's final assessment. | 20 | B3 | C18 | D1 D2 D3 D8 D9 D13 D14 D20 |
| Practical tests, real task execution and / or simulated. | Making of practical tests and exercises related to the subject's contents, in the scope of the subject's final assessment. | 20 | B3 | C18 | D1 D2 D3 D7 D8 D9 D11 D13 D14 D15 D16 |

Other comments on the Evaluation

Assessment of student's work - individually and/or in groups, either face-to-face or non-presential - will be carried out by the lecturer by weighting appropriately the different marks obtained in the activities that were proposed along this course.

Students may opt to follow this course either in the 'Continuous Evaluation' or in the 'Non-Continuous Evaluation' modalities. In both cases the grading of the course will be made according to a numerical system, using values from 0,0 to 10,0 points according to the current laws that are applicable (R.D. 1125/2003 of 5th September, BOE Nr. 224 of 18th September). A minimum overall mark of 5,0 is required to pass this course.

For the First Announcement or Edition.

a) 'Continuous Evaluation' modality:

The final mark for the course will be calculated by combining the individual marks awarded in the assessment of the works proposed and elaborated in the practical classes (60% weight) along the term, with the mark awarded for the final test performed in the date stated by the School's Ruling (40% weight).

These marks will assess the behaviour and the implication of the student both in class and in the realisation of the different programmed activities, plus the fulfillment of the deadlines for submitting the works that were proposed, and/or the presentation and defence of those works, etc.

Students not reaching the minimum value of 3,5 points out of 10 that are required for every section, they will either need to perform also the assessment in the Second Announcement date, or to elaborate additional works or practical exercises to achieve the learning goals that were established for the concerned sections.

b) 'Non-Continuous Evaluation' modality:

There is a two weeks time term after the starting date of the course for the concerned students to justify with documents that it is not possible for them to follow the regular process of continuous evaluation.

In order to pass this course, students renouncing to continuous evaluation will be obliged to perform a final test covering the whole contents of the course, both theoretical and practical, including short questions, reasoning questions, problem solving and development of practical cases. The mark awarded to the student assessment will be the final mark for the course.

A minimum mark of 5,0 points out of 10,0 possible will be required to pass the course.

For the Second Announcement or Edition.

Students who did not pass the course in the First Announcement, but that could have passed some specific parts of the theory or practical blocks, will be allowed to be assessed only regarding the failed parts, keeping the marks formerly awarded for the parts already passed, and applying the same assessment criteria to them.

Students wishing to improve their qualification, or students that failed the course on the First Announcement, will need to assist to the Second Announcement, where they will be assessed about the whole contents of the course, both theoretical and practical, including short questions, reasoning questions, problem solving and development of practical cases. Students are required to reach a minimum mark of 5,0 points out of 10,0 possible to pass the course.

Ethical commitment:

It is expected an adequate ethical behaviour of the student. In case of detecting unethical behaviour (copying, plagiarism, unauthorized use of electronic devices, etc.) shall be deemed that the student does not meet the requirements for passing the subject. In this case, the overall rating in the current academic year will be Fail (0.0).

The use of any electronic device for the assessment tests is not allowed unless explicitly authorized. The fact of introducing unauthorized electronic device in the examination room will be considered reason for not passing the subject in the current academic year and will hold overall rating (0.0).

Sources of information

BIBLIOGRAFÍA BÁSICA:, -----, -----,

Aguado, David, **HABILIDADES PARA EL TRABAJO EN EQUIPO: PROGRAMA DE ENTRENAMIENTO**, 1ª,

Álvarez Maraño, Gonzalo, **EL ARTE DE PRESENTAR: CÓMO PLANIFICAR, ESTRUCTURAR, DISEÑAR Y EXPONER PRESENTACIONES**, 1ª,

Blair, Lorrie, **WRITING A GRADUATE THESIS OR DISSERTATION**, 1ª,

Brown, Fortunato, **TEXTOS INFORMATIVOS BREVES Y CLAROS: MANUAL DE REDACCIÓN DE DOCUMENTOS**, 1ª,

Budinski, Kenneth G., **ENGINEER'S GUIDE TO TECHNICAL WRITING**, 1ª,

Lannon, John M. y Gurak, Laura J., **TECHNICAL COMMUNICATION**, 13ª,

Pease, Allan, **ESCRIBIR BIEN ES FÁCIL: GUÍA PARA LA BUENA REDACCIÓN DE LA CORRESPONDENCIA**, 1ª,

Pringle, Alan S. y O'Keefe, Sarah S., **TECHNICAL WRITING 101: A REAL-WORLD GUIDE TO PLANNING AND WRITING TECHNICAL CONTENT**, 1ª,

BIBLIOGRAFÍA COMPLEMENTARIA:, -----, -----,

Balzola, Martín, **PREPARACIÓN DE PROYECTOS E INFORMES TÉCNICOS**, 2ª,

Boeglin Naumovic, Martha, **LEER Y REDACTAR EN LA UNIVERSIDAD: DEL CAOS DE LAS IDEAS AL TEXTO ESTRUCTURADO**, 1ª,

Calavera, J., **MANUAL PARA LA REDACCIÓN DE INFORMES TÉCNICOS EN CONSTRUCCIÓN: INFORMES, DICTÁMENES, ARBITRAJES**, 2ª,

Córcoles Cubero, Ana Isabel, **CÓMO REALIZAR BUENOS INFORMES: SORPRENDA CON INFORMES CLAROS, DIRECTOS Y CONCISOS**, 1ª,

García Carbonell, Roberto, **PRESENTACIONES EFECTIVAS EN PÚBLICO: IDEAS, PROYECTOS, INFORMES, PLANES, OBJETIVOS, PONENCIAS, COMUNICACIONES**, 1ª,

Himstreet, William C., **GUÍA PRÁCTICA PARA LA REDACCIÓN DE CARTAS E INFORMES EN LA EMPRESA**, 1ª,

Sánchez Pérez, José, **FUNDAMENTOS DE TRABAJO EN EQUIPO PARA EQUIPOS DE TRABAJO**, 1ª,

Williams, Robin, **THE NON-DESIGNER'S PRESENTATION BOOK**, 1ª,

OTHER DOCUMENTARY SOURCES:

- User manuals and tutorials of the software packages used in the course.
- Technical catalogues in paper format.

WEB REFERENCES:

- Different repositories for regulations and standards.
- Software user forums.
- On-line technical catalogues.

Recommendations

Subjects that it is recommended to have taken before

Fundamentals of Engineering Graphics/V12G320V01101
 Projects Elaboration and Management in Engineering/V12G320V01704

Other comments

Previously to the realisation of the final assesments, students should check in the FAITIC platform to know whether it is necessary for them to carry any particular documentation, materials, etc. into the exam room to perform the tests.

It is necessary that the student registered in this course, either has passed all courses of the former years, or is registered in the courses he's not passed yet.
