1. Key Information

Module Code: 13612	**Module Title:** Graphic Expression
Credit Points: 4	**Module Status:** Compulsory	**Module Block:** Business Technologies
Course Title: BSc in Engineering and Management	**Module Theme:** Graphic Expression

2. Lecturer:

2. Lecturer:	Paula Cosar Jordá	**Tutorial Hours:**	Monday 15:00/17:00 · by appointment

3. Required Reading:

Curso de Dibujo Geométrico	F. Javier Rodríguez de Abajo
Fundamentos de Ingeniería Gráfica	Jesús Félez, Mª Luisa Martínez, José Mª Cabanellas, Antonio Carretero
Geometría Descriptiva	Fernando Izquierdo Asensi
Normalización del Dibujo Técnico	Cándido Preciado, Francisco Jesús Moral
Apuntes de Normalización	José Manuel García Ricart
Dibujo para Diseñadores Industriales	Fernando Julián, Jesús Albarracín

4. General overview of the module

The Graphic Expression for an engineer is the alphabet and language rules with which he thinks, he develops his ideas and manages to transmit them. This subject aims to establish the bases of knowledge of the alphabet and its rules to convert it into a language, as it is the technical drawing, and its implementation and use in a company everyday life.

5. Recommended prior knowledge

Code	Module

The basic drawing knowledge acquired in the previous learning stages is advisable but not mandatory. Use of basic drawing tools and spatial vision is recommended.

6. Module objectives – Learning outcomes

Basic and general Competences

01 - Ability to work as a team in multilingual, multidisciplinary and multicultural environments.

02 - Apply technologies, skills and economic tools for engineering and management.

03 - Define, solve and describe in a synthetic way complex technical problems.

05 - Communicate using scientific languages, based on graphical and symbolic elements used in engineering and Management.

CB4 - Capability of students to transmit information, ideas, problems and solutions to a specialized and non-specialized audience.

CB5 - The development by the students of those learning skills necessary to undertake further studies with a high degree of autonomy

Specific Competences

12 - Manage the information of a company using the appropriate technology and systems

17 - Possess spatial vision and knowledge of graphic representation techniques, for application in computer-aided design

7. Teaching and learning units

Unit	Schedule
1- INTRODUCTION: GRAPHIC EXPRESSION IN ENGINEERING	01
2- STANDARIZATION	02 - 08
3- REPRESENTATION SYSTEMS	02 - 13
4- INTRODUCTION TO AUTOCAD	14 - 20
5- APPLIED GEOMETRY	02 - 20

8. Teaching and learning methods

Unit	Theory (Classroom)	Practical (Classroom)	Practical (Laboratory)	Practical (Field)	Practical (ICT)	Self-guided study	TOTAL HOURS
1	2					1	3
2	2	2			2	10	16
3	5	8				25	38
4	4	5			6	24	39
5	2				2	10	14
TOTAL HOURS	15	15			10	70	110

9. Assessment

Overview	Nº of activities	Weighting (%)
Continuous assessment		
Academic assignment: Portfolio Representation Systems	1	20
Academic assignment: Portfolio CAD system	1	20
Exams		
Synthesis test. Representation systems	1	30
Synthesis test. Final full exercise	1	30

The entire evaluation system will be governed by the "EDEM University Center Evaluation System" standard.

For all evaluation acts whether or not qualifying, the criterion will be governed by 4 basic items:

- *Content & Regulations*
- *Graphics*
- *Composition*
- *Cleaning*

Student evaluation will consist of both continuous and summative assessments:

1. *Continuous assessment: The delivery of portfolios, practical cases carried out, and participation in the different teaching activities, as well as attendance and participation in the classroom, within the critical spirit will be valued and assessed. This part of the assessment carries a weighting of 40% towards the final mark.*

2. *Summative assessment: These tests can combine both theoretical and practical content. This part of the assessment carries a weighting of 60% towards the final mark.*

Continuous assessment is attendance based and non-recoverable. Therefore, the mark obtained for this part of the assessment will serve for both the first summative assessment and any subsequent repeat if required. The repeat will only be available at the end of the semester. The deadline for every continuous task is invariable and in case of fail the task will not be assessed. All synthesis tests will be recoverable in the 2nd call in a unique exam.

In order to pass the module an average of more than 5 in summative tests must be obtained. The final mark will be calculated by the average weightings of the summative assessment in combination with the continuous assessment. The final mark achieved must be 5 or above to pass the module. If the Final Exam is suspended, the student will be assessed on second call, with all the subject matter.

Attendance is compulsory to ensure that you extract the most value from the module and meet the learning requirements. Therefore, session absence accounting for more than 15% of the prescribed hours will result in the inability to be awarded a mark for continuous assessment. Consequently, the maximum mark that can be achieved will be that obtained solely from the summative assessments.

Students enrolling in the module for the second time will receive specific instructions from their lecturer on what is required for them to pass the continuous assessment element. This continuous assessment will consist on 6 figures portfolio (2 dihedral, 2 axonometric, 2 CAD) established by the teacher. The final mark will be obtained by combining the summative assessment (80%) and the continuous assessment (20%), having to gain a final mark equal to or greater than 5 to pass the module. Mid term exam will not be available for these students thus class attendance is mandatory for it.

All students must comply with the rules of writing, spelling and grammar in the development of their work and their assessment tests.

Fraud in the students work under any of its forms (copy, plagiarize, not cite references, etc.) will suppose the non-acceptance thereof and therefore will be sanctioned with the minimum score of zero, without prejudice to disciplinary measures that could be derived.