



UNIVERSIDAD DE CORDOBA

INSTITUTO DE ESTUDIOS DE POSGRADO

**MÁSTER UNIVERSITARIO EN  
AVANCES EN CIENCIAS  
GASTRONÓMICAS**

2024/25 YEAR



**REPRESENTACIÓN GRÁFICA  
AVANZADA DE DATOS Y RESULTADOS  
DE TRABAJOS CIENTÍFICOS (T)**

### Course details

**Course name:** REPRESENTACIÓN GRÁFICA AVANZADA DE DATOS Y RESULTADOS DE TRABAJOS CIENTÍFICOS (T)

**Code:** 138006

**Degree/Master:**

MÁSTER UNIVERSITARIO EN AVANCES EN CIENCIAS GASTRONÓMICAS  
MÁSTER UNIVERSITARIO EN ENERGÍAS RENOVABLES DISTRIBUIDAS  
MÁSTER UNIVERSITARIO EN GESTIÓN AMBIENTAL Y BIODIVERSIDAD POR LA UNIVERSIDAD DE CORDOBA  
MÁSTER UNIVERSITARIO EN MEDICINA DEPORTIVA EQUINA POR LA UNIVERSIDAD DE CORDOBA  
MÁSTER UNIVERSITARIO EN REPRESENTACIÓN Y DISEÑO EN INGENIERÍA Y ARQUITECTURA  
MÁSTER UNIVERSITARIO EN SALUD PÚBLICA VETERINARIA POR LA UNIVERSIDAD DE CORDOBA  
MÁSTER UNIVERSITARIO EN TECNOLOGÍA FÍSICA: INVESTIGACIÓN Y APLICACIONES  
MÁSTER UNIVERSITARIO EN TRADUCCIÓN ESPECIALIZADA (INGLÉS/FRANCÉS/ALEMÁN-ESPAÑOL)  
TRANSVERSALES MÁSTERES UNIVERSITARIOS

**Year:**

**Year: 1**

**ECTS Credits:** 4.0

**Classroom hours:** 0

**Face-to-face classroom percentage:** 0.0%

**Study hours:** 100

**Online platform:** <https://moodle.uco.es/>

### Coordinating teacher

**Name:** GUTIÉRREZ DE RAVE AGÜERA, EDUARDO SALVADOR

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### Brief description of the contents

- Development and customization of different types of 2D and 3D plots.
- Obtaining 3D maps with different methods.
- Learning of 3D data visualization techniques.

Work materials for students:

- Dossier - <https://moodle.uco.es/moodlemap/>
- Exercises and activities - <https://moodle.uco.es/moodlemap/>

## Prerequisites

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### Prerequisites established in the study plan

Prerequisites are not needed

### Recommendations

No recommendations are made

## Study programme

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### 1. Theory contents

#### INTRODUCTION

Description of the different types of 2D and 3D plots.

Criteria for selecting suitable plots to represent several kinds of data.

#### I: BASIC PLOTS

Line plot; Scatter plot; Step plot; Bubble plot; Function plots (Explicit, Parametric); Class scatter plot; 3D Ribbon wall plot; 3D XYZ line-scatter plot; 3D Bubble plot; 3D Function plot; 3D XYZ class scatter plot

#### II: GRAPH FEATURES

Graph magnifier; Digitize plots; Some available curve fits (Linear fit, Power fit, Polynomial); Custom curve fit.

#### III: BAR CHART, POLAR, SPECIALTY AND STATISTICAL PLOTS

##### Bar Chart plots

Vertical / Horizontal Bar Chart; Vertical / Horizontal Floating Bar Chart; 3D Vertical / Horizontal Bar Chart;

Vertical / Horizontal Category Bar Chart; 3D Vertical / Horizontal Floating Bar Chart; 3D XYZ Vertical / Horizontal Bar Chart; 3D XYZ Vertical / Horizontal Floating Bar Chart

##### Polar plots

Polar Class Scatter; Rose, Wind Chart; Polar Line/scatter; Polar Function Plot; Polar Bar Chart; Radar Chart

##### Specialty plots

High-Low-Close Candlestick; Ternary Scatter; X/Y/Angle/Magnitude Vector; High-Low-Close

##### Statistical plots

Vertical Histogram; Vertical 3D Histogram; Box-Whisker; Notched Box-Whisker; Pie Chart; Pie Chart 3D; Q-Q Plot;

Normal Q-Q Plot

#### IV: CONTOUR SURFACE

XY Data Map; XZ Data Map; XY Grid Map; XZ Grid Map; XY Function Map; XZ Function Map; Surface Data Map; Surface Grid Map; Surface Function Map; Surface Contour Overlay

### 2. Practical contents

Practicing the student skills on the corresponding theoretical content about 2D and 3D plots.

## Bibliography

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- Grapher, The Ultimate Technical Graphing Package. Quick Start Guide. Golden Software, LLC. <https://www.goldensoftware.com/products/download>
- Bertoline, G.R., Wiebe, E.N., Hartman, N.W., Ross, W.A. (2008). Technical Graphics Communications, fourth edition. Chapter 21, Technical Data Presentation. McGraw-Hill Education.

## Methodology

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### Clarifications

The part-time students status and availability will be taking during the course development and evaluation.

Students fit to part-time course will be held by agreement with the teachers at the beginning of the semester. In duly justified cases, the evaluation criteria may be modified and adapted to these students, providing equal rights and opportunities for all partners.

The work material (dossier of documentation for self-study, exercises and problems) are available to students in the virtual platform will enable flexible learning of the subject for part-time students.

### Face-to-face activities

### Off-site activities

Activity	Total
<i>Exercise and problem solving activities</i>	70
<i>Information processing activities</i>	30
<b>Total hours</b>	<b>100</b>

## Results of the training and learning process

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### Knowledge, competencies and skills

- CU2 Apply the knowledge acquired and problem-solving skills in new or unfamiliar environments in broader (or multidisciplinary) contexts related to the field of study.
- CU6 Ability to obtain information, design experiments and interpret behavioural outcomes.

## Assessment methods and instruments

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Tools	Percentage
Examination	50%
Group or individual globalizing projects	30%
Means of practical execution	20%

### Period of validity for partial qualifications:

There are not partial qualifications

### Clarifications:

If a student (part-time or full time) does not pass the course, he/she must perform a practical exam on exercises

proposed by the teachers at the end of the semester.

Students who obtain a final grade of 10 points will be eligible for honors. To do this, they must take an additional

test proposed by the teachers.

## Sustainable development goals

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Quality education

Gender equality

Decent work and economic growth

## Other Faculty

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*The methodological strategies and the evaluation system contemplated in this Teaching Guide will respond to the principles of equality and non-discrimination and must be adapted according to the needs presented by students with disabilities and special educational needs in the cases that are required. Students must be informed of the risks and measures that affect them, especially those that may have serious or very serious consequences (article 6 of the Safety, Health and Welfare Policy; BOUCO 23-02-23).*

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