

Geometry drawing program *Graphical methods, Perspective drawing, Technical drawing*

Design and image department | Arts Degree — Design Degree

Art Faculty | Universidad complutense de Madrid |

Goals

Use geometry as a generating instrument for the creative process.

Motivate students' spatial vision and abstraction skills.

Use geometry to properly establish composition laws on its applications.

Professor presenting the course with program and works from the course

Miguel Ángel Maure Rubio

Arts Degree: 4 hours of class per week for 13-15 weeks *6 ECTS*

Desing Degree: 4 hours of class per week for 13-15 weeks *6 ECTS*

1/4 blocks

BA+DI Chapter 1 (*2 weeks*)

Plane and spatial metric geometry:

Tangency and curve links.

Conic curves and their design

The ellipse. Tangency,

Spirals and helixes. Helicoid.

Uses for Art, Graphic Design and Product Design

Conceptualise the concepts and designs used in metric geometry to define planar shapes with applications for Arts and Design

BA+DI Chapter 2 (*2 weeks*)

Install and first steps with CAD

Initiate students in C.A.D. systems, establishing a dialog between metric geometry and graphical methods in use.

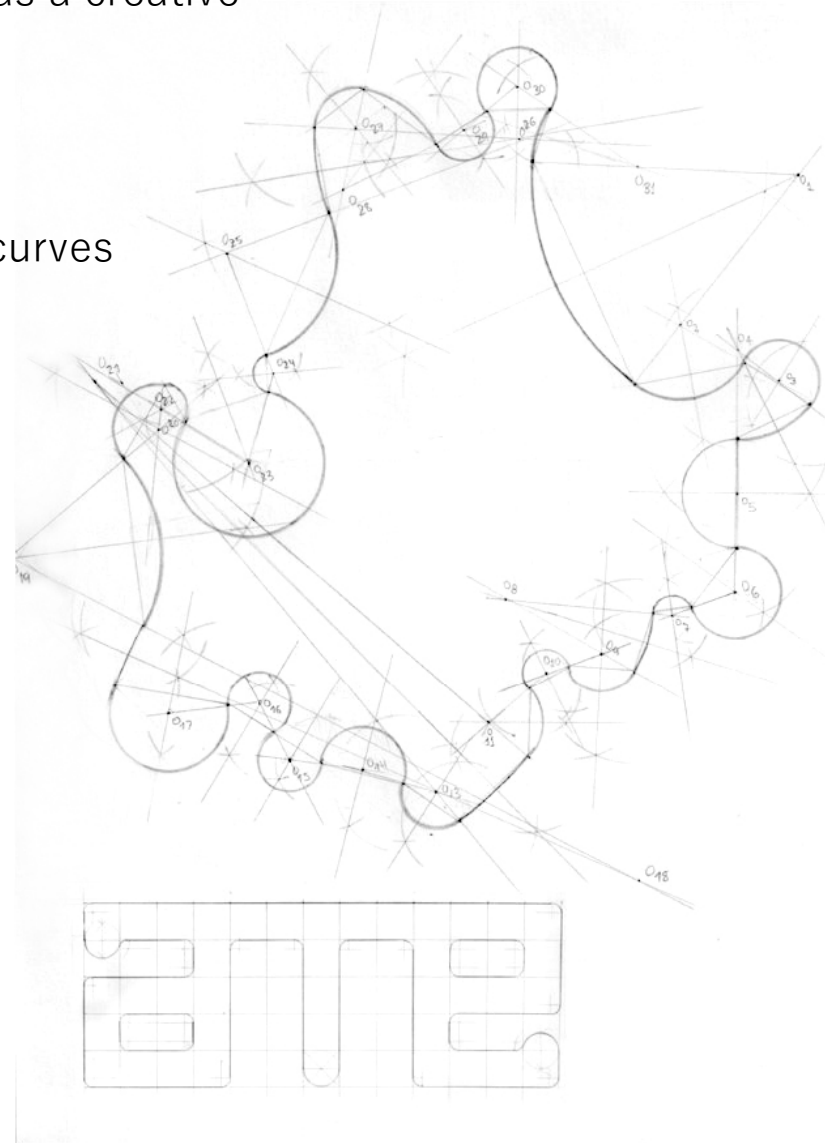
Students' autonomous work

First part

Design a logotype using geometry as a creative instrument for the design process.

Second part

Draw planar and spatial technical curves



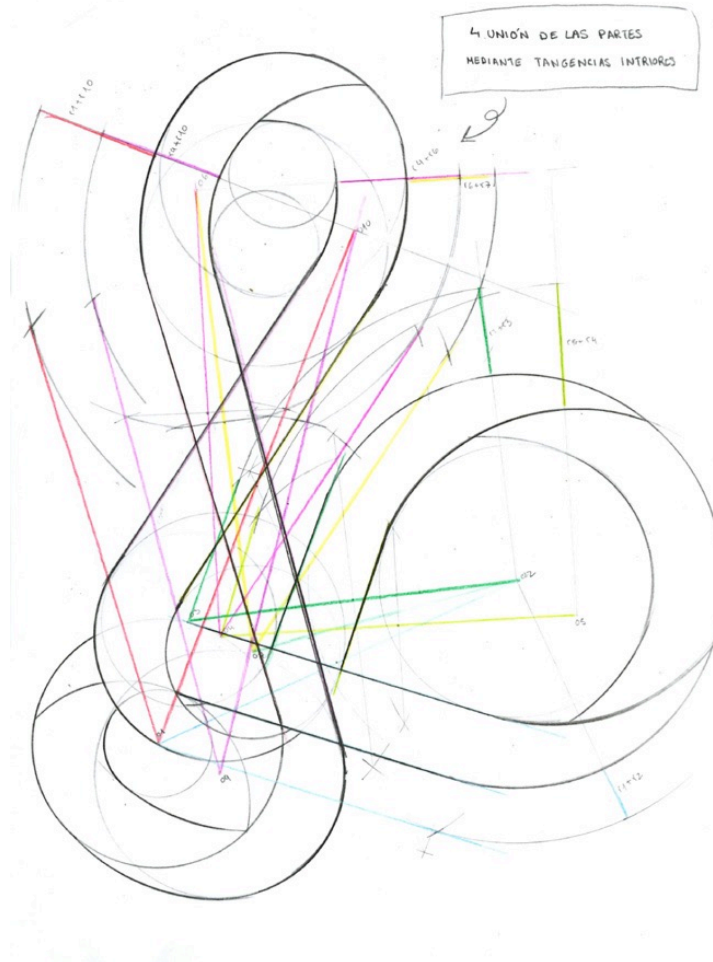
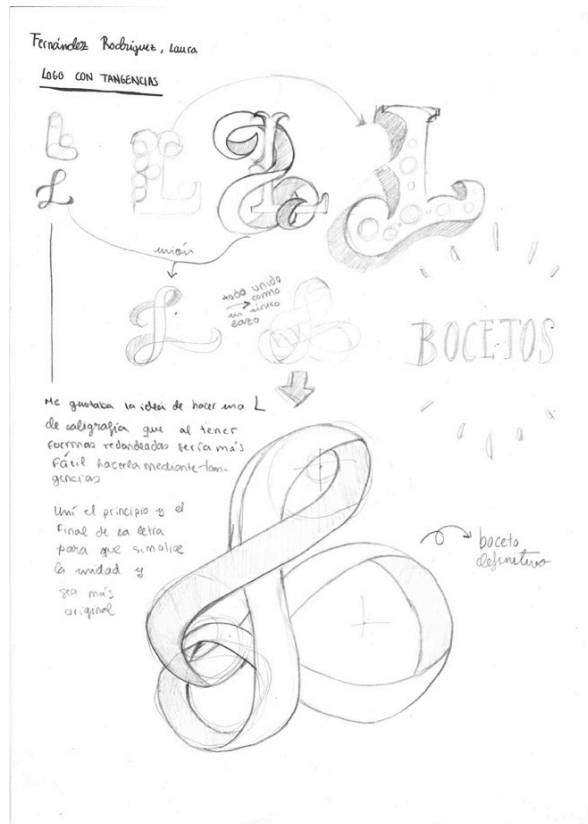
First part

Students' autonomous work

Design a logotype using geometry as a creative instrument for the design process.

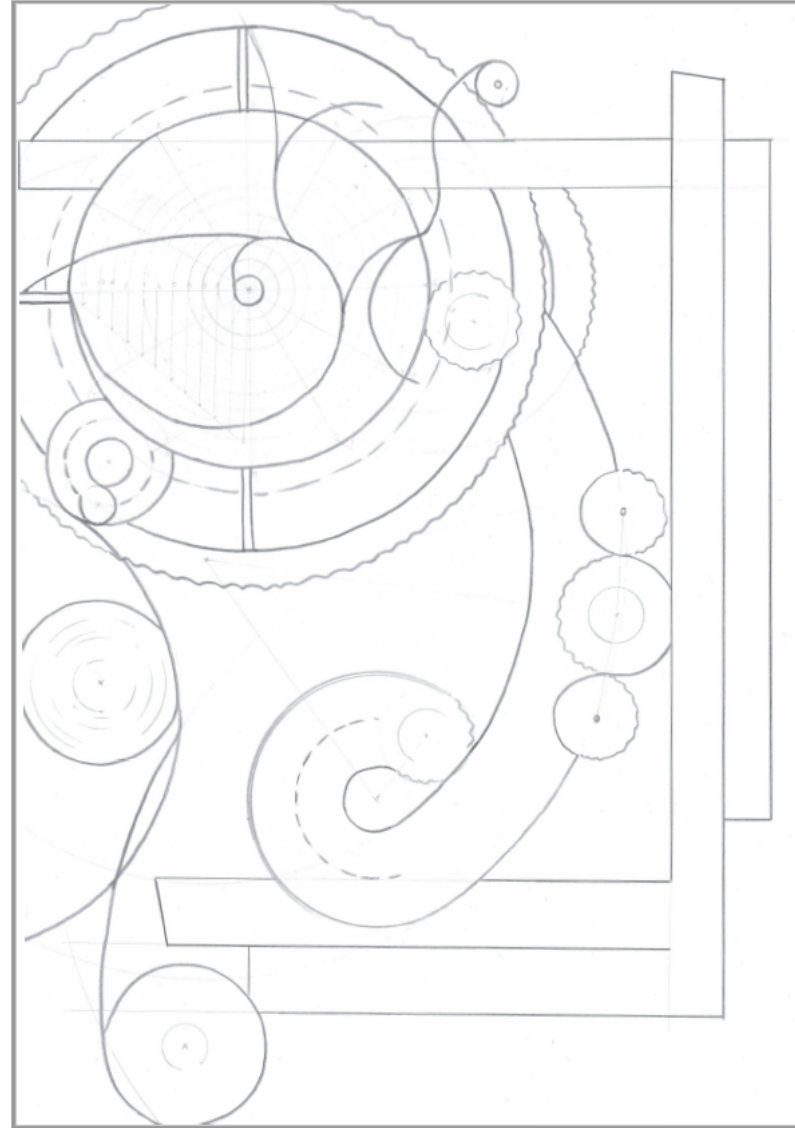
Second part

Draw planar and spatial technical curves



Students' autonomous work
Visit an exhibition related to Art
or Design creation. (William
Morris-Arts & Craft.)
Carry out in teams an analysis of
the most representative work
from a geometric point of view.

Ejercicio hecho por ellos. Diseño
de un tapiz



2/4 blocks

BA Chapter 5 (*2 weeks*)

DI Chapter 3 (*2 weeks*)

DI Graphical methods:

History. Types. Relationship between each one.

BA+DI

The Dihedral representation system

and Axonometry:

Alphabet. Polyhedrons. Views of an object.

Parallelism and perpendicularity.

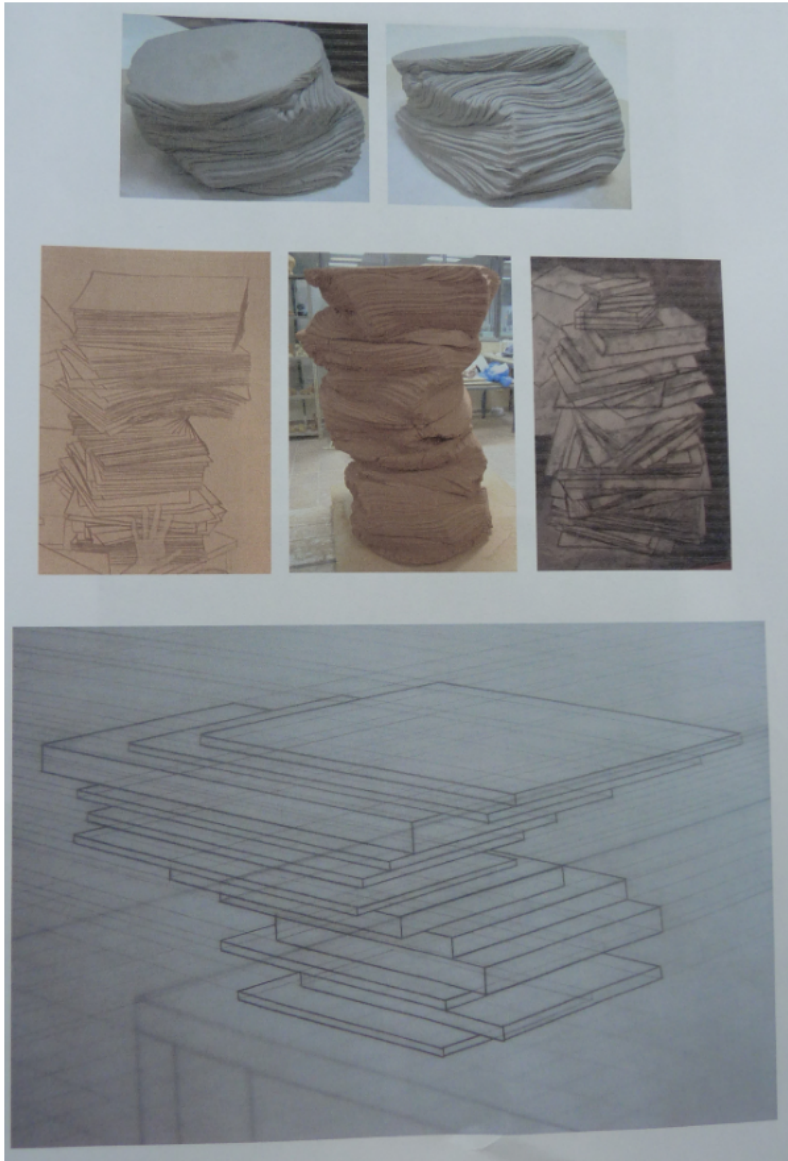
Intersections and shadows.

UNE standards. Dimensioning rules

Know the historical evolution of graphical methods and understand that they will develop spatial view and abstraction skills.

Learn to use the vocabulary related to ortogonal-projection methods used in design.

Learn norms used for the definition of an object.



3/4 blocks

BA Chapter 5 (*2 weeks*)

DI Chapter 4 (*5 weeks*)

The Dihedral representation system and Axonometry

methods:

Distances. Turn. Fold. Plan change. Application: Figures laying on tilted planes. (Dihedral representation system) Planar sections.

Projection geometry (Planar and spatial homology and Affinity) and its application to Dihedral.

Planar sections.

Figures supported on oblique planes in the dihedral system

Intersection between surface and line.

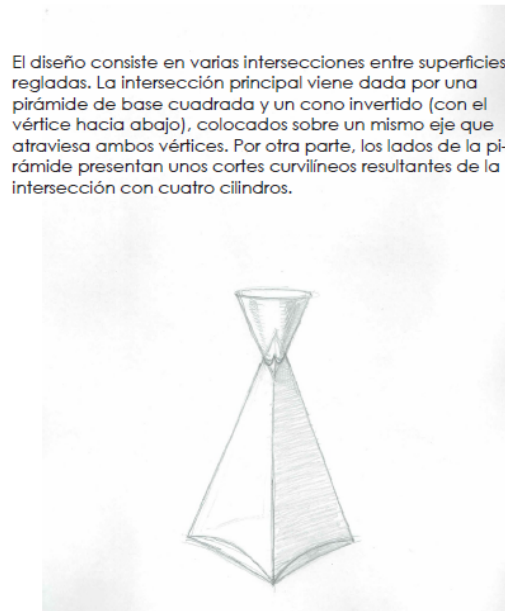
DI Intersection between Plane surfaces

Develop the most appropriate operations and methods to achieve the correct planar representation of the space and its application to simple geometric shapes and figures

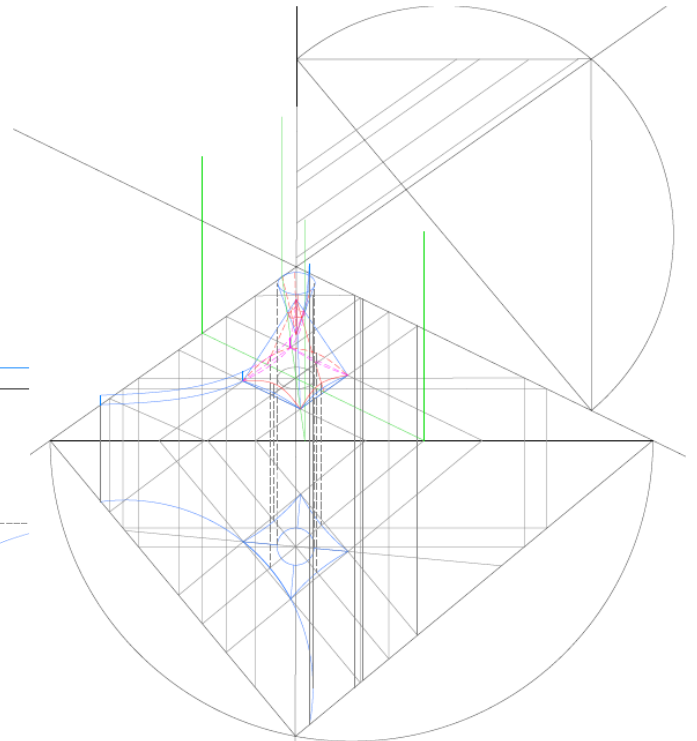
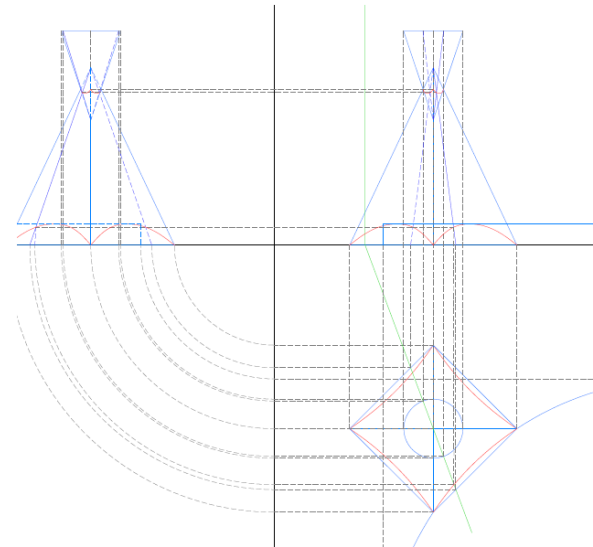
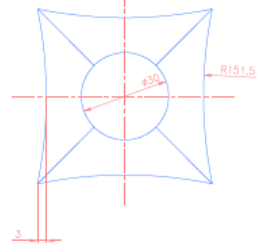
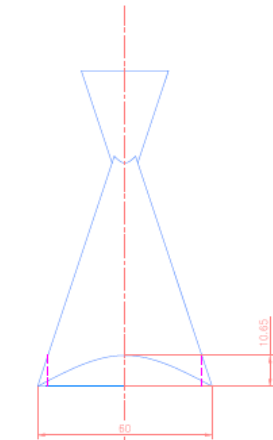
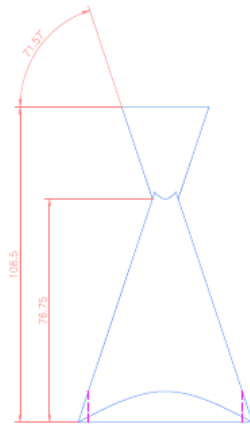
Learn how to use projection geometry to easily solve complex representation challenges.

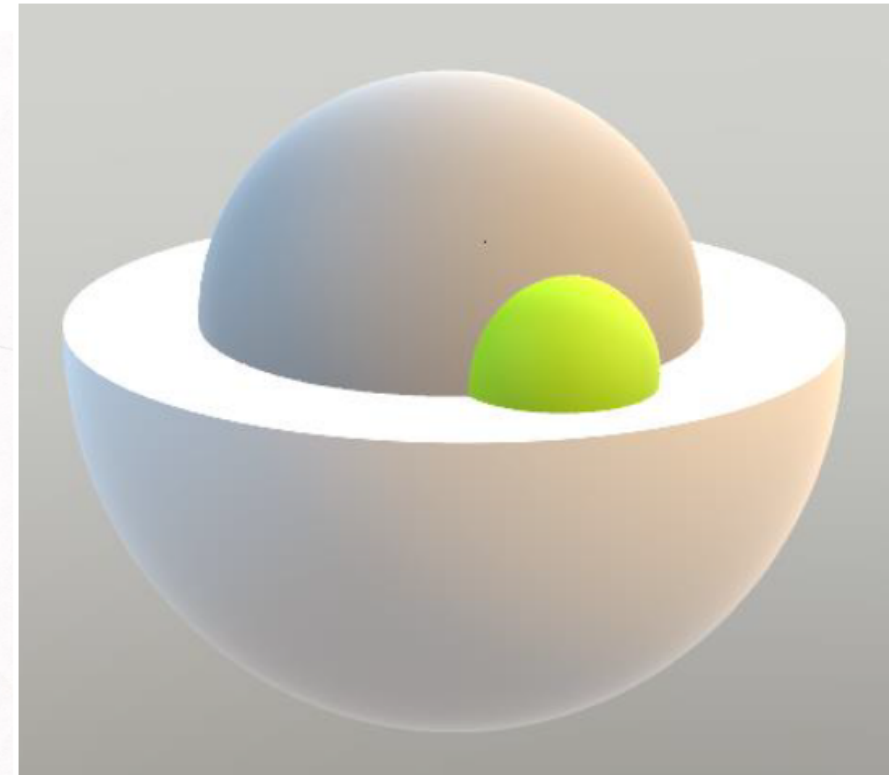
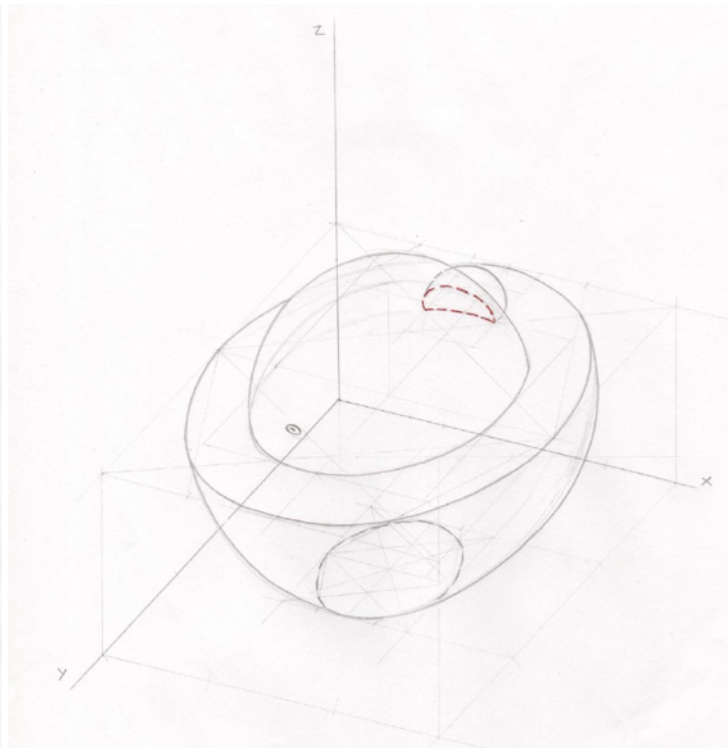
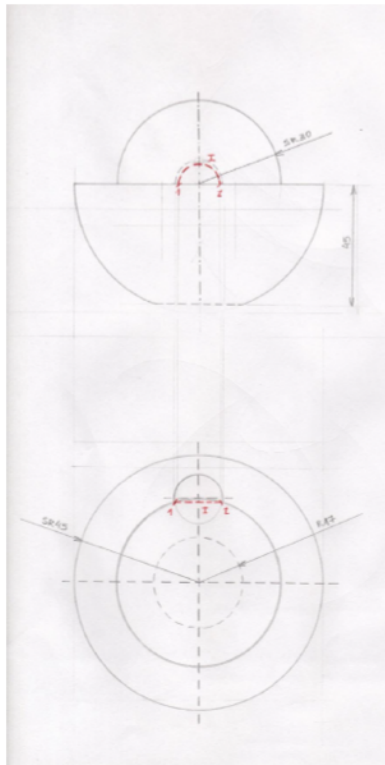
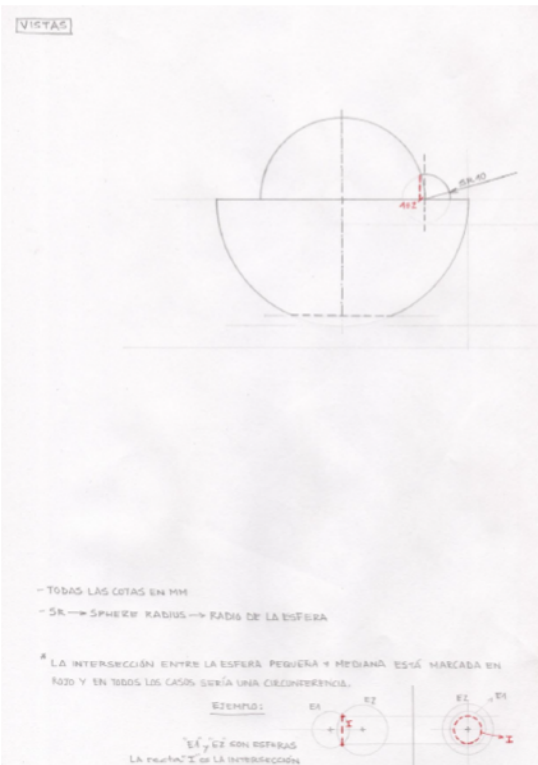
Apply a geometric procedure as a tool for the creative process.

FRASCO DE PERFUME



El diseño consiste en varias intersecciones entre superficies regladas. La intersección principal viene dada por una pirámide de base cuadrada y un cono invertido (con el vértice hacia abajo), colocados sobre un mismo eje que atraviesa ambos vértices. Por otra parte, los lados de la pirámide presentan unos cortes curvilíneos resultantes de la intersección con cuatro cilindros.





4/4 blocks

BA Chapter 3 (*5 weeks*)

DI Chapter 5 (*2 weeks*)

Perspective:

BA History.

Graphical methods.

Classification. Relationship between each one.

BA+DI Alphabet. Membership. Parallelism.

Intersections.

Direct method and Vanishing points method.

The object to the ground plane in Perspective.

The vanishing points.

Measuring Points on the Horizon Line.

The circumference in the Ground Plane. Perpendicularity,

Round the plan

Perspective of prismatic and cylindrical surfaces

BA Figures laying on tilted planes.

Perpendicularity and Mirrors.

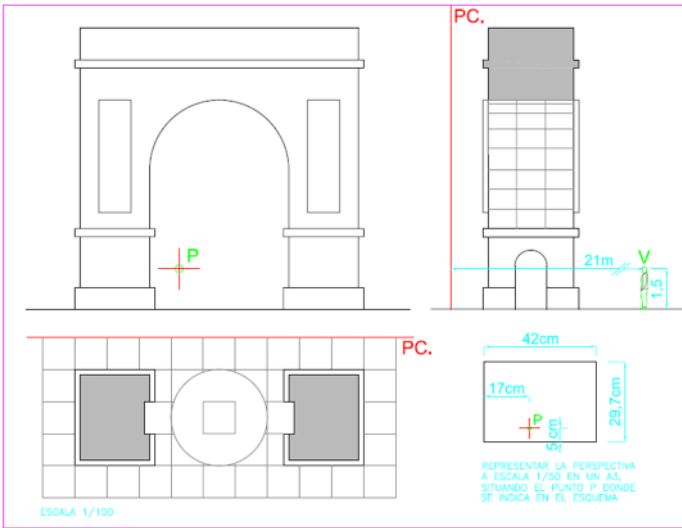
Geometric restitution of perspective

Know the historical evolution of perspective representation.

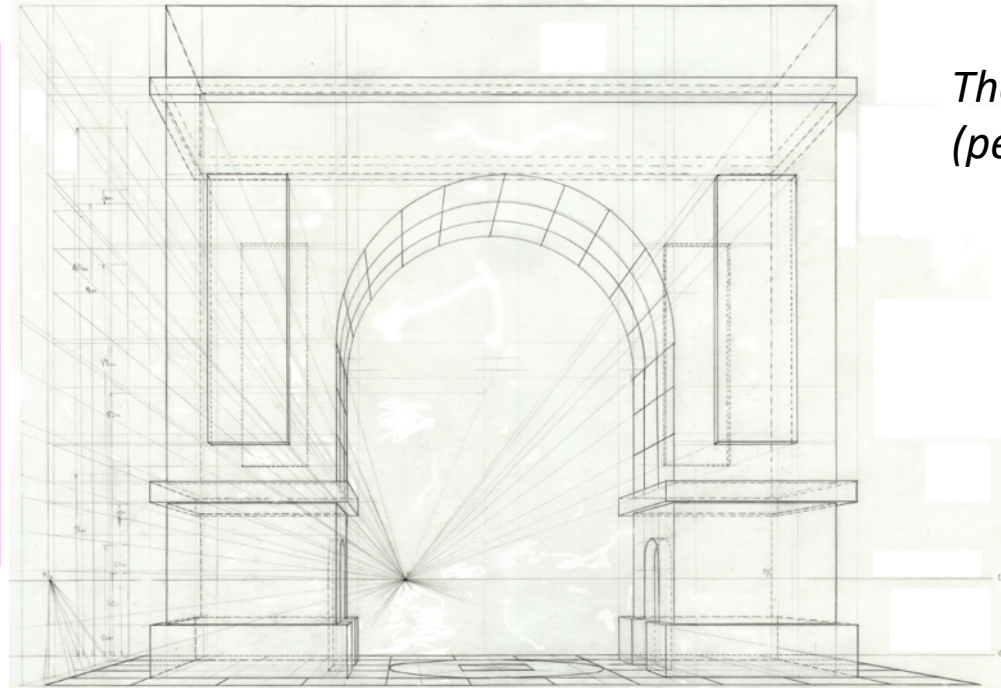
Learn to use the vocabulary from conical-projection graphical methods.

Develop the most appropriate operations and methods to correctly represent the space in perspective and to apply it on simple shapes and figures.

Apply the geometric procedure of representation as a tool for the creative process



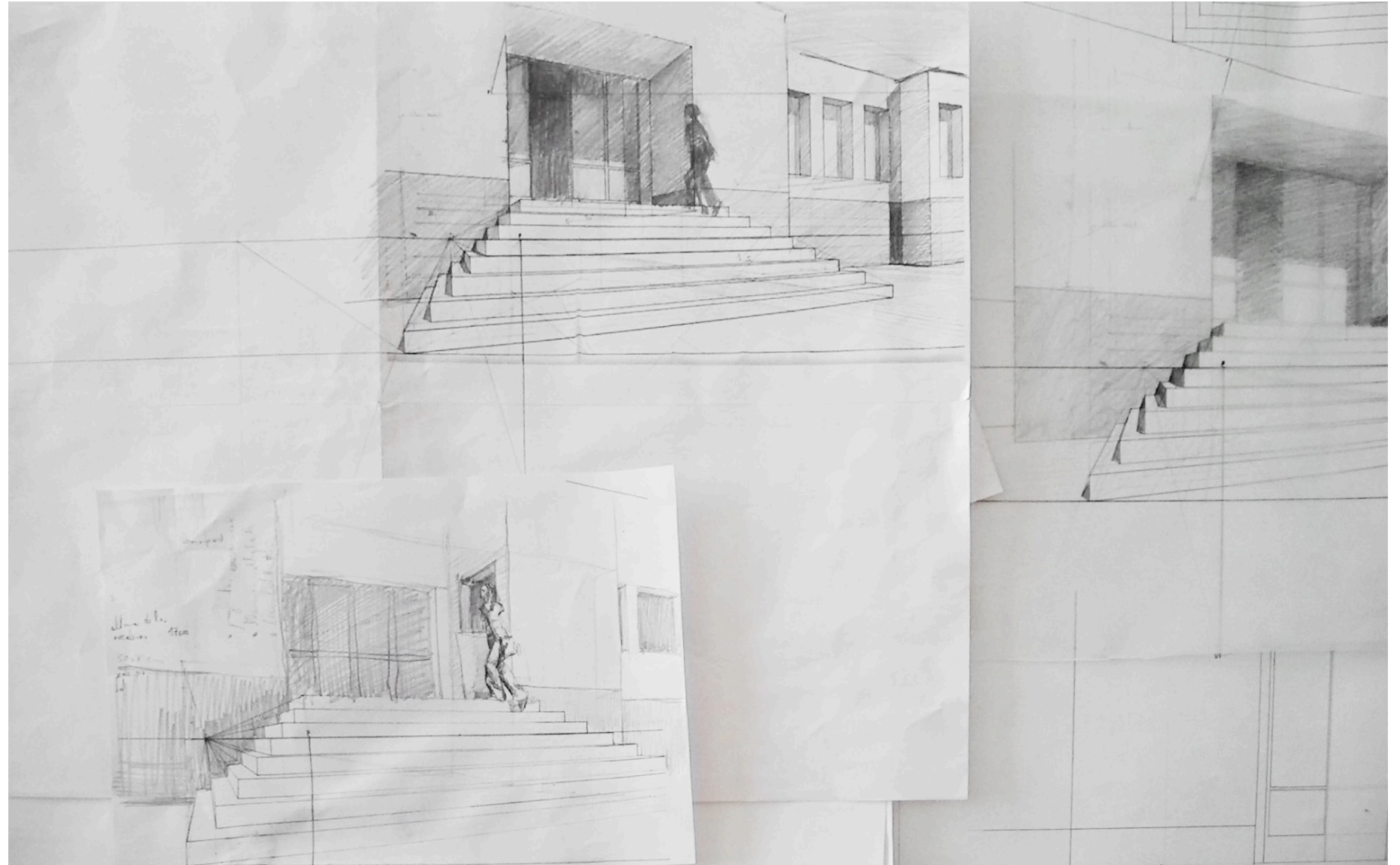
The data of the exercise



The student finds in his own drawing (perspective) a source of creative inspiration.

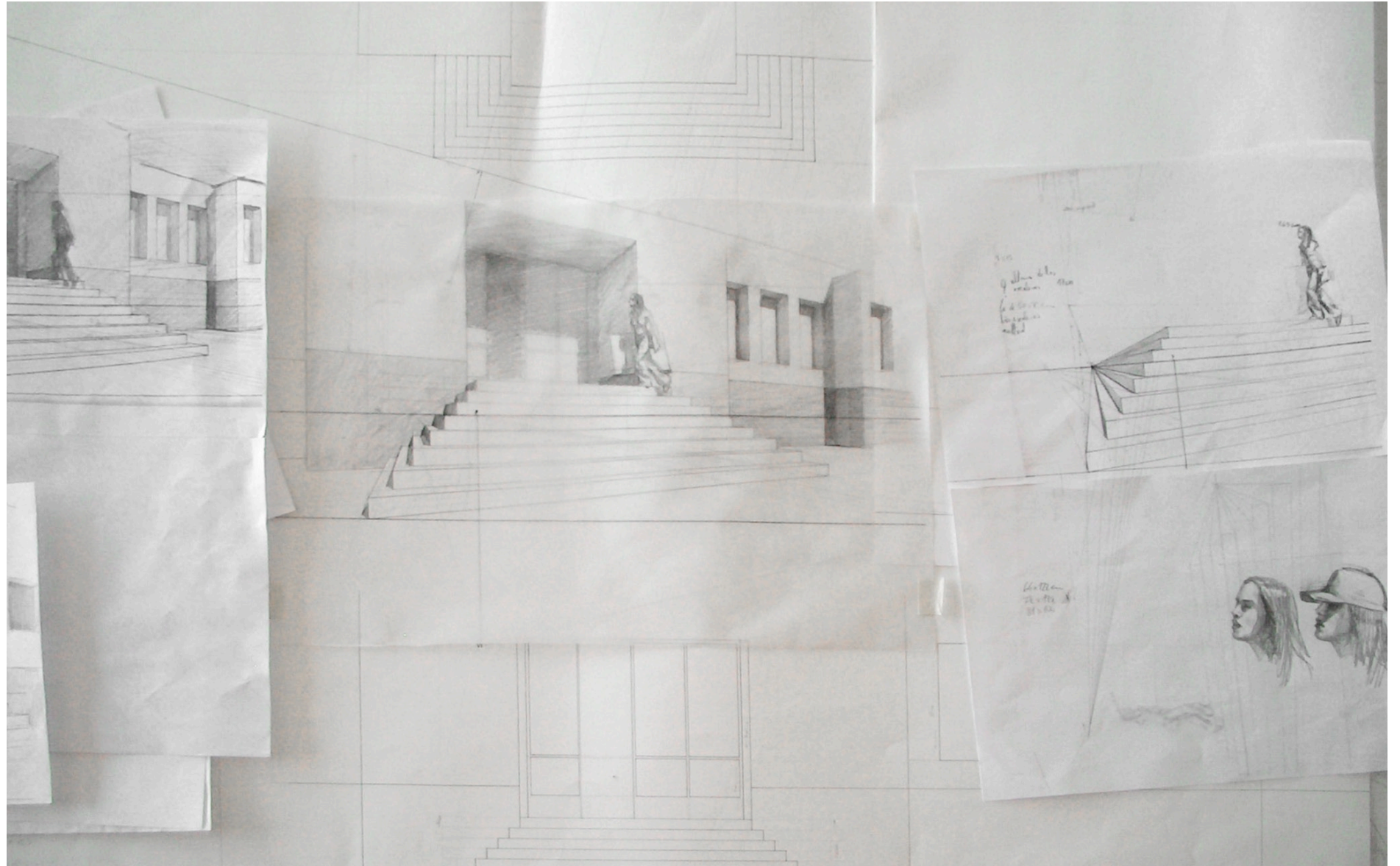


From the perspective drawing to the picture



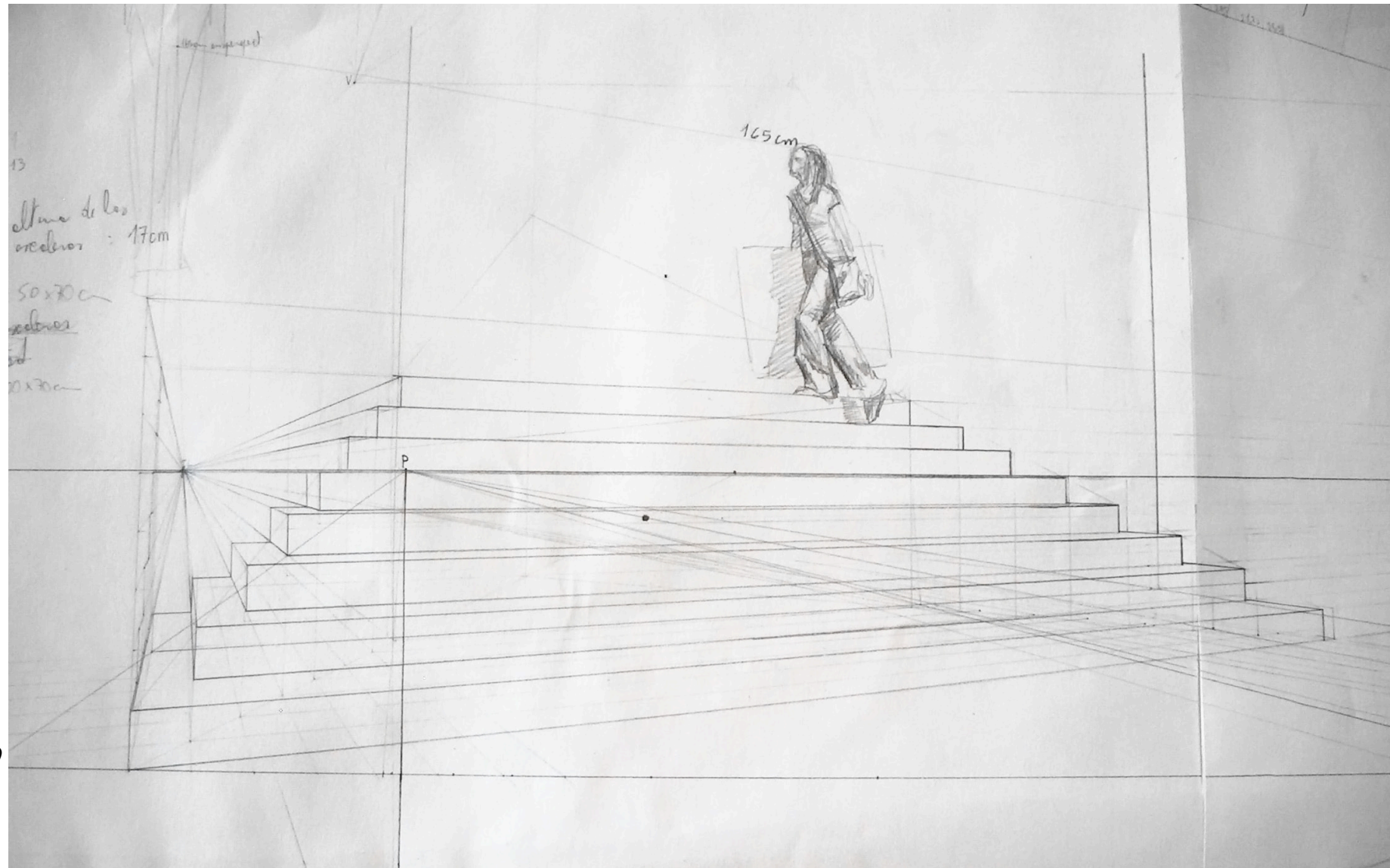
Michele del Campo
Course 2004-05

From the perspective drawing to the picture



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Course 2004-05

From the perspective drawing to the picture



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Course 2004-05

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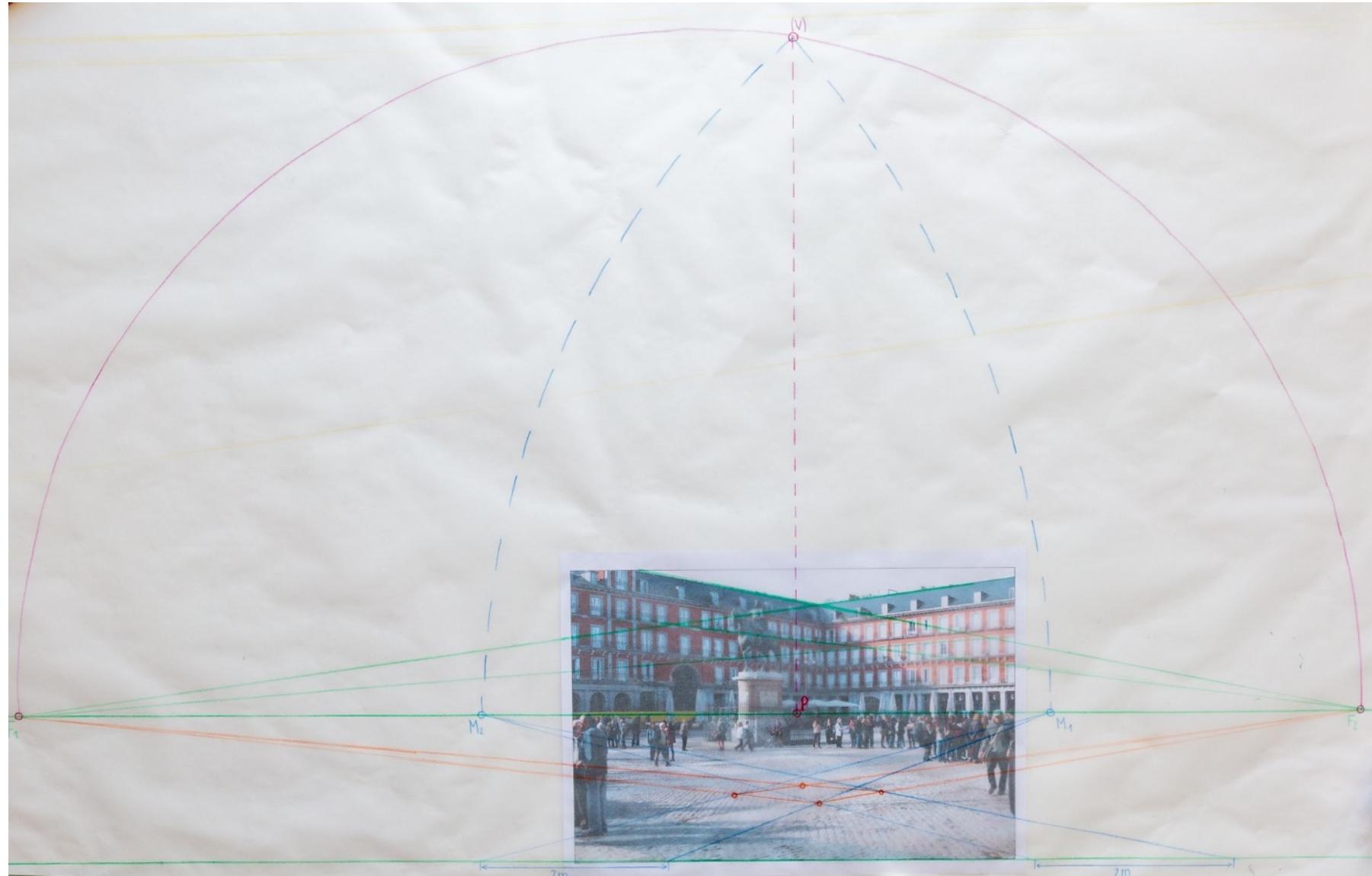
Michele del Campo

Course 2004-05

Geometric restitution of perspective.

To incorporate in the Plaza Mayor's of Madrid, photograph an sculpture according to the perspective.

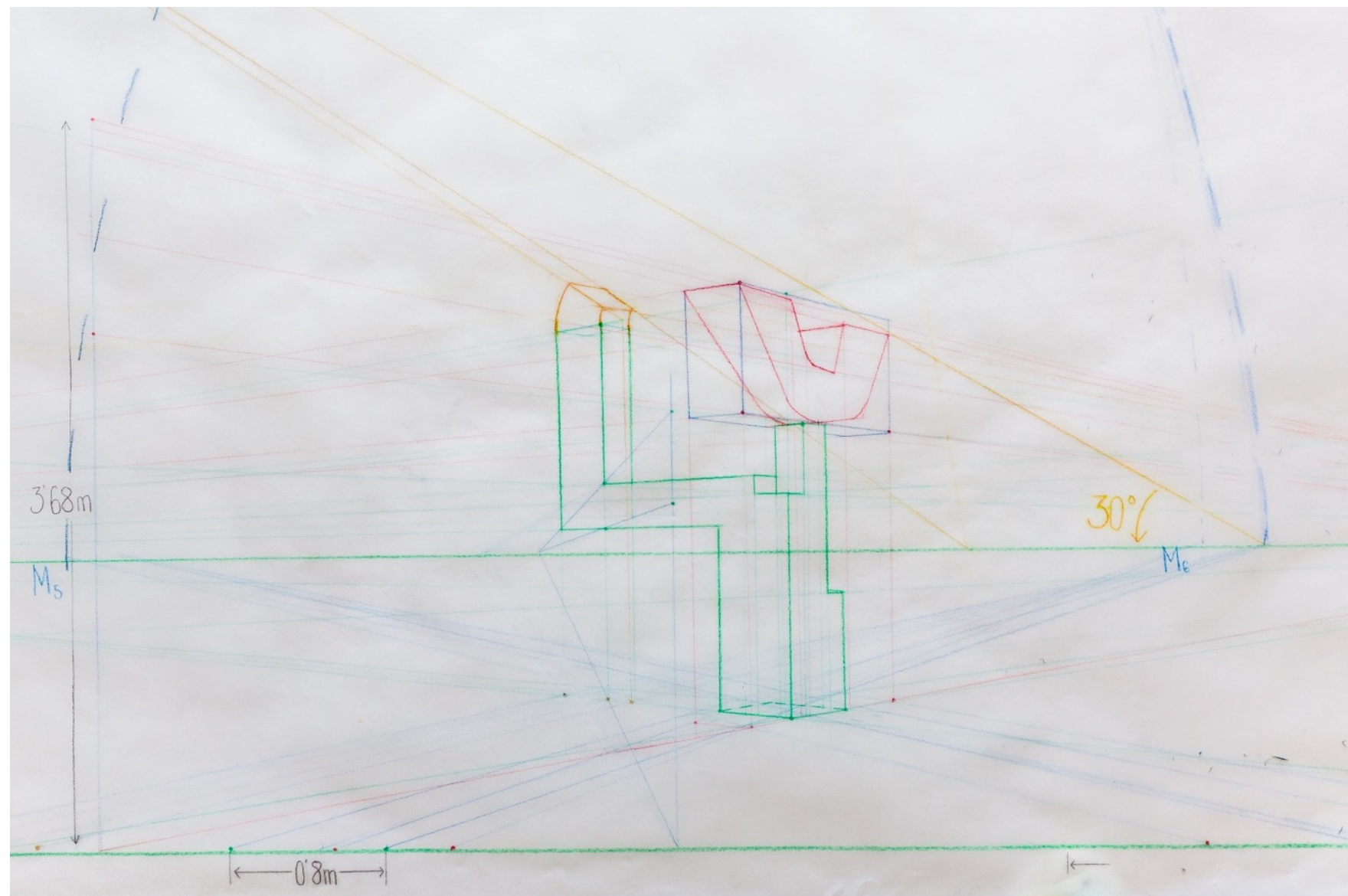
The vanishing points.
Measuring Points on the
Horizon Line.



Elena Carro Concepción
Course 2017-18

Geometric restitution of perspective.

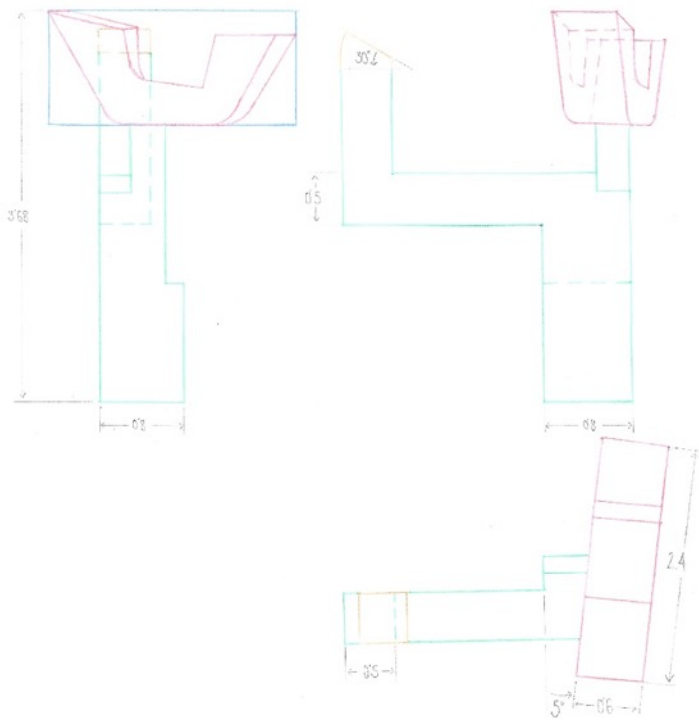
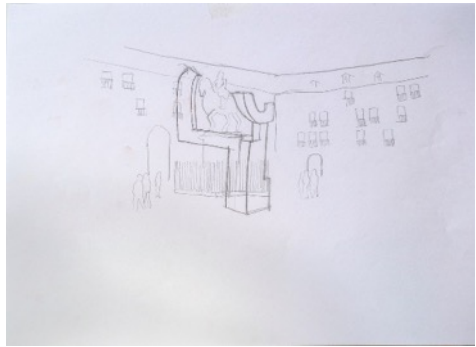
To incorporate in the Plaza Mayor's of Madrid, photograph an sculpture according to the perspective.



Elena Carro Concepción
Course 2017-18

Geometric restitution of perspective.

To incorporate in the Plaza Mayor's of Madrid, photograph an sculpture according to the perspective.



Elena Carro Concepción
Course 2017-18

Esquema de la escultura datos relevantes (Sistema europeo).
Cotas en metros

On the other hand, and following the guidelines of the program sent to us by the teacher Vasco Cardoso, I must say that what I most liked to investigate are the perspective tracings of the mural painting that decorates churches, palaces, villas and other monuments. I have written some articles on this topic and if someone is interested you will find them on the Dialnet website

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Dialnet

<https://dialnet.unirioja.es/servlet/autor?codigo=172399>

Thank you very much for your attention