

Course	Disegno
Scientific Disciplinary Area	ICAR/17
Teaching Code	50N11
Teacher	Domenico Mediati
Number of CFU	6
Teaching hours	48
Course Year	1°
Semester	1°

Learning Objectives

The course deals with the theoretical principles of the science of representation, necessary for the understanding, analysis and communication of space. The main educational targets are aimed at learning the essential notions for the geometric interpretation of shapes and for the representation of architectural artifacts. We will provide the necessary skills for the transformation of a project idea into a finished product. Particular attention will be paid to the executive and detailed drawing, as a link between imagination and productive activity. It will deepen techniques, methods and tools of representation useful for the control of construction processes. It will be faced, finally, the topic of communication according to shared graphic standards and conventions.

Prerequisites (if any)

The course, placed in the first year, has no particular prerequisites necessary for the student.

Course programme

The course will offer the essential notions of fundamentals and applications of descriptive geometry as a prerequisite for understanding and communicating architectural space. It will also offer the necessary skills for an executive representation of the architectural project, taking into account the international graphic standards and conventions.

Finally, we will propose a critical analysis of the methods of representation, highlighting their specific peculiarities: from the architectural sketch for the development of creative processes, to the tools and methods of representation for the communication of the executive project.

Expected results (student's acquisition of knowledge)

Understand space and control shapes through processes of graphic verification.
Expanding the potential for creative imagination through the verification tools offered by the science of representation: orthogonal, axonometric and perspective projections.
Control and communicate the project through the techniques and standards of graphic representation.

Proceeding methods

The didactics will be articulated in theoretical lectures and study seminars, according to a didactic calendar divided into three sections.

The first part of the course will be devoted to the fundamentals and applications of descriptive geometry: notion of projective space, conic and cylindrical projections, methods of representation (orthogonal projections; axonometric projections, perspective projections).

The second section will deal with representation techniques: eidoypes and methods of freehand representation, UNI standards, graphic and cartographic conventions, scale ratios, drawing dimensioning, graphic errors, graphic techniques for communication, hints on infographic drawing.

The third phase will critically investigate the representation modalities of the architectural drawing as a tool for the "definition" of project choices and will offer methodologies aimed at the organization of production processes. In detail, we will deal with the following topics: project drawing; axonometric projections as a conformational tool; from the idea to the measure: orthogonal projections; detail drawing as a decision-making

tool.

The attendance of the course is compulsory.

Lessons: 32 ore

Exercises: 8 ore

Practical activities: 8 ore

Evaluation methods

During the course, we will conduct periodic verifications through exercises assigned by the teacher. We will carry out, besides, verification meetings of the assigned papers. The final exam is individual. It can be accessed after verification of the minimum frequency required by the course. The papers produced during the course and the topics covered in the theoretical lessons will be the subject of the oral test.

Adopted texts and reference bibliography

BERTOLDO T. (1989). *Tecnica grafica*. Bergamo: Atlas.

BRACCO S. (2001). *Disegno com.e. A mano libera con un occhio al computer*. Torino: Testo & Immagine.

CHING F. D.K. (1998). *Costruire per illustrazioni*. Bologna: Calderini.

DELL'AQUILA M. (1999). *Il luogo della geometria*. Napoli: Arte tipografica.

DOCCI M. (1985). *Manuale di disegno architettonico*. Bari: Laterza.

DOCCI M., MIGLIARI R. (1999). *Scienza della rappresentazione. Fondamenti e applicazioni della geometria descrittiva*. Roma: Carocci editore.

DOCCI M., MIRRI F. (1994). *La redazione grafica del progetto architettonico. Repertorio di disegni esecutivi per l'edilizia*. Roma: NIS.

MIGLIARI R. (2003). *Geometria dei modelli*. Roma: Kappa.

MUTTI A. (1999). *Progetto cantierabile*. Roma: Kappa.

SGROSSO A. (2000). *La rappresentazione geometrica dell'architettura. Applicazioni di geometria descrittiva*. Torino: UTET.

ZERLENGA O. (1996). *Note sulla rappresentazione geometrica dello spazio architettonico. Assonometria e prospettiva*. Napoli: CUEN.