



Dipartimento di Architettura e Territorio – dArTe

Corso di Studio in Architettura quinquennale – Classe LM-4

Degree course	Architecture
Course code	ARM86
Lecturer	Domenico Mediatì
Course name	Basic concepts of Representation C
Disciplinary area	A
Disciplinary field of science	ICAR/17
University credits - ECTS	6
Teaching hours	60
Course year	1st
Semester	1st

Synthetic description and specific course objectives

This course gives the fundamental theories of the Representation Sciences, that are necessary for comprehension, analysis and communication of the architectural space.

The overall educational aims of the Course focus mainly on the education/training of students in the following fields: comprehension of geometrical structure, that are behind the shape, and the correct way to represent, through architectural drawings, the artifacts.

Course entry requirements

No request are necessary on this first year degree course.

Course programme

The didactics will be organized in theoretical lessons, extempore and study seminars.

The lessons will be divided into three sections.

The first one: will be dedicated to the basis of Duality (projective geometry): the projective space, the properties that are invariant under projective transformations, Projective linear transformation (homographies), perspective (homology); conical projections and parallel projections.

The second one: will be dedicated to the practical applications of the Projective Geometry: Orthogonal Projection, Oblique Projection, Perspective and Geometry of shadows.

The third one will be dedicated to the Technique of Representation: techniques of representation freehand, scale ratios, graphic and cartographic graphic techniques for communicating; notes on digital design.

Expected results

Students will be able to understand the geometrical space and they will be able, also, to control the shape through graphical process.

Students should be able to improve their imagination through the tools of the Representation Sciences like the Orthogonal Projection, the Oblique Projection and the Perspective.

They will, also, be able to communicate the architectural project through the techniques of the graphic representation.

Course structure and teaching

Lectures (*hours/year in lecture theatre*): 40

Practical class (*hours/year in lecture theatre*): 10
Practical / Workshops (*hours/year in lecture theatre*):10

Student's independent work

The graphical exercitations, related to the theoretical arguments, will be submitted periodically to the docents.

Some drawings will be submitted at the end of the course. They will be related to the theme that the docents will assign to each student.

The themes are: graphical constructions, golden section, geometrical canons. Some drawings to show the applications of the Orthogonal Projections, the Oblique Projections and the Perspectives will also be made.

Testing and exams

During the course periodical verifications through the exercitations assigned by docents will be done. Also, during the course, periodical verifications of the drawings, related to specific theme which has been assigned, will be made.

The exam is individual.

To be admitted to the exam you must attended at least 70% of the lessons and passed the pre-exam.

The oral exam will be related to the theoretical arguments discussed during the course and on the graphical tabs.

Suggested reading materials

MARIELLA DELL'AQUILA, *Il luogo della geometria*, Arte tipografica, Napoli, 1999.

MARIO DOCCI, RICCARDO MIGLIARI, *Scienza della rappresentazione. Fondamenti e applicazioni della geometria descrittiva*, Carocci editore, Roma, 1999.

DOMENICO MEDIATI, *L'occhio sul Mondo. Per una semiotica del punto di vista*, Rubbettino, Soveria Mannelli, 2008.

ANNA SGROSSO, *La rappresentazione geometrica dell'architettura. Applicazioni di geometria descrittiva*, UTET, Torino, 2000.

ORNELLA ZERLENGA, *Note sulla rappresentazione geometrica dello spazio architettonico. Assonometria e prospettiva*, CUEN, Napoli, 1996.

Other Teaching Materials

During the course will be made available to the students various educational materials, such contents will be downloaded from the website of the *Multimedia Laboratory* of the University.



Degree course	Architecture
Course code	ARM86
Lecturer	Daniele Colistra
Course name	Basic concepts of Representation A
Disciplinary area	A
Disciplinary field of science	ICAR/17
University credits - ECTS	6
Teaching hours	60
Course year	1st
Semester	1st

Synthetic description and specific course objectives

This course gives the fundamental theories of the Representation Sciences, that are necessary for comprehension, analysis and communication of the architectural space. The overall educational aims of the Course focus mainly on the education/training of students in the following fields: comprehension of geometrical structure, that are behind the shape, and the correct way to represent, through architectural drawings, the artifacts.

Course entry requirements

No request are necessary on this first year degree course.

Course programme

The didactics will be organized in theoretical lessons, extempore and study seminars. The lessons will be divided into three sections.

The first one: will be dedicated to the basis of Duality (projective geometry): the projective space, the properties that are invariant under projective transformations, Projective linear transformation (homographies), perspective (homology); conical projections and parallel projections.

The second one: will be dedicated to the practical applications of the Projective Geometry: Orthogonal Projection, Oblique Projection, Perspective and Geometry of shadows.

The third one will be dedicated to the Technique of Representation: techniques of representation freehand, scale ratios, graphic and cartographic graphic techniques for communicating; notes on digital design.

Expected results

Students will be able to understand the geometrical space and they will be able, also, to control the shape through graphical process.

Students should be able to improve their imagination through the tools of the Representation Sciences like the Orthogonal Projection, the Oblique Projection and the

Perspective.

They will, also, be able to communicate the architectural project through the techniques of the graphic representation.

Course structure and teaching

Lectures (*hours/year in lecture theatre*): 40

Practical class (*hours/year in lecture theatre*): 10

Practical / Workshops (*hours/year in lecture theatre*):10

Student's independent work

The graphical exercitations, related to the theoretical arguments, will be submitted periodically to the docents.

Some drawings will be submitted at the end of the course. They will be related to the theme that the docents will assign to each student.

The themes are: graphical constructions, golden section, geometrical canons. Some drawings to show the applications of the Orthogonal Projections, the Oblique Projections and the Perspectives will also be made.

Testing and exams

During the course periodical verifications through the exercitations assigned by docents will be done.

Also, during the course, periodical verifications of the drawings, related to specific theme which has been assigned, will be made.

The exam is individual.

To be admitted to the exam you must attended at least 70% of the lessons and passed the pre-exam.

The oral exam will be related to the theoretical arguments discussed during the course and on the graphical tabs.

Suggested reading materials

During the course will be made available to the students various educational materials, such contents will be downloaded from the website of the *Multimedia Laboratory* of the University.



Degree course	Architecture
Course code	ARM86
Lecturer	Marinella Arena
Course name	Basic concepts of Representation B
Disciplinary area	A
Disciplinary field of science	ICAR/17
University credits - ECTS	6
Teaching hours	60
Course year	1st
Semester	1st

Synthetic description and specific course objectives

This course gives the fundamental theories of the Representation Sciences, that are necessary for comprehension, analysis and communication of the architectural space. The overall educational aims of the Course focus mainly on the education/training of students in the following fields: comprehension of geometrical structure, that are behind the shape, and the correct way to represent, through architectural drawings, the artifacts.

Course entry requirements

No request are necessary on this first year degree course.

Course programme

The didactics will be organized in theoretical lessons, extempore and study seminars. The lessons will be divided into three sections.

The first one: will be dedicated to the basis of Duality (projective geometry): the projective space, the properties that are invariant under projective transformations, Projective linear transformation (homographies), perspective (homology); conical projections and parallel projections.

The second one: will be dedicated to the practical applications of the Projective Geometry: Orthogonal Projection, Oblique Projection, Perspective and Geometry of shadows.

The third one will be dedicated to the Technique of Representation: techniques of representation freehand, scale ratios, graphic and cartographic graphic techniques for communicating; notes on digital design.

Expected results

Students will be able to understand the geometrical space and they will be able, also, to control the shape through graphical process.

Students should be able to improve their imagination through the tools of the Representation Sciences like the Orthogonal Projection, the Oblique Projection and the

Perspective.

They will, also, be able to communicate the architectural project through the techniques of the graphic representation.

Course structure and teaching

Lectures (*hours/year in lecture theatre*): 40

Practical class (*hours/year in lecture theatre*): 10

Practical / Workshops (*hours/year in lecture theatre*):10

Student's independent work

The graphical exercises, related to the theoretical arguments, will be submitted periodically to the docents.

Some drawings will be submitted at the end of the course. They will be related to the theme that the docents will assign to each student.

The themes are: graphical constructions, golden section, geometrical canons. Some drawings to show the applications of the Orthogonal Projections, the Oblique Projections and the Perspectives will also be made.

Testing and exams

During the course periodical verifications through the exercises assigned by docents will be done.

Also, during the course, periodical verifications of the drawings, related to specific theme which has been assigned, will be made.

The exam is individual.

To be admitted to the exam you must attend at least 70% of the lessons and pass the pre-exam.

The oral exam will be related to the theoretical arguments discussed during the course and on the graphical tabs.

Suggested reading materials

Obligatory school textbooks

Marinella Arena, *Mediazioni mediterranee*, Edizioni Kappa, Roma 2007

Mario Docci, Diego Maestri, *Manuale di rilevamento architettonico e urbano*, Laterza, Milano 2002

Docci, Migliari, *Scienza della rappresentazione*, NIS, Urbino, 1992

Texts to consult

AA.VV., *Emergenza rilievo*, Kappa, Roma 2001

Riccardo Migliari, *Fondamenti della rappresentazione geometrica e informatica dell'architettura*, Edizioni Kappa, Roma 2000

Mario Docci, *Teoria e pratica del disegno*, Laterza, Roma 1994

Ugo Saccardi, *Applicazioni della geometria descrittiva*, LEF, Firenze, 1989

Useful texts

Erwin Panofsky, *La prospettiva come forma simbolica*, Feltrinelli, Milano 1993

Michel Foucault, *Le parole e le cose*, BUR, Milano 1996

Attraverso lo specchio, in Rassegna n°13 del 1983 (Umberto Eco, *Catottrica versus semiotica*)

Raymond Carver, *Cattedrale*, Mondadori, Milano 1994

Susan Sontag, *Sulla fotografia Realtà e immagine nella nostra società*, Einaudi, Torino

2004

Roland Barthes, *La camera chiara Note sulla fotografia*, Einaudi, Torino 2003