COURSE DESCRIPTION
ARCHITECTURAL DRAWING

SSD: DISEGNO (ICAR/17)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: DELLA CORTE TERESA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5512 - LABORATORIO DI DISEGNO DELL'ARCHITETTURA
MODULE: 52491 - DISEGNO DELL'ARCHITETTURA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 5

REQUIRED PRELIMINARY COURSES

No preparatory teaching is required.

PREREQUISITES

No preparatory teaching is required.

LEARNING GOALS

The overall objectives of the Laboratory of Architectural Drawing consist in providing the necessary tools to represent architecture and to enable the visualization of architectural space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing and on the scientific methods of Descriptive Geometry.
The specific objectives of the **Architectural Drawing** module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects related to **Architectural Drawing**, aimed at the representation of both existing reality and the design concept;

- to enable the visualization of architectural and urban space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing.
The specific objectives of the **Applications of Descriptive Geometry** module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects of Descriptive Geometry, aimed at the representation of both existing reality and the design concept;
- to provide the fundamental notions and scientific methods of Descriptive Geometry and its applications in the architectural field;
- to provide the basic principles of CAD and three-dimensional modeling.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, practical exercises, and field surveys, students will acquire knowledge of the theories and techniques of architectural survey and representation, understanding their specific applications with respect to traditional methods as well as more recent developments related to new technologies.
By the end of the course, students will be able to recognize architectural forms in their configurative and geometric specificities and apply the scientific methods of representation.
Students will be required to demonstrate an understanding of the stereometric nature of space, applying scientific awareness, graphic sensitivity, and critical thinking.
They will also be expected to know and apply the principles underlying the geometric genesis of surfaces, in order to control constructive processes using both two-dimensional and three-dimensional representations.

Applying knowledge and understanding

Students will develop the ability to interpret architectural drawings and to produce graphic elaborations through various representation techniques, as well as the ability to read and survey built architecture in its different articulations and at different scales.
The knowledge acquired will also enable students to prefigure and proportion designed spaces, achieving an effective and rigorous communication of the project.
Students will be guided in the critical interpretation of existing architecture and in its representation through digital tools, allowing them to understand, analyze, and communicate architectural space using a clear and rigorous language.
These skills will be applied within both modules of the Laboratory.

COURSE CONTENT/SYLLABUS

The course content is aimed at teaching the fundamental concepts of perception and representation of architecture, drawing, and interpretation through the use of graphic and infographic tools.
The course focuses on classical architectural orders, understood as a tool for formal definition and lexical structure for the description of architecture and for the composition and proportioning of its elements.

The experiential part of the course focuses mainly on the rigorous manual drawing of several tables relating to architectural orders according to Vignola, followed by a study visit to the temples of Paestum for direct experimentation with freehand drawing as an interpretative/cognitive tool for architecture.
The cognitive process on the language of orders is then deepened through an experience of critical reading, interpretation, and rigorous multiscale representation of a monumental historical space in the city of Napoli.
The experimentation phase is applied to the Cortile d'Onore of the Palazzo Reale, which exemplifies, in its peculiarity, the different levels of adherence [and/or derogation] to the ‘rule’ laid down by 16th-century codification.
The course content is aimed at teaching the fundamental concepts of perception and representation of architecture, drawing, and interpretation through the use of graphic and infographic tools.
The course focuses on classical architectural orders, understood as a tool for formal definition and lexical structure for the description of architecture and for the composition and proportioning of its elements.

The rigorous representation phase concerns the geometric genesis of the elevations and coverings (vaults) of the chosen theme and the control of the related construction processes through two-dimensional and three-dimensional representations.
The specific topics covered are as follows:
- Interpretation and transcription of architecture. Projections: the plan, elevation, and section (3 credits)
- Origins and codification of architectural drawing (1 credit)
- Three-dimensional reading and interpretation of architectural spatiality through scientific representation methods (1 credit).

READINGS/BIBLIOGRAPHY

The essential and reference bibliography contained in the course program (main texts and recommended texts) is listed below; it is supplemented during the course by support materials that can be downloaded from the instructor's institutional website and collected in the Materiale didattico folder.

-Edwin Abbott, Flatlandia. Racconto fantastico a più dimensioni, Adelphi Edizioni, Milano 1966.
-Giacomo Barozzi da Vignola, Regola delli cinque ordini d’architettura, ristampa anastatica dell’edizione del 1607, Arnaldo Forni Editore, Bologna 1988.
-Giuseppe Boidi-Trotti, I cinque ordini del Vignola ossia Manuale di Disegno Architettonico, Torino 1876.
-Manlio Brusatin, Storia delle linee, Einaudi, Torino 1993.
-Teresa Della Corte, Declinazioni della trasparenza in architettura. Una indagine sulla complessitàattraverso la differenza/Declinations of transparency in architecture. A survey about complexity through the difference, Officina Edizioni, Roma 2020.

-Teresa Della Corte, Riccardo Florio, La Rappresentazione dello spazio domestico 1, Dieci interpretazioni dell'abitazione contemporanea, Officina Edizioni, Roma 2008.
-Giuseppe Di Napoli, Disegnare e conoscere. La mano, l'occhio, il segno, Einaudi, Torino 2004.
-Mario Docci, Manuale di Disegno architettonico, Editori Laterza, Roma-Bari 1987.
-Riccardo Florio, Origini evoluzioni e permanenze della classicità in architettura, Un'esperienza di conoscenza disegno e rappresentazione dell'architettura, Officina Edizioni, Seconda edizione, Roma 2004. Seconda edizione 2018.
-Riccardo Florio, Sul Disegno Riflessioni sul disegno di architettura. About Drawing Reflections about architectural drawing, Officina Edizioni, Roma 2012.
-Jacques Guillerme, La figurazione in architettura, Franco Angeli, Milano 1982.
-Le Corbusier, Il Linguaggio delle pietre, Marsilio, Venezia 1988.
-Riccardo Migliari, Il disegno degli ordini e il rilievo dell'architettura classica: Cinque Pezzi Facili, in <disegnare idee immagini>, anno II, n. 2, giugno 1991.
-Henry Millon e Vittorio Magnago Lampugnani, a cura di, Rinascimento. Da Brunelleschi a Michelangelo. La Rappresentazione dell'Architettura, Bompiani, Milano 1994.
-Antonio Monestiroli, La metopa e il triglifo. Nove lezioni di architettura, Editori Laterza, Bari 2002.
-Franco Purini, Una lezione sul Disegno, Gangemi Editore, Roma 2007.
-Ludovico Quaroni, Progettare un edificio. Otto lezioni di architettura, Mazzotta, Milano 1977.
-Mario Sironi, Il mito dell'architettura, Mazzotta, Milano 1990.
-John Summerson, Il linguaggio classico dell'architettura. Dal Rinascimento ai maestri contemporanei, Einaudi, Torino 2000.
-Vitruvio, De Architectura, a cura di Pierre Gros, Einaudi, Torino 1997 (in particular the Libro Primo).
-Wim Wenders, L'atto di Vedere. The act of Seeing, Ubulibri, Milano 1992.

TEACHING METHODS OF THE COURSE (OR MODULE)

Lectures and practical exercises. The course consists of theoretical lessons (approximately 50% of total hours) and practical activities for drawing (approximately 30% of total hours), preceded by a manual drawing phase in the classroom (approximately 20% of total hours), which marks the start of the experiential part of the course.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Discussion of graphic designs

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers

☐ Numerical exercises

b) Evaluation pattern

The assessment methods are equal between the representative papers and the oral discussion on the topics covered during the course.

COURSE DESCRIPTION
ARCHITECTURAL DRAWING

SSD: DISEGNO (ICAR/17)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5512 - LABORATORIO DI DISEGNO DELL'ARCHITETTURA
MODULE: 52491 - DISEGNO DELL'ARCHITETTURA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 5

REQUIRED PRELIMINARY COURSES

None

PREREQUISITES

None

LEARNING GOALS

The overall objectives of the Laboratory of Architectural Drawing consist in providing the necessary tools to represent architecture and to enable the visualization of architectural space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing and on the scientific methods of Descriptive Geometry.
The specific objectives of the Architectural Drawing module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects related to architectural drawing, aimed at the representation of both existing reality and the design concept;

- to enable the visualization of architectural and urban space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, practical exercises, and field surveys, students will acquire knowledge of the theories and techniques of architectural survey and representation, understanding their specific applications with respect to traditional methods as well as more recent developments related to new technologies. By the end of the course, students will be able to recognize architectural forms in their configurative and geometric specificities and apply the scientific methods of representation. Students will be required to demonstrate an understanding of the stereometric nature of space, applying scientific awareness, graphic sensitivity, and critical thinking. They will also be expected to know and apply the principles underlying the geometric genesis of surfaces, in order to control constructive processes using both two-dimensional and three-dimensional representations.

Applying knowledge and understanding

Students will develop the ability to interpret architectural drawings and to produce graphic elaborations through various representation techniques, as well as the ability to read and survey built architecture in its different articulations and at different scales. The knowledge acquired will also enable students to prefigure and proportion designed spaces, achieving an effective and rigorous communication of the project. Students will be guided in the critical interpretation of existing architecture and in its representation through digital tools, allowing them to understand, analyze, and communicate architectural space using a clear and rigorous language. These skills will be applied within both modules of the Laboratory.

COURSE CONTENT/SYLLABUS

The course covers the tools and techniques useful for translating architectural reality, whether existing or planned, into its representation.
Specifically, the following themes will be addressed:
- Tools and techniques of representation;
- Concept of plan, elevation and section;
- Monge method;
- Proportioning and modularity.
- Graphic conventions, reduction scales, dimensioning methods, symbologies;
- The representation of stairs;
- Layout of graphic work;
- Representation of the case study.

READINGS/BIBLIOGRAPHY

- M. Docci, M. Gaiani, D. Maestri, Scienza del Disegno, Città Studi, 2021.
- R. De Rubertis, Il disegno dell’architettura, Carocci, Roma 2005.

- V. Ugo, Fondamenti della rappresentazione architettonica, Esculapio, Bologna 1994.
- M. Docci, Manuale di disegno architettonico, Laterza, Roma 1990.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course consists of theoretical lectures and practical exercises relating to the topics covered. The exercises will be carried out in the classroom and at home and will be verified during the examination. In particular, a case study will be assigned to verify the knowledge acquired.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Discussion of graphic works.

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

COURSE DESCRIPTION
ARCHITECTURAL DRAWING

SSD: DISEGNO (ICAR/17)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5512 - LABORATORIO DI DISEGNO DELL'ARCHITETTURA
MODULE: 52491 - DISEGNO DELL'ARCHITETTURA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 03 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 5

REQUIRED PRELIMINARY COURSES

None.

PREREQUISITES

None.

LEARNING GOALS

The overall objectives of the **Laboratory of Architectural Drawing** consist in providing the necessary tools to represent architecture and to enable the visualization of architectural space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing and on the scientific methods of Descriptive Geometry.
The specific objectives of the **Architectural Drawing** module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects related to architectural drawing, aimed at the representation of both existing reality and the design concept;

- to enable the visualization of architectural and urban space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, practical exercises, and field surveys, students will acquire knowledge of the theories and techniques of architectural survey and representation, understanding their specific applications with respect to traditional methods as well as more recent developments related to new technologies. By the end of the course, students will be able to recognize architectural forms in their configurative and geometric specificities and apply the scientific methods of representation. Students will be required to demonstrate an understanding of the stereometric nature of space, applying scientific awareness, graphic sensitivity, and critical thinking. They will also be expected to know and apply the principles underlying the geometric genesis of surfaces, in order to control constructive processes using both two-dimensional and three-dimensional representations.

Applying knowledge and understanding

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COURSE CONTENT/SYLLABUS

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- Monge method;
- Proportioning and modularity.
- Graphic conventions, reduction scales, dimensioning methods, symbologies;
- The representation of stairs;
- Layout of graphic work;
- Representation of the case study.

READINGS/BIBLIOGRAPHY

- M. Docci, M. Gaiani, D. Maestri, *Scienza del Disegno*, Città Studi, 2021.

- R. De Rubertis, *Il disegno dell'architettura*, Carocci, Roma 2005.
- V. Ugo, *Fondamenti della rappresentazione architettonica*, Esculapio, Bologna 1994.
- M. Docci, *Manuale di disegno architettonico*, Laterza, Roma 1990.

TEACHING METHODS OF THE COURSE (OR MODULE)

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EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Discussion of graphic works.

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

COURSE DESCRIPTION
APPLICATIONS OF DESCRIPTIVE GEOMETRY

SSD: DISEGNO (ICAR/17)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5512 - LABORATORIO DI DISEGNO DELL'ARCHITETTURA
MODULE: 01512 - APPLICAZIONI DI GEOMETRIA DESCRITTIVA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 5

REQUIRED PRELIMINARY COURSES

None

PREREQUISITES

None

LEARNING GOALS

The overall objectives of the Laboratory of Architectural Drawing consist in providing the necessary tools to represent architecture and to enable the visualization of architectural space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing and on the scientific methods of Descriptive Geometry.

The specific objectives of the Applications of Descriptive Geometry module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects of Descriptive Geometry, aimed at the representation of both existing reality and the design concept;

- to provide the fundamental notions and scientific methods of Descriptive Geometry and its applications in the architectural field;
- to provide the basic principles of CAD and three-dimensional modeling.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, practical exercises, and field surveys, students will acquire knowledge of the theories and techniques of architectural survey and representation, understanding their specific applications with respect to traditional methods as well as more recent developments related to new technologies. By the end of the course, students will be able to recognize architectural forms in their configurative and geometric specificities and apply the scientific methods of representation. Students will be required to demonstrate an understanding of the stereometric nature of space, applying scientific awareness, graphic sensitivity, and critical thinking. They will also be expected to know and apply the principles underlying the geometric genesis of surfaces, in order to control constructive processes using both two-dimensional and three-dimensional representations.

Applying knowledge and understanding

Students will develop the ability to interpret architectural drawings and to produce graphic elaborations through various representation techniques, as well as the ability to read and survey built architecture in its different articulations and at different scales. The knowledge acquired will also enable students to prefigure and proportion designed spaces, achieving an effective and rigorous communication of the project. Students will be guided in the critical interpretation of existing architecture and in its representation through digital tools, allowing them to understand, analyze, and communicate architectural space using a clear and rigorous language. These skills will be applied within both modules of the Laboratory.

COURSE CONTENT/SYLLABUS

Descriptive Geometry is a science which deals with the geometric figures of the space, transcribing their models in visual language. The discipline will be presented as a complement of the Drawing of Architecture and, therefore, the methods of representation will be introduced with a theoretical and practical approach, with the aim of guiding students in the visualization and reading of the different configurations of an architectural space, from paper to digital.

APPLICATIONS OF DESCRIPTIVE GEOMETRY

Projective geometry

•Overview and general information

•Main operations

•Projectivity and prospectivity

Homology

•The reference in space and on the plane

•Properties and graphic operations

•Special cases (analogy, homothety, translation)
•Flipping Homology
Axonometry
•Overview and general information
Orthogonal axonometry
•Definition and main features
Oblique axonometry
•The reference in space and on the plane
•Cavalier axonometry as the homologous transformation of orthogonal projections
Perspective
•Overview and general information
•The reference in space and on the plane
•The representation of fundmental geometric entities
•The flipping method
•Determination of perspective heights
•Perspective section
Vaults and surfaces
•Overview and general information
•Surfaces of revolution
•Ribbed surfaces
Genesis and representation of vaults
•Barrel vault
•Barrel vault with lunettes
•Cross vault
•Cloister vault
•Bohemian vault
Conic sections
•ellipse, parabola, hyperbola (definition and geometric genesis)

COMPUTER-AIDED DESIGN (CAD)
Overview and general information
•Main principles and fundamentals of CAD: tools and methods
•Difference between vectorial-based and raster-based software; interaction between the two different categories.
The virtual working area
•Drawing settings and relationship with “analogic” drawing
•Digital representation main apps between bi-dimensionality and three-dimensionality.
The tools of digital drawing
•Standard primitives
•Object properties

•Software for bi-dimensional representation
•Print management
•Software for three-dimensional representation

READINGS/BIBLIOGRAPHY

Textbook

Gesuele A, Pagliano A., Verza A., *La geometria animata. Lezioni multimediali di geometria descrittiva*, Libreria Editrice Cafoscarina, 2018

Additional suggested books (optional)

Migliari, R., *Geometria Descrittiva. Metodi e Costruzioni. Volumi I e II*, Città Studi Edizioni, 2009

Docci M., Gaiani M., Maestri D., *Scienza del disegno,* Città Studi Edizioni, 2021

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is divided in theoretical lessons, in-class practical lessons, practical exercises (individual and/or group activities and revisions).

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Discussion of graphic works

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

COURSE DESCRIPTION
APPLICATIONS OF DESCRIPTIVE GEOMETRY

SSD: DISEGNO (ICAR/17)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5512 - LABORATORIO DI DISEGNO DELL'ARCHITETTURA
MODULE: 01512 - APPLICAZIONI DI GEOMETRIA DESCRITTIVA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 5

REQUIRED PRELIMINARY COURSES

None

PREREQUISITES

None

LEARNING GOALS

The overall objectives of the Laboratory of Architectural Drawing consist in providing the necessary tools to represent architecture and to enable the visualization of architectural space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing and on the scientific methods of Descriptive Geometry.
The specific objectives of the **Applications of Descriptive Geometry** module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects of Descriptive Geometry, aimed at the representation of both existing reality and the design concept;

-to provide the fundamental notions and scientific methods of Descriptive Geometry and its applications in the architectural field;
- to provide the basic principles of CAD and three-dimensional modeling.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, practical exercises, and field surveys, students will acquire knowledge of the theories and techniques of architectural survey and representation, understanding their specific applications with respect to traditional methods as well as more recent developments related to new technologies. By the end of the course, students will be able to recognize architectural forms in their configurative and geometric specificities and apply the scientific methods of representation. Students will be required to demonstrate an understanding of the stereometric nature of space, applying scientific awareness, graphic sensitivity, and critical thinking. They will also be expected to know and apply the principles underlying the geometric genesis of surfaces, in order to control constructive processes using both two-dimensional and three-dimensional representations.

Applying knowledge and understanding

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COURSE CONTENT/SYLLABUS

Descriptive Geometry is a science which deals with the geometric figures of the space, transcribing their models in visual language. The discipline will be presented as a complement of the Drawing of Architecture and, therefore, the methods of representation will be introduced with a theoretical and practical approach, with the aim of guiding students in the visualization and reading of the different configurations of an architectural space, from paper to digital. APPLICATIONS OF DESCRIPTIVE GEOMETRY Projective geometry
Overview and general information
Main operations
Projectivity and prospectivity

Homology
The reference in space and on the plane
Properties and graphic operations
Special cases (analogy, homothety, translation)Flipping Homology

Axonometry
Overview and general information
Orthogonal axonometry
Definition and main features
Oblique axonometry
The reference in space and on the plane
Cavalier axonometry as the homologous transformation of orthogonal projections

Perspective
Overview and general information
The reference in space and on the plane
The representation of fundmental geometric entities
The flipping method
Determination of perspective heights
Perspective section

Vaults and surfaces
Overview and general information
Surfaces of revolution
Ribbed surfaces
Genesis and representation of vaults
Barrel vault
Barrel vault with lunettes
Cross vault
Cloister vault
Bohemian vault
Conic sections
ellipse, parabola, hyperbola (definition and geometric genesis)

COMPUTER-AIDED DESIGN (CAD)
Overview and general information
Main principles and fundamentals of CAD: tools and methods
Difference between vectorial-based and raster-based software; interaction between the two different categories.
The virtual working area
Drawing settings and relationship with “analogic” drawing
Digital representation main apps between bi-dimensionality and three-dimensionality.
The tools of digital drawing
Standard primitives
Object properties
Software for bi-dimensional representation
Print management
Software for three-dimensional representation

READINGS/BIBLIOGRAPHY

Textbook Gesuele A, Pagliano A., Verza A., La geometria animata. Lezioni multimediali di geometria descrittiva, Libreria Editrice Cafoscarina, 2018

Additional suggested books

(optional) Migliari, R., Geometria Descrittiva. Metodi e Costruzioni. Volumi I e II, Città Studi Edizioni, 2009 Docci M., Gaiani M., Maestri D., Scienza del disegno, Città Studi Edizioni, 2021

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is divided in theoretical lessons, in-class practical lessons, practical exercises (individual and/or group activities and revisions).

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Discussion of graphic works

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

COURSE DESCRIPTION
APPLICATIONS OF DESCRIPTIVE GEOMETRY

SSD: DISEGNO (ICAR/17)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5512 - LABORATORIO DI DISEGNO DELL'ARCHITETTURA
MODULE: 01512 - APPLICAZIONI DI GEOMETRIA DESCRITTIVA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 03 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 5

REQUIRED PRELIMINARY COURSES

None

PREREQUISITES

None

LEARNING GOALS

The overall objectives of the Laboratory of Architectural Drawing consist in providing the necessary tools to represent architecture and to enable the visualization of architectural space through the construction of graphic and infographic models, based on the understanding of the interpretative aspects of Drawing and on the scientific methods of Descriptive Geometry.

The specific objectives of the Applications of Descriptive Geometry module are:
- to enable the learning of the theoretical-scientific and methodological-operational aspects of Descriptive Geometry, aimed at the representation of both existing reality and the design concept;

- to provide the fundamental notions and scientific methods of Descriptive Geometry and its applications in the architectural field;
- to provide the basic principles of CAD and three-dimensional modeling.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, practical exercises, and field surveys, students will acquire knowledge of the theories and techniques of architectural survey and representation, understanding their specific applications with respect to traditional methods as well as more recent developments related to new technologies.
By the end of the course, students will be able to recognize architectural forms in their configurative and geometric specificities and apply the scientific methods of representation.
Students will be required to demonstrate an understanding of the stereometric nature of space, applying scientific awareness, graphic sensitivity, and critical thinking. They will also be expected to know and apply the principles underlying the geometric genesis of surfaces, in order to control constructive processes using both two-dimensional and three-dimensional representations.

Applying knowledge and understanding

Students will develop the ability to interpret architectural drawings and to produce graphic elaborations through various representation techniques, as well as the ability to read and survey built architecture in its different articulations and at different scales.
The knowledge acquired will also enable students to prefigure and proportion designed spaces, achieving an effective and rigorous communication of the project.
Students will be guided in the critical interpretation of existing architecture and in its representation through digital tools, allowing them to understand, analyze, and communicate architectural space using a clear and rigorous language.
These skills will be applied within both modules of the Laboratory.

COURSE CONTENT/SYLLABUS

Descriptive Geometry is a science which deals with the geometric figures of the space, transcribing their models in visual language. The discipline will be presented as a complement of the Drawing of Architecture and, therefore, the methods of representation will be introduced with a theoretical and practical approach, with the aim of guiding students in the visualization and reading of the different configurations of an architectural space, from paper to digital.

APPLICATIONS OF DESCRIPTIVE GEOMETRY

Projective geometry

•Overview and general information
•Main operations
•Projectivity and prospectivity

Homology

•The reference in space and on the plane

•Properties and graphic operations
•Special cases (analogy, homothety, translation)
•Flipping Homology

Axonometry

•Overview and general information

Orthogonal axonometry

•Definition and main features

Oblique axonometry

•The reference in space and on the plane
•Cavalier axonometry as the homologous transformation of orthogonal projections

Perspective

•Overview and general information
•The reference in space and on the plane
•The representation of fundmental geometric entities
•The flipping method
•Determination of perspective heights
•Perspective section

Vaults and surfaces

•Overview and general information
•Surfaces of revolution
•Ribbed surfaces

Genesis and representation of vaults

•Barrel vault
•Barrel vault with lunettes
•Cross vault
•Cloister vault
•Bohemian vault

Conic sections

•ellipse, parabola, hyperbola (definition and geometric genesis)

COMPUTER-AIDED DESIGN (CAD)

•Overview and general information
•Main principles and fundamentals of CAD: tools and methods
•Difference between vectorial-based and raster-based software; interaction between the two different categories.

The virtual working area

•Drawing settings and relationship with “analogic” drawing
•Digital representation main apps between bi-dimensionality and three-dimensionality.

The tools of digital drawing

•Standard primitives
•Object properties
•Software for bi-dimensional representation

•Print management
•Software for three-dimensional representation.

READINGS/BIBLIOGRAPHY

Textbook

Gesuele A, Pagliano A., Verza A., *La geometria animata. Lezioni multimediali di geometria descrittiva*, Libreria Editrice Cafoscarina, 2018

Additional suggested books (optional)

Migliari, R., *Geometria Descrittiva. Metodi e Costruzioni. Volumi I e II*, Città Studi Edizioni, 2009

Docci M., Gaiani M., Maestri D., *Scienza del disegno,* Città Studi Edizioni, 2021

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is divided in theoretical lessons, in-class practical lessons, practical exercises (individual and/or group activities and revisions).

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Discussion of graphic works

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

COURSE DESCRIPTION
CALCULUS

SSD: ANALISI MATEMATICA (MAT/05)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: FIORENZA ALBERTO
PHONE: 081-2538912
EMAIL: alberto.fiorenza2@unina.it

GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5513 - CORSO INTEGRATO DI ISTITUZIONI DI MATEMATICHE
MODULE: 01270 - ANALISI MATEMATICA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 4

REQUIRED PRELIMINARY COURSES

No one.

PREREQUISITES

Adequate possession of the mathematical skills required by the curricula of previous secondary education courses and knowledge of the essential elements of formal language.

LEARNING GOALS

The aim of the course is to provide students with the basic content of Mathematical Analysis essential for the proper learning of technical and scientific disciplines. Specifically, the course aims to teach rigorous logical reasoning and the use of formal language, as well as to provide broader investigative tools that facilitate learning in general and, with a view to future career choices, enable students to apply the knowledge acquired in the relevant contexts.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Students will acquire basic knowledge and skills in Mathematical Analysis aimed at facilitating the learning of technical and scientific disciplines: structural theory, construction techniques, technical physics, disciplines that contribute significantly to the creation of the professional figure of the junior architect. In particular, by the end of the course, students will have acquired the tools and procedures of Mathematical Analysis, with particular reference to the main theorems and applications of differential calculus and integral theory for functions of one variable and the solution of simple differential equations.

Applying knowledge and understanding

Students must be able to identify and consciously apply the knowledge and procedures acquired in solving problems both in mathematics and in other contexts. They must be able to understand and adequately express qualitative and quantitative information, and design and construct simple mathematical models.

COURSE CONTENT/SYLLABUS

NUMBERS AND THE CARTESIAN PLANE: Sets - Natural, integer, rational and real numbers - Cartesian axes - Geometric loci - Exercises.
REAL FUNCTIONS OF A REAL VARIABLE: Functions and Cartesian representation - Elementary functions - Equations and inequalities - Exercises.
LIMITS AND CONTINUITY: Definitions and main theorems.
DIFFERENTIAL CALCULUS: Definitions, examples and properties of differentiable functions - Derivatives of elementary functions - Applications of differential calculus - Exercises.
INTEGRALS: Primitives - Indefinite integrals - Introduction to definite integrals and the fundamental theorem of integral calculus - Exercises.
DIFFERENTIAL EQUATIONS: Generalities - Linear differential equations - Differential equations with separable variables.

READINGS/BIBLIOGRAPHY

G. Crasta, A. Malusa, Elementi di Analisi Matematica e Geometria con prerequisiti ed esercizi svolti. Independently published (September 18, 2019).

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is a module of the integrated course in Mathematical Institutions, which is structured as follows:
1. Mathematical Analysis (01/MATH-03 –4 CFU)
2. Geometry (01/MATH-02 –4 CFU)
The theoretical lessons, accompanied by concrete examples, will be supplemented by examples and/or exercises. Extensive use will be made of graphical representations to clarify the concepts introduced and provide more effective tools for interpreting the situations proposed.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [x] Written
- [x] Oral
- [ ] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [x] Multiple choice answers
- [x] Open answers
- [x] Numerical exercises

b) Evaluation pattern

The assessment will take into account the accuracy of the answers provided in the written tests and/or mid-term tests. In the oral tests, the assessment will take into account knowledge of the definitions, theorems and proofs covered in the lectures, the language skills acquired, the ability to correctly write formulas and theorem statements using mathematical symbols, and finally the ability to reason about the concepts presented during the lectures.

COURSE DESCRIPTION
CALCULUS

SSD: ANALISI MATEMATICA (MAT/05)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: DELLA VECCHIA GIOVANNA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5513 - CORSO INTEGRATO DI ISTITUZIONI DI MATEMATICHE
MODULE: 01270 - ANALISI MATEMATICA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 4

REQUIRED PRELIMINARY COURSES

None.

PREREQUISITES

Adequate possession of the mathematical skills provided by the curricula of previous secondary education and knowledge of the essential elements of formal language.

LEARNING GOALS

The aim of the course is to provide the student with the basic contents of Mathematical Analysis that are essential for a correct learning of the technical-scientific disciplines. The training course aims, in particular, to educate to rigorous logical reasoning and the use of formal language, as well as to provide broader tools of investigation that facilitate learning in general and, in view of future career choices, enable the knowledge acquired to be applied in the relevant contexts.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student will acquire basic knowledge and skills of Mathematical Analysis aimed at an easy learning of the technical-scientific disciplines: Theory of structures, Construction technology, Technical physics, disciplines that contribute strongly to the creation of the professional figure of the junior architect. In particular, at the end of the course, will have acquired tools and procedures of Mathematical Analysis with particular reference to the main theorems and applications of differential calculus and integral theory for the functions of one variable, and the study of simple differential equations.

Applying knowledge and understanding

The student must be able to consciously identify and apply knowledge and procedures acquired in problem solving both in mathematics and in other contexts, should be able to understand and know how to adequately express qualitative and quantitative information, design and construct simple mathematical models.

COURSE CONTENT/SYLLABUS

Fundamentals of set theory.
Elements of Topology on R.
Functions.
Real functions of one real variable.
Function limits.
Continuous functions.
Derivatives.
Application of derivatives.
Graphical representation of functions.
Definite integrals.
Indefinite integrals.
First order linear differential equations and Cauchy problem.

READINGS/BIBLIOGRAPHY

N. Fusco –P. Marcellini - C. Sbordone: Elementi di analisi 1. Ed. Liguori.
N. Fusco –P. Marcellini - C. Sbordone: Elementi di analisi 2. Ed. Liguori.
A. Ventre –Matematica Parte 1 –Ed. Liguori.
P. Marcellini –C. Sbordone: Esercitazioni di Matematica –I vol., parte I e II –Ed. Liguori.
P. Marcellini –C. Sbordone: Esercitazioni di Matematica –II vol., parte I –Ed. Liguori.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is a module of the integrated course of Mathematics Institutions that is articulated as follows:

1. Mathematical Analysis (Mat/05 - 4 CFU)
2. Geometry (MAT/03 - 4CFU).

In the course, the theoretical lessons, accompanied by concrete examples and the related application exercises, are always perfectly integrated. Extensive use is made of graphic representations to give greater clarity to the concepts introduced and provide more effective tools for interpreting the proposed situations.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [x] Written
- [x] Oral
- [ ] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [x] Open answers
- [x] Numerical exercises

b) Evaluation pattern

The knowledge and skills acquired will be assessed through both written and oral examinations. The written test will assess the ability to apply the knowledge acquired in solving the problems proposed. The oral examination will assess the candidate's ability to define, argue, verify and demonstrate, as well as the logical and formal rigour with which the topics are treated. Regular attendance at lessons and interest shown in the subject will also be assessed.

COURSE DESCRIPTION
GEOMETRY

SSD: GEOMETRIA (MAT/03)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: FIORENZA ALBERTO
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5513 - CORSO INTEGRATO DI ISTITUZIONI DI MATEMATICHE
MODULE: 00107 - GEOMETRIA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 4

REQUIRED PRELIMINARY COURSES

No one.

PREREQUISITES

Adequate possession of the mathematical skills required by the curricula of previous secondary education courses and knowledge of the essential elements of formal language.

LEARNING GOALS

The aim of the course is to provide students with the basic geometry content essential for proper learning of technical and scientific disciplines. Specifically, the course aims to
teach rigorous logical reasoning and the use of formal language, as well as to provide broader investigative tools that facilitate learning in general and, with a view to future career choices, enable students to apply the knowledge acquired in the relevant contexts.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Students will acquire basic knowledge and skills in geometry aimed at facilitating the learning of technical and scientific disciplines: structural theory, construction techniques,
technical physics, disciplines that contribute significantly to the creation of the professional profile of a junior architect. In particular, by the end of the course, students should have acquired geometric tools and procedures with particular reference to vectors, matrices and linear systems and the representation of straight lines in plane and space.

Applying knowledge and understanding

Applied knowledge and understanding: students must be able to correctly apply the theoretical knowledge acquired during the course. In particular, they must be able to solve the linear algebra and analytical geometry exercises proposed during the course.
- Independent judgement: students must be able to critically evaluate the problems posed and propose the most appropriate approach to argue the required solution.
- Communication skills: students must demonstrate logical deductive and synthesis skills in their presentations and must be able to use mathematical language correctly.
- Learning skills: students must be able to integrate knowledge from various sources in order to gain a broad view of the issues related to the topics covered.

COURSE CONTENT/SYLLABUS

VECTORS, MATRICES AND LINEAR SYSTEMS: Vectors - Operations and properties - Canonical basis of R^2
and R^3 - Matrices - Operations and properties - Linear systems - Cramer's theorem - Rouché-Capelli theorem
- Exercises.
ELEMENTS OF PLANE GEOMETRY: Vector space R^2 - Equations of a straight line - Parallelism and perpendicularity between straight lines - Conics - Exercises.
ELEMENTS OF SPACE GEOMETRY. Vector space R^3 - Equations of a straight line - Direction numbers and direction cosines of a straight line - Exercises.

READINGS/BIBLIOGRAPHY

G. Crasta, A. Malusa, Elementi di Analisi Matematica e Geometria con prerequisiti ed esercizi svolti. Independently published (September 18, 2019).

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is a module of the integrated course in Mathematical Institutions, which is structured as follows:
1. Mathematical Analysis (01/MATH-03 –4 CFU)
2. Geometry (01/MATH-02 –4 CFU)
The theoretical lessons, accompanied by concrete examples, will be supplemented by examples and/or exercises. Extensive use will be made of graphical representations to clarify the concepts

introduced and provide more effective tools for interpreting the situations proposed.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [x] Written
- [x] Oral
- [ ] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [x] Multiple choice answers
- [x] Open answers
- [x] Numerical exercises

b) Evaluation pattern

The assessment will take into account the accuracy of the answers provided in the written tests and/or mid-term tests. In the oral tests, the assessment will take into account knowledge of the definitions, theorems and proofs covered in the lectures, the language skills acquired, the ability to correctly write formulas and theorem statements using mathematical symbols, and finally the ability to reason about the concepts presented during the lectures.

COURSE DESCRIPTION
GEOMETRY

SSD: GEOMETRIA (MAT/03)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5513 - CORSO INTEGRATO DI ISTITUZIONI DI MATEMATICHE
MODULE: 00107 - GEOMETRIA
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 4

REQUIRED PRELIMINARY COURSES

None

PREREQUISITES

Adequate possession of the mathematical skills provided by the curricula of previous secondary education and knowledge of the essential elements of formal language

LEARNING GOALS

The aim of the course is to provide the student with the basic contents of Geometry that are essential for a correct learning of the technical-scientific disciplines. The training course aims, in particular, to educate to rigorous logical reasoning and the use of formal language, as well as to provide broader tools of investigation that facilitate learning in general and, in view of future career choices, enable the knowledge acquired to be applied in the relevant contexts

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student will acquire basic knowledge and skills of Geometry aimed at an easy learning of the technical-scientific disciplines: Theory of structures, Construction technology, Technical physics, disciplines that contribute strongly to the creation of the professional figure of the junior architect. In particular, at the end of the course, will have acquired tools and procedures of Geometry with particular reference to the main theorems and applications of linear sistems , Projection geometry elements, Classification of the conics, Parametric equation of a straight line in a plane and in a space

Applying knowledge and understanding

Applied knowledge and understanding skills: The student must be able to correctly apply the theoretical knowledge acquired during the course. In particular, he/she must be able to solve linear algebra and analytic geometry exercises proposed during the course. - Autonomy of judgment: The student must be able to critically evaluate the problems posed and propose the most appropriate approach to argue what is required. - Communication skills: The student must demonstrate logical deductive and synthetic skills in exposition, must be able to use mathematical language correctly. - Learning skills: The student must be able to integrate knowledge from various sources in order to achieve a broad view of the problems related to the topics covered.

COURSE CONTENT/SYLLABUS

Vectors Matrices Linear systems: Vectors: operations and properties, canonical basis of R2 and R3, matrices, operations and properties, linear systems, Cramer's theorem, Rouchè-Capelli theorem, exercises

Elements of Plane Geometry: Vector space R2, equation of a line, parallelism and perpendicularity between lines, conics, exercises

Elements of Space Geometry: Vector space R3, equation of a line, direction vectors of a line, exercises

Translated with DeepL.com (free version)

READINGS/BIBLIOGRAPHY

Aldo G.S.Ventre, Matematica uno e Due, Fridericiana Editrice Universitaria, 2011 Course notes

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is a module of the integrated course of Mathematics Institutions that is articulated as follows: 1. Mathematical Analysis (Mat/05 - 4 CFU) 2. Geometry (MAT/03 - 4CFU). In the course, the theoretical lessons, accompanied by concrete examples and the related application exercises, are always perfectly integrated. Extensive use is made of graphic representations to give greater clarity to the concepts introduced and provide more effective tools for interpreting the proposed situations.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [x] Written
- [x] Oral
- [ ] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [x] Open answers
- [x] Numerical exercises

b) Evaluation pattern

The knowledge and skills acquired will be assessed through both written and oral examinations. The written test will assess the ability to apply the knowledge acquired in solving the problems proposed. The oral examination will assess the candidate's ability to define, argue, verify and demonstrate, as well as the logical and formal rigour with which the topics are treated. Regular attendance at lessons and interest shown in the subject will also be assessed.

COURSE DESCRIPTION
HISTORY OF ARCHITECTURE 1

SSD: STORIA DELL'ARCHITETTURA (ICAR/18)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: BRUNETTI ORONZO
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 8

REQUIRED PRELIMINARY COURSES

no preparatory teaching

PREREQUISITES

Knowledge of historical, political and cultural events from the 15th to the 18th century.

LEARNING GOALS

The objectives are twofold. 1. To develop the critical awareness necessary for students to pursue a profession or a career in government; 2. To stimulate interest in the discipline and provide the basic tools for a career in research.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student must know and be able to critically present the topics covered during the lessons.

Applying knowledge and understanding

The student must be able to connect and compare episodes of architectural culture from different historical periods.

COURSE CONTENT/SYLLABUS

- Foundations of Classical Architecture (the birth of the architectural orders, their use in the Greek and Roman worlds)
- The Origins of the Renaissance (Filippo Brunelleschi, Leon Battista Alberti)
- 15th-Century Architectural Treatises (Leon Battista Alberti, Francesco di Giorgio Martini, Filarete, Leonardo)
- The Renaissance City 1 (Florence, Pienza, Urbino, Ferrara, Naples)
- The High Renaissance (Donato Bramante, Antonio da Sangallo the Younger, Michelangelo, Giulio Romano, Jacopo Sansovino, Vignola, Palladio)
- 16th-Century Architectural Treatises (Serlio, Vignola, Palladio)
- The Renaissance City 2 (Rome, Florence, Naples)
- The Baroque Age (Gianlorenzo Bernini, Francesco Borromini, Pietro Berrettini da Cortona)
- The Baroque City (Rome, Naples)
- Developments of the Baroque in Southern Italy
- Overview of the European situation between the 17th and 18th centuries

READINGS/BIBLIOGRAPHY

The student will be provided with the images shown during the lessons.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is based on ex-cathedra lectures, expert lectures, and site inspections.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☐ Other

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

evaluation according to the thirtieths system.

COURSE DESCRIPTION
HISTORY OF ARCHITECTURE 1

SSD: STORIA DELL'ARCHITETTURA (ICAR/18)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: CAPANO FRANCESCA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 8

REQUIRED PRELIMINARY COURSES

None.

PREREQUISITES

None.

LEARNING GOALS

The course aims to provide the critical and methodological tools for the knowledge of the History of western architecture and the European city during the modern age up to the early contemporary age, with reference to the main historiographical categories and the theories of architecture that have characterised the debate in modern Europe. Introducing the general aspects concerning the ancient and medieval age, the linguistic and theoretical phenomena, authors and works with reference to the European debate from the Renaissance to Neoclassicism will be dealt with. Historiographical analysis will be tackled at both the architectural and urban scales, using bibliographical and iconographical sources, in order to provide the student with the

tools for the knowledge of paradigmatic cases relating to periods and places.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The student must acquire the historical disciplines in an integrated manner with respect to the subjects of the course of study: the understanding of history must be considered with respect to the themes addressed in the courses of Architectural and urban design, Urban planning, and Restoration. The student will have to understand the main themes, exemplified through works and protagonists, in relation to the different historical moments and places; he/she will have to critically analyse the architectural work also through the study of the material, constructive and cultural peculiarities of each historical period. The student will thus have demonstrated a critical knowledge of architectural and urban phenomena in a diachronic dimension.

Independent judgement: students must acquire the skills to independently explore what they have learned; they must use the basic knowledge acquired to understand architecture, urban systems, transformations and conformative processes in relation to the historical, cultural and social context and different geographical areas.

Communication skills: students must develop a scientific method and acquire the terminology of the discipline, appropriate language and an adequate glossary.

Learning skills: students will acquire and subsequently analyse architecture and cities in relation to the historical context; they will demonstrate critical reading skills in relation to architectural phenomena. Students will thus be able to understand the relationship between design and places. Analytical skills will be related to the design topics addressed by students in the various workshop courses of the programme.

Applying knowledge and understanding

The student will have acquired a satisfactory mastery of the methods of historiographical analysis applied to architecture and the city, i.e. he/she will be able to use the methodological tools of the discipline in order to recognise the linguistic and stylistic aspects relating to architecture at the scale of the artefact and the territory and to understand the relationship between theory and design. The student will be able to understand the relationships between Architectural history and the other disciplines learnt in the Drawing, Architectural and urban design, Restoration, Urban planning courses.

COURSE CONTENT/SYLLABUS

INTRODUCTIONS. The meaning of Classicism; outlines of the History of Architecture between the Classical World and the Middle Ages; Greek Architecture from the origins to the Hellenistic Period: the city, architectural orders, typologies; Roman Architecture and Vitruvius; the permanence of the Ancient between Late Antiquity and the Middle Ages and Romanesque; elements of Gothic Architecture.

RENAISSANCE. Between the Proto-Renaissance and the Renaissance in Tuscany; Filippo Brunelleschi; Vitruvianism and Leon Battista Alberti’s theory; the 15th-century Florentine palace; the 15th-century city: the ideal city and urban transformations, Pienza, Urbino, Ferrara; the

Renaissance in Milan; the early 16th century in Rome: Donato Bramante.
MANIERISM. The sixteenth-century Roman palace; the building site for the new San Pietro in Rome; Raffaello the architect and his pupils: Baldassarre Peruzzi and Giulio Romano; Michelangelo; The Counter-Reformation; The treatisers; 'Venetian Classicism'; Andrea Palladio.
THE BAROQUE AND THE ROCOCÒ. Sisto V and Domenico Fontana's plan; The Roman Baroque: Pietro da Cortona, Gian Lorenzo Bernini; Francesco Borromini; Guarino Guarini; 'Baroque Classicism' in France; the theme of the place royale; Claude Perrault's eastern front of
the Louvre; the residence of Vaux-le Vicomte, the palace of Versailles; Palladianism: Inigo Jones, Christopher Wren; the Austrian Rococo; Fischer von Erlach; Lukas von Hildebrandt; Balthasar Neumann; Filippo Juvarra; Bernardo Vittone: 18th century Roman architecture.
NEOCLASSICISM IN THE 18TH CENTURY. Theories; architecture, antiques and collecting; Giuseppe Piermarini; the theoretical debate in France; Etienne-Loius Boullée; Claude Nicolas Ledoux.
NAPLES: CITY AND ARCHITECTURE: The origins of the city: Parthenope and Neapolis; Angevin Naples; Aragonese Naples; Naples during the viceroyal period; Naples and the Bourbons; the French Decade.

READINGS/BIBLIOGRAPHY

The student may choose one of the following textbooks for the general part: Renato De Fusco, *Mille anni d'architettura in Europ*a, Roma-Bari, Laterza, 1993. David John Watkin, *Storia dell'architettura occidentale*, Bologna, Zanichelli 1990.
For the monographic part on Naples a selection will be provided from the following volumes: G. Alisio, *Urbanistica napoletana del Settecento*, Bari, Dedalo, 1979. A. Bonanni, *Napoli angioina*, in *Conoscere Napoli: storia e itinerari*, edited by D. Bartolucci, Naples, Liguori, 1990. A. Buccaro, G. Matacena, *Architettura e urbanistica dell'età borbonica. Le opere dello stato, i luoghi dell'industria*, Napoli, Electa Napoli, 2004. R. De Fusco, *L'architettura del Quattrocento*, Turin, UTET, 1984. D. Del Pesco, *Napoli: l'architettura*, in *Storia dell'architettura italiana. Il secondo Cinquecento*, edited by C. Conforti, R.J. Tuttle, Milan, Electa, 2001. C. de Seta, *Napoli*, Roma-Bari, Laterza, 1981. A. Ghisetti Giavarina, *Napoli*, in *Storia dell'architettura italiana. Il primo Cinquecento*, edited by A. Bruschi, Milan, Electa, 2002. R. Pane, *Architettura e urbanistica del Rinascimento*, in *Storia di Napoli*, Napoli, Edizioni Scientifiche Italiane, vol. IV, t. I; A. Venditti, *Urbanistica e architettura angioina*, in *Storia di Napoli*, Napoli, Edizioni Scientifiche Italiane, III, 1969; E. Violini, *Napoli dalle origini al secolo XIII*, in *Conoscere Napoli...*, cit.
Students will be provided with all the lectures in the course in pdf format for the iconographic material necessary for understanding the topics covered. Supplementary material will be provided for the lessons that will take place in and around Naples.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course will be conducted primarily through lectures, during which students will be encouraged to participate. Each lecture will conclude with in-depth discussions and clarifications suggested by the students. Three mid-course lectures will be dedicated to students presenting an agreed-upon

topic of their choice, ranging from the Renaissance to Mannerism (6 credits). Three lectures will involve site visits to Naples and its surroundings, including civic and religious buildings and a real site; one will be dedicated to site visits to the archaeological site of San Lorenzo (2 credits).

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [ ] Written
- [x] Oral
- [ ] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [ ] Open answers
- [ ] Numerical exercises

b) Evaluation pattern

Not applicable.

COURSE DESCRIPTION
TECHNOLOGICAL CULTURE FOR HABITAT DESIGN

SSD: TECNOLOGIA DELL'ARCHITETTURA (ICAR/12)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: TERSIGNI ENZA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 6

REQUIRED PRELIMINARY COURSES

Not foreseen

PREREQUISITES

No prerequisites

LEARNING GOALS

The course has the key objective of transmitting the fundamentals of the discipline of Architectural Technology, through the awareness of the synergic nature of the different components of an Architectural Building, in relation to the project, both in its conceptual and operational phases. The disciplinary contents delivered through lectures and exercises will therefore be aimed at providing the basis for a design and technical culture through information and training of the student, as well as to make the latter competent in the management of the process - programmatic and executive - that underlies the construction of an architectural artefact.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures, seminars, active meetings and exercises the student interprets and understands the technological and material issues related in particular to the construction and executive aspects of the architectural project also in relation to the use of methodologies and strategies for environmental sustainability and the protection of the natural and cultural heritage and considers their intertwining with the other disciplines that contribute to architectural and environmental design.

Applying knowledge and understanding

The student develops the ability to interpret and subsequently begin to define in detail, in both theoretical and applicative terms, the technological and constructional aspects of architecture, both in the knowledge and design phases.

COURSE CONTENT/SYLLABUS

The course content explores different aspects of the design-construction process through general and specific topics.

General topics

- technological design;
- from the design idea to the construction of a building;
- the principles of sustainable architecture;
- the role of technology in the development of the architectural project;
- the requirements-performance approach for the quality of projects.

Specific topics

- the building as a system;
- construction systems;
- the production processes of building materials and components.

READINGS/BIBLIOGRAPHY

Basic texts

- E. Arbizzani, Progettazione tecnologica dei sistemi edilizi. Progetto, processo, costruzione, Maggioli Editore, Sant'Arcangelo di Romagna, 2021.
- A. Campioli, M. Lavagna, Tecniche e architettura, Città studi edizioni, Milano, 2013.
- M. Torricelli, R. Del Nord, P. Felli, Materiali e Tecnologie dell'Architettura, Laterza, Roma, 2005.

Recommended bibliography

- AA.VV., Progettazione tecnologica, TECHNE n.2, Firenze University Press, 2011 (http://www.fupress.net/index.php/techne/issue/view/785).
- N. Sinopoli, V. Tatano, Sulle tracce dell'innovazione, Franco Angeli, Milano, 2002.
- M. Losasso, Architettura, tecnologia e complessità, Clean, Napoli, 1991.
- E. Dassori, R. Morbiducci, Costruire l'Architettura. Tecniche e tecnologie per il progetto, Tecniche nuove, 2010.

- AAVV, Manuale di progettazione edilizia, Hoepli, 1995.
- M. Salvadori, R. Heller, Le strutture in architettura, Etaslibri, Milano, 1992.
- AA.VV., Manuale di progettazione edilizia, Hoepli, Milano, 2007 (Volumi: 1, 4 e quaderni: le strutture, le chiusure verticali, le chiusure orizzontali, le partizioni, le finiture).

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is divided into theoretical lectures and graphic exercises aimed at verifying the basic knowledge acquired by the students and assessing their application skills.
The main topics covered in the theoretical lectures are:
- The Architecture Technology.
- Sustainable development and the construction world.
- Systemic logic and building system.
- Structures in architecture: foundation structures, elevation structures, floors.
- Closures: perimeter walls, flat and sloping roofs, external fixtures.
- Partitions: walls, internal fixtures, stairs.
- Hints on plants.
- The building process.
- The demand/performance approach.
- Construction materials and systems.
- Methods of representation of the architectural project: the executive detail.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [ ] Written
- [x] Oral
- [ ] Project discussion
- [x] Other : Graphic Exercises

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [ ] Open answers
- [ ] Numerical exercises

b) Evaluation pattern

COURSE DESCRIPTION
TECHNOLOGICAL CULTURE FOR HABITAT DESIGN

SSD: TECNOLOGIA DELL'ARCHITETTURA (ICAR/12)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: DELL'ACQUA FEDERICA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 6

REQUIRED PRELIMINARY COURSES

There are no required preliminary courses

PREREQUISITES

There are no prerequisites

LEARNING GOALS

The course aims to provide knowledge, methodologies and tools of Technological and Environmental Design of Architecture aimed at the design of the habitat, both in the conceptual and operational phases. The disciplinary contents, delivered through frontal lessons and practical exercises, are aimed at making the student competent in the management of the process - programmatic and executive - that underlies the construction of the building.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Through lectures and exercises the student understands and interprets the construction aspects of buildings and building materials, with particular reference to methodologies and strategies for environmental protection, sustainability and reduction of environmental impacts, considering the interactions with other disciplines that contribute to the project.

Applying knowledge and understanding

The student develops the ability to identify, interpret and define, overall with respect to the building system and subsequently on a detailed scale, both in conceptual terms and through application exercises, the technological and constructional aspects of the building.

COURSE CONTENT/SYLLABUS

The course conveys the basic knowledge related to the design process and the construction aspects underlying the realization of the building, framing them on the one hand in the culture of technological and environmental design, and on the other hand in relation to the goals of sustainable development, the reduction of environmental impacts and the role of the building sector in the objectives of reducing climate-changing emissions.
The course programme envisages three areas of content, framing, basic and specific, as outlined below.
Thematic framework:
- fundamentals of technological and environmental design for the habitat
- built environment and Carbon and Climate Neutral scenarios
- principles of sustainable architecture

Basic topics:
- the building as a system
- the building construction process
- the requirements-performance approach for the quality of the project

Specific topics:
- materials and construction systems
- graphic representation of executive details

READINGS/BIBLIOGRAPHY

Core texts

- Arbizzani, E. (2021), Progettazione tecnologica dei sistemi edilizi. Progetto, processo, costruzione, Maggioli Editore, Sant'Arcangelo di Romagna.
- Campioli A., Lavagna M. (2013),Tecniche e architettura, Città studi edizioni, Milano.
- Torricelli M., Del Nord RFelli., P. (2005), Materiali e Tecnologie dell'Architettura, Laterza, Roma.

Further Bibliography

- Attaianese E., Losasso M. (2022) "La Progettazione ambientale e la ricerca di Area Tecnologica per il progetto di architettura", in Attaianese E., Losasso M., (a cura di) La ricerca nella Progettazione ambientale. Gli anni 1970-2008. I contributi dalle Sedi universitarie del Cluster Progettazione ambientale della Società Italiana della Tecnologia dell'Architettura,

Maggioli,Santarcagelo di Romagna, pp. 9-14.
- AA.VV. (1995), Manuale di progettazione edilizia, Hoepli.
- AA.VV. (2007), Manuale di progettazione edilizia, Hoepli, Milano, (Vol.: 1, 4 e Quaderni: le strutture, le chiusure verticali, le chiusure orizzontali, le partizioni, le finiture).
- M. Losasso, Architettura, tecnologia e complessità, Clean, Napoli, 1991.
- Vittoria, E. (1975), “Abitabilità del territorio” in Argomenti per un corso in Tecnologia dell’architettura, Multigrafica Brunetti, Roma.
- Gangemi V. (1995), “Sistemi eco-compatibili nella Progettazione Ambientale” in AA. VV., TIA - Teaching in Architecture energy and environment world network, Alinea Editrice, Firenze.
- Nardi G. (2001), Tecnologie dell’architettura. Teorie e storia, Libreria CLUP, Milano.
- Maldonado T. (1970), La speranza progettuale, Einaudi, Torino.
- Spadolini P. (1981), “Progettare nel processo edilizio”, in Zaffagnini M. (a cura di) Progettare nel processo edilizio. La realtà come scenario per l’edilizia residenziale, Edizioni Luigi Parma, Bologna.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is organized into lectures and exercises, carried out through the production of graphic details aimed at verifying the student's level of learning of the theoretical contents and the ability to apply them.
The contents of the theoretical lessons are divided into:
- Elements of the technological culture of design. The concept of habitat and the built environment
- The built environment in the new climate regime. Sustainable design solutions for counteract the effects of climate change in the urban context
- Technical policies for Climate and Carbon Neutrality in the urban and built environment
- The building construction process
- The systemic approach for reading and design the building
- The requirements-performance approach to architectural design
- Structures in architecture: foundation structures, elevation structures, floors.
- Enclosure systems: perimeter walls, flat and sloping roofs, external fixtures.
- Partitions: walls, internal fixtures, stairs
- Building systems and construction materials
- Methods of graphical representation of the project. Construction details

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☑ Other : Graphic drawings

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers

☐ Numerical exercises

b) Evaluation pattern

The examination involves testing the learning of the theoretical content and assessing the application skills as a result of the exercise activity

COURSE DESCRIPTION
TECHNOLOGICAL CULTURE FOR HABITAT DESIGN

SSD: TECNOLOGIA DELL'ARCHITETTURA (ICAR/12)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: RIGILLO MARINA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 03 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 6

REQUIRED PRELIMINARY COURSES

No

PREREQUISITES

No

LEARNING GOALS

The general objective of the course is to train students toward the cultural and operational tools of the technological and environmental design. The course works in compliance with construction practices, the principles of environmental sustainability and the circular economy and current legislation.
The specific objectives relate to the acquisition of the following skills:
- Provide access codes to the core content of the discipline.
- Examine and reimagine the connection between form and technique.

- Become proficient in recognizing and contextualizing specific technological solutions.
- Identify the spatial, technological, and environmental requirements of the architectural project, with a focus on the life cycle of the building.
- Provide access codesto the technical information.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

The course of Technological Culture of Habitats aims to train skills relating to the specificity of the technological and environmental project, in this including knowledge of the basic principles of the discipline, the ability to decode the technical representation, the ability to access specialized information.

The course deals with the form/technique relationship with a focus on the following objectives:

- the concept of system referring to the architectural project, through a deepening of the relationships between construction systems, materials and technological transformation processes;
- understanding of the specificity of construction techniques in referring to the form/technique relationship, including through demand-performance analysis;
- the concept of material culture referring to the architectural project, with the deepening of the cultural, technological and social context in which the intervention takes place

Applying knowledge and understanding

The course is aimed at transferring functional methods and tools to apply the knowledge and skills acquired to the specificity of technological and environmental design.

Notably, students shall be able to:

- to orient oneself in disciplinary culture;
- to be able to read, interpret and reproduce construction details and technological solutions;
- to decline the relationship between form and technique according to the overall needs expressed by the intervention programme

COURSE CONTENT/SYLLABUS

Students will work on a set of case studies relating to examples of different architectures for materials and construction systems used and belonging to different geographical, stodic and cultural contexts.

Each student will be assigned a set of case studies for which they must return:

- the project’s systemic condition. - the relations between the parties, with a special focus on interconnection elements.
- the hierarchy of components. - the required performance.
- the constraints arising from the environmental context in which the intervention was carried out.

The course is divided into 3 thematic modules and a monographic study The modules are organized in the form of teaching exercises, which are in turn divided into:

- a research phase, the aim of which is to systematize the bibliographical references, the design references and the analysis of the case studies assigned for the purpose of extrapolating the

elements of knowledge essential to the understanding of the basic principles of technological and environmental design;
- a discussion phase, the aim of which is to develop the capacity for critical peer discussion, using input from the classroom debate to refine and systematise research work;
- a proposition phase, the objective of which is to return the essential elements of the analyzed project as a case study, using scale representations to return the set of needs and performances to which the case study project responds.
The monographic study is dedicated to the work of Renzo Piano

READINGS/BIBLIOGRAPHY

The teaching material is grouped into:
- reference bibliography, organized on the specific nature of teaching modules.
- references for the monographic section - excerpts from talks, lectures and tutorials
- reference case studies for the topics adopted - cartographic and archival study material

TEACHING METHODS OF THE COURSE (OR MODULE)

The course involves lectures, classroom exercises, and guided discussion moments.
Teaching is organized so that the student has learning opportunities both through traditional models of knowledge transfer in a top-down logic, as well as through peer exchange and discussion work with colleagues

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [ ] Written
- [x] Oral
- [ ] Project discussion
- [x] Other : Classroom exercises organized as intercourse tests
  Discussion of the tests carried out
  Verification of knowledge of the bibliographic material provided

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [ ] Open answers
- [ ] Numerical exercises

b) Evaluation pattern

The exam consists of an oral test concerning the disciplinary contents developed during the course. Knowledge of the bibliographic material provided and passing of the tests is required.
Each test carried out is evaluated according to a specific score. The sum of the scores varies from a minimum of 25 to a maximum of 60 points.
Students with a rating below 25 are not admitted to the first exam session

COURSE DESCRIPTION
null

SSD: COMPOSIZIONE ARCHITETTONICA E URBANA (ICAR/14)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: LEWICKI KORNEL TOMASZ
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 6

REQUIRED PRELIMINARY COURSES

not any

PREREQUISITES

not any

LEARNING GOALS

The course aims to provide students with basic knowledge of architectural design as it relates to architectural theories, with particular emphasis on technical aspects, interdisciplinary aspects, the answers that the history of architecture has provided to the students aforementioned questions, and its relationship with the form of the city. Therefore, the course will provide students with knowledge of: methodological aspects of architectural design, relating to contemporary design theories, and analytical-instrumental aspects for the study of the distributive, typological, morphological, and linguistic characteristics of architecture and the city.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

In their initial approach to the discipline, the students, through theoretical lectures, seminars, and practical activities, address the compositional issues (distributive, typological, morphological, and linguistic) that underlie the architectural project and its various thematic articulations, understanding their relationships with the other disciplines that contribute to the formation of the architectural project.

Applying knowledge and understanding

In the first year of the course of study, the students will be introduced to architectural and urban design, developing preliminary skills in theoretically and methodologically structuring the design work and producing related project documents by addressing the different levels of complexity of the architectural design at different scales.The ability to apply some of the knowledge acquired in this field will be realized through the design activities in the Architectural Design Studios in the following years.

COURSE CONTENT/SYLLABUS

We will concentrate on fundamentals of theory and technics in architecture. In introduction will show how the theory is a man's construct, therefore in progressive evolution (for there the title for the course "Not Yet, Never Entirely").
We will discuss fondamental elements and materials that build the personal arsenal of tool for projecting architecture. We will read and analyse a few essays. We will learn how to read and observe architecture, both built and drawn (a series of plans in provided in the Reader).

Finally we will analyse, discuss and redraw a series of single family houses, relevant for the discipline. As from Inaki Abalos work "The Good Life, A guided visit to the houses of modernity", 2001:
"We study the relationship that exists between ways of living, different strata of contemporary thought, and the varied forms of the house, of planning and living in it. (...) It is hoped in this way to show how the most prevalent form of thinking and planning domestic space, one still current among architects, is nothing other than a materialization of certain archetypal ideas about the house which have their origin in one of those strata –positivism –the stratum, in short, that those who have the authority to do so agree is the only one that is undoubtedly exhausted, whose validity has ended."

READINGS/BIBLIOGRAPHY

A reader will be provided containing theoretical texts, basic concepts and a collection of plans.
The reader will include excerpts from texts:

1908 IN THE CAUSE OF ARCHITECTURE F. L. WRIGHT
1908 ORNAMENTO E DELITTO A. LOOS
1924 ARCHITETTURA E VOLONTÀ DELL‘EPOCA L.M. VAN DER ROHE
1931 VERS UNE ARCHITECTURE LE CORBUSIER
1941 SPAZIO, TEMPO ARCHITETTURA: L’IDENTITÀ NEI METODI S. GIEDION
1952 STRUTTURE E SEQUENZE DI SPAZI L. MORETTI
1955 COSTRUIRE CORRETTAMENTE P.L. NERVI
1957 ARCHITETTURA E IDEOLOGIA C.G. ARGAN
1960 ACADEMIC TRADITION AND CONCEPT OF ELEMENTARY COMPOSITION R. BANHAM
1963 LA CASA ÈUN OPERA D’ARTE K. SHINOHARA
1963 VERSO UNA COMPRENSIONE DEL CONCETTO DI FORMA P. EISENMAN
1965 A HOME IS NOT A HOUSE R. BANHAM1966 UN ARCHITETTURA NON SEMPLICE R. VENTURI
1967 LA CONSTRUZIONE LOGICA DELL’ARCHITETTURA G. GRASSI
1967 LA FUNZIONE SENZA FORMA R. DE FUSCO
1968 TEORIE E STORIA DELL’ARCHITETTURA M. TAFURI
1973 ARGUMENTS ON THE ARCHITECTURAL LANGUAGE B. ZEVI
1976 GENIUS LOCI CH. NORBERG-SCHULZ
1980 LA PRESENZA DEL PASSATO CH. JENCKS
1988 A WAY OF LOOKING AT THINGS P. ZUMTHOR
1993 VARIATIONS OF IDENTITY: THE TYPE IN ARCHITECTURE C. MARTI ARIS
1995 BIGNESS OVVERO IL PROBLEMA DELLA GRANDE DIMENSIONE R. KOOLHAAS
2000 PAROLE E EDIFICI A. FORTY
2001 PRITZKER PRIZE SPEECH J. HERZOG, P. DE MEURON
2002 LA METOPA E IL TRIGLIFO: OTTO DEFINIZIONI DI ARCHITETTURA A. MONESTIROLI
2007 CAPOLAVORI; IL FARE E LA CONOSCENZA L. VACCHINI
2008 CONTRO LA FINE DELL’ARCHITETTURA V. GREGOTTI
2009 ARCHITECTURE DEPENDS J. TILL
2009 WHAT IS ARCHITECTURE CH. KEREZ, H. FREI
2013 LESS IS ENOUGH P.V. AURELI
2013 WHAT IS GOOD ARCHITECTURE? V. PATTEEUW, CH. VAN GERREWAY
2016 ORDER, DISORDER: 10 CHOICES AND CONTRADICTIONS CH. VAN GERREWAY
2016 THE PUBLIC OF ARCHITECTURE: CONFLICT AND CONSENSUS L. CENTIS
2016 WELL INTO XXI CENTURY A. ZAERA POLO2017 HOW WE BECAME ARCHITECTS P. V. AURELI
2018 NON REFERENTIAL ARCHITECTURE M. BREITSCHMID, V. OLGIATI
2019 ECONOMY OF MEANS E. LAPIERRE
2021 RILIEVI DISEGNATI PER DISEGNARE PROGETTI K.T. LEWICKI, M. MONTRESOR
2022 ABSOLUTE BIGGINERS I. ABALOS

TEACHING METHODS OF THE COURSE (OR MODULE)

7 Lectures with discussion at the end:
- Project(s) of Anamnesis _ Introduction
- Not yet, never entirely.
- Fundamental elements and materials.
- Everything could be otherwise, it is not.
- Types of Spaces.
- Figures of Thought.
- Survey drawings, drawing projects.
10 Short guest lectures on Single-Family Homes
3 Exercises
1 Final assignment as introductory material for the oral exam discussion

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☑ Project discussion
- ☑ Other : 3 intermediate hand-ins

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

The final grade, expressed in thirtieths, will be given by a weighted average of a series of parameters and intermediate assessments:
- Attendance and active participation in lessons and intermediate assignments
- Exercise 1 _ What is Architecture
- Exercise 2 _ Types of Spaces
- Exercise 3 _ What constitutes good architecture
- Exercise 4 _ A house
- Oral examination

COURSE DESCRIPTION
THEORY AND TECHNIQUE OF ARCHITEXCTURAL PROJECT

SSD: COMPOSIZIONE ARCHITETTONICA E URBANA (ICAR/14)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: VISCONTI FEDERICA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 6

REQUIRED PRELIMINARY COURSES

Not any

PREREQUISITES

Not any

LEARNING GOALS

The course aims to provide students with basic knowledge of architectural design as it relates to architectural theories, with particular emphasis on technical aspects, interdisciplinary aspects, the answers that the history of architecture has provided to the aforementioned questions, and its relationship with the form of the city. Therefore, the course will provide students with knowledge of: methodological aspects of architectural design, relating to contemporary design theories, and analytical-instrumental aspects for the study of the distributive, typological, morphological, and linguistic characteristics of architecture and the city.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

In their initial approach to the discipline, the students, through theoretical lectures, seminars, and practical activities, address the compositional issues (distributive, typological, morphological, and linguistic) that underlie the architectural project and its various thematic articulations, understanding their relationships with the other disciplines that contribute to the formation of the architectural project.

Applying knowledge and understanding

In the first year of the course of study, the students will be introduced to architectural and urban design, developing preliminary skills in theoretically and methodologically structuring the design work and producing related project documents by addressing the different levels of complexity of the architectural design at different scales. The ability to apply some of the knowledge acquired in this field will be realized through the design activities in the Architectural Design Studios in the following years.

COURSE CONTENT/SYLLABUS

- THEORY OF ARCHITECTURAL PROJECT
the "Theme" of architecture
the typological choice as design guide
the relationship building typology-urban morphology
the relationship building construction-uarchitectural expression
- ESSAYS ANALYSIS
Boulleé, Architecture. Essay in Art
Rossi, Archhitecture for Museums
- CRITICAL ANALYSIS OF WORKS
typology | the plan
space | the section
character | the facade

READINGS/BIBLIOGRAPHY

Bibliography

A. Rossi, *Architettura per i Musei*, in AA. VV., *Teoria della progettazione architettonica*, Dedalo, Bari 1968.
A.a. V.v., *Dizionario critico illustrato delle voci più utili all'architetto moderno*, a cura di Luciano Semerani, Edizione C.E.L.I., Faenza 1993 (Voci: *Tipo* di C. Martí Arís, *Costruzione* di A.R. Burelli, *Carattere* di E. Mantese).
A. Monestiroli, *La metopa e il triglifo*, Laterza, Roma-Bari, 2002.
A. Rossi, *Introduzione* a E.L. Boullée, *Architettura. Saggio sull'arte*, Einaudi, Torino 2005.

F. Visconti, *Esercizi di analogia*, Thymos Books, Napoli 2022.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is articulated in:
a) lessons: about 80% of the total hours amount;
b) exercises to deep the theoretical aspects: about 10% of the total hours amount;
c) seminars to deep specific themes: about 10% of the total hours amount.
Lessons and seminars can be developed also using multimedial devices and on-line materials. Exercises will be developed through the use of adequate instruments for drawings and for the construction of models.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☑ Project discussion
- ☐ Other

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

The exam to verify the knowledge acquired consists in an oral interview aimed at verifying the specific skills obtained by the students during the course, in case also discussing the produced graphic works.

COURSE DESCRIPTION
null

SSD: COMPOSIZIONE ARCHITETTONICA E URBANA (ICAR/14)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: GIAMMETTI MARIATERESA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 03 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 6

REQUIRED PRELIMINARY COURSES

No any

PREREQUISITES

No any

LEARNING GOALS

The course aims to provide students with basic knowledge of architectural design as it relates to architectural theories, with particular emphasis on technical aspects, interdisciplinary aspects, the answers that the history of architecture has provided to the aforementioned questions, and its relationship with the form of the city. Therefore, the course will provide students with knowledge of: methodological aspects of architectural design, relating to contemporary design theories, and analytical-instrumental aspects for the study of the distributive, typological, morphological, and linguistic characteristics of architecture and the city.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

In their initial approach to the discipline, the students, through theoretical lectures, seminars, and practical activities, address the compositional issues (distributive, typological, morphological, and linguistic) that underlie the architectural project and its various thematic articulations, understanding their relationships with the other disciplines that contribute to the formation of the architectural project.

Applying knowledge and understanding

In the first year of the course of study, the students will be introduced to architectural and urban design, developing preliminary skills in theoretically and methodologically structuring the design work and producing related project documents by addressing the different levels of complexity of the architectural design at different scales. The ability to apply some of the knowledge acquired in this field will be realized through the design activities in the Architectural Design Studios in the following years.

COURSE CONTENT/SYLLABUS

The course aims to introduce students to the understanding of architectural design, starting with a thematic study that covers the main theoretical positions that have developed over the history of architecture. The theoretical aspect will be related to the technical components of the design process: compositive, constructive and distributive. This study will be developed through the reading of works by the main architects in history, interpreted in relation to their theoretical positions. The course aims to encourage students to think critically about how architecture is conceived, planned, built and used. The synthesis of knowledge acquired through the study of theories and skills acquired through the study of the technical components of the design process will provide students with the basic tools needed to manage the design process. The final phase of the course will be developed through a series of exercises on the techniques and compositional principles that inform architectural space. At the same time, design issues will be addressed, working with students to learn representation strategies useful for bridging the gap between graphic abstraction and the actual physical construction of architecture.

READINGS/BIBLIOGRAPHY

In addition to a bibliography, digital texts and teaching materials useful for carrying out the exercises will be provided. All materials will be available in the files section of the course Teams channel.

Bibliografy

Vitruvio, *De Architectura*, BUR Biblioteca Univ. Rizzoli, Milano 2002.

L. B. Alberti, *De Re Aedificatoria*, Bollati Boringhieri, Torino 2010.

M. A. Laugier, *Essai sue l'architecture, Aesthetica*, Palermo 2002.

G. Semper, *Lo stile nelle arti tecniche e tettoniche. Estetica pratica*, Laterza, Bari 1992.

Le Corbusier, *Verso una architettura*, Longanesi, Milano 1999.
A. Loos, *Parole nel vuoto*, Adelphi, Milano 1992.
M. Bonaiti (a cura di), *Architettura è. Luis Isidoro Khan. Gli scritti*, Electa, Milano 2001.
R. Koolhas, *Delirious New York,* Electa, Milano 2001.
P. Eisenman, *The formal basis of Modern architecture*, Lars Müller Publishers, Zurigo 2006.
S. Holl, *Parallax. Architettura e percezione*, Postmedia Books, Milano 2005.
Additional bibliographical references relating to the topics discussed or supplementary teaching materials will be provided by the professor at the start of the course.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course will consist of seminars, lectures and exercises that can be framed within the context of the debate on architectural theories, techniques and poetics, in order to guide students in developing a critical perspective useful for understanding architectural practice and the basics necessary for managing the design process. The teaching activity will be articulated in lectures corresponding to verification exercises (each concluded by a collegial review). Topics and criteria of the lectures and exercises respond to the four levels that structure the formative process.
Each level is assigned a percentage of the total number of ECTS credits for the course:
Level 1 –study and exercises on the dimensional characteristics and morphological types of architecture conducted through the reading of works by Master of Modern and Contemporary architecture analyzed in relationship to their theorical essays. (1 ECTS)
Level 2 –study and exercises on the main theoretical approaches that have alternated throughout the history of architecture. (1 ECTS)
Level 3 –study and exercises aimed at developing critical analyses of historical phases of urban development concerning Naples. The city is interpreted through the metaphor of the “palimpsest”, that is as a document where each phase of construction, transformation and stratification is revealed as a layer on an ancient and reused page which continue to exist and influence the current form of the city. (1 ECTS)
Level 4 –exercises on the compositional principles governing space, aimed at highlighting methodological aspects of architectural design and concerned with design theories and analytical-instrumental aspects. Review and systematization of exercises completed to produce materials for the exam and final exam. (3 ECTS)

EXAMINATION/EVALUATION CRITERIA

a) Exam type

☐ Written
☑ Oral
☑ Project discussion
☑ Other : Discussing exercises developed during the course

In case of a written exam, questions refer to

☐ Multiple choice answers

☐ Open answers

☐ Numerical exercises

b) Evaluation pattern

The exam to verify the knowledge acquired consists in an oral interview aimed at verifying the specific skills obtained by the students during the course, in case also discussing the produced graphic works.

COURSE DESCRIPTION
BASIC URBAN PLANNING

SSD: URBANISTICA (ICAR/21)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: CASTIGLIANO MARICA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 6

REQUIRED PRELIMINARY COURSES

No prerequisites required

PREREQUISITES

No prerequisites required

LEARNING GOALS

The course aims to provide students with the fundamental tools to understand and manage territorial development through the study of the evolution of urban settlement forms and planning models. By examining the approaches, plans, and projects that have shaped socio-spatial transformations over the past two centuries, key themes and figures in contemporary urban planning are explored in depth, with the goal of developing a critical and projective understanding of the places we inhabit and will inhabit.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Students acquire a solid foundation of critical knowledge, enabling them to understand the origins and evolution of urban planning through references, documentation, and collective discussions. By studying theories and models of spatial planning and analyzing the contributions of foundational figures in urban planning, students examine the theoretical debates, techniques, and innovations that inform the interpretation, planning, and design of cities, territories, and landscapes.

Applying knowledge and understanding

Students develop analytical and critical skills for reading and interpreting different approaches to territorial themes and transformations, conceptualizing their models and principles. This knowledge enables students to identify the constituent parts, elements, structures, and relational systems that characterize urban, peri-urban, and rural landscapes, and to recognize the distinctive features of territories in relation to both built components and the morphology of open spaces.

COURSE CONTENT/SYLLABUS

The course combines lectures, exercises, and collective discussions with two complementary objectives: first, to provide theoretical knowledge of the discipline, including its evolution in terms of theories, models, and plans, and its engagement with contemporary urban challenges; second, to develop direct knowledge of the Neapolitan territory, serving as an exploratory field in which theoretical notions are applied as tools for critical reading and interpretation.

The program is organized into four parts:

I. INTRODUCTION TO URBAN PLANNING This part introduces urban planning as both knowledge and practice, highlighting the diversity of topics it addresses and its evolving nature in response to economic, social, and environmental changes from its origins to the present day. Rather than seeking a single definition, the course critically examines different expert positions in response to the question: “What do we mean by urban planning?” It also explores the transformations brought about by the Industrial Revolution, the evolving role of the urban planner, and contemporary approaches to studying, representing, and planning cities.

II. THEORIES AND MODELS OF SPATIAL PLANNING This module conceptualizes urban planning through the study of spatial planning theories and models developed in Europe over the last two centuries. The work of foundational figures is analyzed in relation to contemporary perspectives to understand the challenges and issues of today’s cities. Topics include: the phenomenology of urban expansion in the capitals of the late 19th century; Cerdà’s theory of spatial equality and the Superblocks of contemporary Barcelona; Geddes’ spatial development theory, regional investigations, and civic engagement; Howard’s Garden City as a model of spatial equilibrium and its influence on peri-urban landscapes; the machine-city concept of the Modern Movement, CIAM urban planning, and zoning; and the interplay between cities and the natural environment, from Abercrombie’s Greater London Plan to its influence on contemporary principles of urban circularity.

III. TOOLS AND THEMES OF URBAN PLANNING IN ITALY This part examines the planning instrument within the Italian context since the post-war period, considering the contributions of key

figures to the evolution of methods and approaches in the discipline
IV. THE DESIGN OF THE URBAN PLAN AND THE "NEW URBAN QUESTION" The final part focuses on contemporary urban projects, considering the characteristics and challenges of current territories. It explores how the emergence of a “new urban question”, which guides the transition of urban systems towards sustainability, equity, and inclusion, reshapes planning methods and techniques by emphasizing adaptivity, process-orientation, and openness to uncertainty as potential assets for design.

READINGS/BIBLIOGRAPHY

The reference text is:
Gaeta L., Janin Rivolin U., Mazza L. (2021), *Governo del territorio e pianificazione spaziale.* Citta Studi edizioni, Torino.
Additional references:
Secchi B. (2000). *Prima lezione di urbanistica*. Editori Laterza, Roma.
Secchi B. (2005). *La città del ventesimo secolo.* Editori Laterza, Roma
Tosi M.C. (2017). *Di cosa parliamo quando parliamo di urbanistica?.* Meltemi, Milano.
A selection of essays, articles, and text excerpts will be provided throughout the course to complement the lectures and core text.
All necessary base materials (maps, data, etc.) for the case study explored during the exercises will also be provided.

TEACHING METHODS OF THE COURSE (OR MODULE)

Lessons combine lectures with collective discussions. At the end of each of the four modules, exercises and discussions are conducted to consolidate learning. Lessons will make use of images and reference texts provided to students.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☑ Oral
- ☐ Project discussion
- ☐ Other

In case of a written exam, questions refer to

- ☐ Multiple choice answers
- ☐ Open answers
- ☐ Numerical exercises

b) Evaluation pattern

Midterm exercises are conducted to monitor students’ progress. The final assessment will take into account the materials produced during the final case study exercise and the oral exam, which will evaluate students’ understanding of fundamental concepts, their ability to make relevant

connections between the topics covered and contemporary issues, and the skills acquired in analyzing the territory examined in the exercises.

COURSE DESCRIPTION
ARCHITECTURAL AND URBAN COMPOSITION

SSD: COMPOSIZIONE ARCHITETTONICA E URBANA (ICAR/14)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: PICONE ADELINA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5515 - LABORATORIO DI FONDAMENTI DEL PROGETTO DI ARCHITETTURA
MODULE: U2384 - COMPOSIZIONE ARCHITETTONICA E URBANA
TEACHING LANGUAGE:
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 6

REQUIRED PRELIMINARY COURSES

Not foreseen

PREREQUISITES

There are no prerequisites

LEARNING GOALS

The aim of the course is to introduce the first year student to the architectural design. The ARCHITECTURAL and URBAN COMPOSITION as characterizing discipline and the MECHANICS AND STRUCTURE MODELING module (which provides knowledge of basic mechanics and modeling), applying them to the design exercise of the lab, contribute to the achievement of this objective.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

Theoretical lessons, seminars, site visits and the activities of the Design Studio are the instruments with which the student knows the compositive principles (distributive, typological, morphological and related to the architectural language) on which the architectural project is based toghether with its different thematic articulations, understanding the relationship with the other disciplines that are part of the construction of the architectural design.Through lectures and exercises, the student also knows the issues related to the structural conception and calculation as integrated elements of the design development in the different areas of its application, understanding the relationship with the other disciplines that are part of the construction of the architectural design.

Applying knowledge and understanding

The student develops, theoretically and methodologically, the capability of structuring the design activity and producing design drawings comparing the different degrees of complexity of the architectural project at different scales. The capability to apply the acquired knowledge in this area is concretized in the laboratory planning activities over the years.The student develops, theoretically and methodologically, the capability of applying the knowledge related to the structural aspects of the architectural design and to produce design documents. With reference to the structural conception, the student develops the capaability to critically choose materials, typologies and dimensions of a first calculation to be assigned to the structural system and its elements.

COURSE CONTENT/SYLLABUS

THROUGH ARCHITECTURES

A.OBJECTIVES

The course aims to introduce the student to an experimentation through all the phases of which the design process in architecture is composed. Aiming at the decodification of the procedures and praxis of the constructing form process, the course will lead to an initial design experience: an exercise on the patio house, conducted as part of the "Incipit Lab" first-year design workshops, coordinated by the University of Palermo.

B.CONTENTS

The architectural project is understood as the result of a logical path during which a series of choices are rationally made, ordered by a theory. A corpus of theoretical lectures will deepen the thematic aspects, delving into the articulation of the multiple knowledges of which the project is made up: from the relationship with history, to the relationship with the context, investigated in the double form of nature and urban dimension, to the relationship with the typology, to the relationship with the regulations, to the form-function relationship, to the relationships with the technological and plant engineering aspects, up to the technical-structural dimension of the project, seen in particular in relation with the formal conception. The acquisition of elementary notions (analytical-instrumental field) is proposed to the student mainly through the reading of

reference architectures. The architectures are placed at the centre of the cognitive pathway, it is, in fact, through the works that the techniques are exposed, the theories found and the methodologies made explicit. In this way, questions pertaining to the methodological-theoretical field will be explored at the same time as those of the analytical-instrumental sphere, as on the other hand happens in project practice.
C. ARTICULATION
The course is divided into theoretical lectures and project activities to be carried out in the classroom. The theoretical lessons will address two orders of topics: the techniques of making, with the support of manuals, and the composition of form in relation with interdisciplinary aspects. The design activity will be conducted in the form of exercises on the theme of housing. The first exercise will consist of a thematic reading of Terragni's Danteum, using the redesign and construction of a model as the main tools. The reading will tend to trace the 'hidden structure' in relation to the configuration and quality of the spaces, proportions and measurements. The second exercise will focus on the house of Pompeii. By redrawing the plan and section of the Domus, the Vitruvian canons will be applied to discover the proportions of the rooms and represent them in interpretative models. The third exercise will focus on the reading of a contemporary patio house, assigned to the students by the lecturer, a reading that will take the form of drawings and a study model. From the comparison between the Domus and the contemporary patio house the compositional principles of the final exercise will be drawn. The exercise involves the drafting of all the graphic works necessary to describe the house: floor plan, plans at various heights, elevations and sections, three-dimensional representation and model. The exercises are individual, drawing exclusively by hand during the entire Design Studio's path.

READINGS/BIBLIOGRAPHY

The theoretical lectures and design exercises will be illustrated, commented and documented by means of specific teaching and bibliographical materials. Particularly relevant will be the consultation of monographic texts on the work of the Masters. The architectures of the Masters will constitute the main bibliographical reference, like a text, of the course.

TEACHING METHODS OF THE COURSE (OR MODULE)

Lectures and exercises. Architectural Design Studio project activities.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [ ] Written
- [x] Oral
- [x] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [ ] Multiple choice answers

☐ Open answers

☐ Numerical exercises

b) Evaluation pattern

The Architectural Design Studio 1, foresees a single test for the two integrated disciplines. The final grade will be weighted according to the CFUs of each course and will be composed as follows: MECHANICS AND STRUCTURAL MODELLING Module 4CFU 40%, ARCHITECTURAL DESIGN Module 6CFU 60%.

COURSE DESCRIPTION
MECHANICS AND MODELING OF STRUCTURES

SSD: SCIENZA DELLE COSTRUZIONI (ICAR/08)

DEGREE PROGRAMME: SCIENZE DELL'ARCHITETTURA (DB6)
ACADEMIC YEAR 2025/2026

COURSE DESCRIPTION

TEACHER: CERALDI CARLA
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GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: U5515 - LABORATORIO DI FONDAMENTI DEL PROGETTO DI ARCHITETTURA
MODULE: U5516 - MECCANICA E MODELLAZIONE DELLE STRUTTURE
TEACHING LANGUAGE: ITALIANO
CHANNEL: 01 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: I
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER II
CFU: 4

REQUIRED PRELIMINARY COURSES

Teoria e tecnica per la progettazione architettonica

PREREQUISITES

None

LEARNING GOALS

The aim of the course is to introduce the student to architectural design. The Architectural and urban composition as characterizing discipline and Mechanics and structural modelling module, which provides knowledge of basic mechanics and modelling, applying them to the design exercise of the lab, contribute to the achievement of this target.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

In the Mechanics and structural modelling module, the student learns theoretical and methodological issues related to structural design and calculation, as integrated in the architectural design, understanding the relationship with the other disciplines that are parts of architectural design construction.

Applying knowledge and understanding

In the Mechanics and structural modelling module, the student develops the skill of applying theoretical and methodological knowledges related to structural characteristics of the architectural design.

COURSE CONTENT/SYLLABUS

Vector and cursor theory - 1 CFU - vector algebra; - operation with vectors; - transforming law. Kinematics of rigid bodies –1.5 CFU - material point. Absolute and relative displacement; - finite and infinitesimal displacements of a rigid body; - independent parameters of infinitesimal rigid motion; - constrains and restraints; - beams and mechanical systems; - distortion; - analytical and graphical solitons.
Statics of rigid bodies 1.5 CFU- laws of mechanics; - equilibrium of a material point and of a rigid body; - static behavior of constraints; - equations of equilibrium; - stress characteristics; - relationships between loads and stress characteristics; - graphic solution of equilibrium.

READINGS/BIBLIOGRAPHY

C. Ceraldi, L. Dodaro, M. Lippiello, Meccanica dei sistemi rigidi, Aracne editrice C. Ceraldi, L. Dodaro, M. Lippiello, Esercizi di Meccanica dei sistemi rigidi, Luda

TEACHING METHODS OF THE COURSE (OR MODULE)

Teaching activities will be carried out by performing theoretical lectures

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- [x] Written
- [x] Oral
- [ ] Project discussion
- [ ] Other

In case of a written exam, questions refer to

- [ ] Multiple choice answers
- [ ] Open answers
- [x] Numerical exercises

b) Evaluation pattern

40% Meccanica e modellazione delle strutture 60% Composizione architettonica e urbana