

Introduction

During the last ten years, teaching experiments have moved from the need to point out a design path that would use technology as a knowledge tool of the intervention field and as a preview and control tool for operating techniques. With this aim, the evolution of the design process is enriched from minimizing environmental impact, transformation of materials for architecture, able to reduce waste resources, compatibility between traditional building systems and innovative technologies and lastly the overcoming of contraposition between innovation and recovery, between natural and artificial cycle.

With this intention, an interdisciplinary coordination has been acted, allowing to deal with always higher complexity of the architectural project, integrating contributes given by "poetics" and "analytics" with ones referred to as procedural, actuation and environmental aspects, linked to the feasibility of a project, with particular reference to technological innovation for building production.

General Orientation

The degree course in Architecture has been set up in 1996 with the current curriculum, according to EEC directive 85/384. It grants the qualification of Doctor in Architecture, necessary to become an architect.

The graduates are able to plan realization and transformation processes of physical context with full knowledge of the formal, distributive, functional, structural, technical, constructive, managerial, economical and environmental aspects. They can read, work and organize projects and their final realization. If necessary, they are able to organize other specialists in the field of architecture, engineering, urban planning and architectural restoration.

The duration of the course is five years (totally 300 credits) and it foresees the completion in three periods (108+140+52 credits) oriented respectively:

- | | |
|----------------------|--|
| FIRST PERIOD | to base training
(44 CFU for the first year and 64 CFU for the second one) |
| SECOND PERIOD | to technical, scientific and professional training
(72 CFU for the third year and 68 CFU for the fourth one) |
| THIRD PERIOD | to study completion, eventually with training activities based on stages and apprenticeship for the final degree exam.
(38 CFU for the fifth year and 14 CFU for the stage) |

* these two colleagues participated in the Workshop. However, the present paper has been produced by: prof. arch. M. Isabella AMIRANTE (Coordinator), prof. arch. L. MAFFEI, prof. ing. M. CONTALDO, prof. ing. G. FRUNZIO, prof. arch. S. RINALDI, dott. arch. R. VALENTE, dott. arch. C. SANNINI

Teaching activity is organized in mono-disciplinary courses, integrated courses (carried out by two professors of the same discipline or of different disciplines) and design studio for the development of theoretical and practical activities purposive to the project.

The final synthesis design studio includes the mature and complete preparation of a project, managed with the contribution of many disciplines.

CONSTRUCTION STUDIES PLANNING

FIRST PERIOD

I YEAR

- **TECHNOLOGY OF ARCHITECTURE** (Integrated course) 6 CFU
Knowledge of Building Technology 3 CFU
+
Materials and Design of Building Components 3 CFU
Analysis and knowledge of materials and elements of the construction. Acquisition of the basic knowledge to understand the dynamics of interaction between building and context.
- **THERMODYNAMICS AND HEAT TRANSFER**
(Mono-disciplinary course) 4 CFU
Basic concepts and applications of balance of mass and energy, of thermodynamic properties of simple substances, of psychometrics, of mechanisms of heat transfer.

II YEAR

- **STATICS** (Mono-disciplinary course) 8 CFU
Application of mechanics to the study of static equilibrium of rigid and elastic bodies. Topics include composition and resolution of forces; moments and couples; equivalent force systems, free-body diagrams; equilibrium of particles and rigid bodies; forces in trusses and beams; first and second moments of area; moments and product of inertia.
- **CONSTRUCTION 1** (Design Studio) 12 CFU
Design of Construction Systems 8 CFU
+
Computer Science 4 CFU
Application of building systems of architecture referring to design experimentation acted through control of enforceability and workability of the project. Competence in recognizing quality of architectural work in its technical and formal exits.
- **ARCHITECTURAL DESIGN 2** (Design Lab.) 12 CFU
Architectural Design 8 CFU
+
Building Construction 2 CFU
Integration in the project of architecture of the creative and constructive aspects.
+
History and Ways of Analyse Architecture 2 CFU

SECOND PERIOD

III YEAR

• **STRUCTURAL MECHANICS AND STRENGTH OF MATERIALS**

(Mono-disciplinary course) 8 CFU

Development of the ability to formulate and solve structural problems. Topics include knowledge to investigate the response of deformable solids; understanding of the concepts of stress and strain; stiffness and flexibility methods; equilibrium and compatibility; virtual work and total potential energy; response of linear structures to static loads; verification and interpretation of structural response.

• **BUILDING ENVIRONMENTAL CONTROL** (Monodisciplinary course) 8 CFU

Systems for energy conversion. Thermal comfort: active and passive methods. Behaviour of building envelope to steady and transient thermal and humid conditions. Acoustical comfort: sound propagation, sound quality, noise control. Vision comfort: light, colour, illumination levels. Air quality control. Design strategies.

IV YEAR

• **STRUCTURAL ANALYSIS AND DESIGN** (Design Studio) 12 CFU

Design of r.c. and p.c. structures 8 CFU

Analysis and design of reinforced concrete and pre-stressed concrete structures. Topics include design of beams and columns for flexure, shear, axial load, torsion, and anchorage; behaviour and design of reinforced concrete frame structures for gravity and lateral loads; behaviour and design of statically determinate pre-stressed concrete structures; applications to the construction of buildings.

+

Consolidation of Historic Buildings 2 CFU

+

Design and Construction of Structural Systems 2 CFU

Understanding of current practice for analysis and design of structures. Topics include understanding of matrix methods of analysis for linear structures; direct stiffness assembly procedure for structural analysis; design of moment-resisting frames.

• **ENVIRONMENTAL SYSTEMS DESIGN** (Integrated course) 8 CFU

Public Hygiene of Buildings and of the Environment 4 CFU

+

Environmental Design 4 CFU

Knowledge of technologies to improve quality of the indoor and outdoor environment. Methodology of approach to project with applications to sustainable technologies for a correct relationship between human and natural processes.

• **ARCHITECTURAL DESIGN** 4 (Design Studio) 12 CFU

Architectural Design 8 CFU

+

Applied Structural Design 2 CFU

Development of the ability to size and detail components of reinforced concrete and steel buildings. Topics include consideration of the broad aspects of use of concrete and steel in construction; technical requirements; selection of materials; types of concretes and construction methods used for building structures.

+

Working Design 2 CFU

Integration in the project of contributions related to working definition of architectural solutions.

- **RESTORATION** (Design Studio) 12 CFU

Restoration 8 CFU

+

Retrofit of Monuments and Historic Buildings 2 CFU

Structural analysis and retrofit of historical buildings. Topics include introduction to heritage conservation, history and philosophy of historic preservation, basic concepts, guidelines, methods and technologies currently used to preserve, rehabilitate and restore cultural buildings; seismic retrofitting; new materials and technologies in earthquake strengthening; use of the state historical building code.

+

Construction Features of Historical Buildings 2 CFU

THIRD PERIOD

V YEAR

Then students can choose one of this Final Laboratories belonging to different disciplinary areas, which are:

- **FINAL LABORATORY OF TECHNOLOGY**

Design according to environmental sustainability criteria with attention to the condition of heat transmission, ventilation and to landscape features, above the use of ecocompatible technological systems.

FINAL LABORATORY OF DESIGN

FINAL LABORATORY OF HISTORY

FINAL LABORATORY OF URBAN PLANNING

FINAL LABORATORY OF RESTORATION

All this Final Laboratories are Design Lab. of 12 CFU

Then students can also choose other five subjects and two of construction among these following:

1)

- **DESIGN OF STEEL STRUCTURES** (Mono-disciplinary course) 4 CFU

Behaviours and design of steel structural members and connections. Topics include tension members, compression members, beams and beam-columns; typical shear and moment connections, welded and bolted. Behaviour and characteristics of steel structural systems. A term project is assigned to conduct the design of a steel building structure.

OTHERWISE

- **TESTING ASSESSMENT AND MONITORING OF CONSTRUCTIONS** (Mono-disciplinary course) 4 CFU

Experimental behaviour of materials and structures. Topics include introduction to experimental methods, test planning, model preparation, loading of systems, instrumentation, data acquisition and data processing; non-destructive methods; materials testing - steel, concrete, masonry; structural testing - set-ups, loading devices, sensing devices.

2)

- **ARCHITECTURAL ACOUSTICS AND LIGHTING SYSTEMS** (Integrated course) 4 CFU

Room acoustics. Acoustical design of spaces for music, drama, conferences. Systems and materials for sound absorption and sound insulation. Noise control design in urban planning. Architectural design of artificial lighting systems.

OTHERWISE

- **MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS** (Mono-disciplinary course) 4 CFU

Design processes, equipments and building organization for Heating, Ventilating and Air Conditioning (HVAC), Water and waste, Electrical and Fire protection systems.

What and Why

Professional knowledge and working attitudes given to architecture student from construction teachings are turned to training for a graduate able to:

- handle complexity of technological transformations to building and settlement scale;
- know and to be able to use innovative technologies in the field of materials, building systems and components in structural ground and in the one of energy saving;
- integrate in architecture project the growing complexity of the aspects related to technical equipments (including the ones turned to energy saving) and of the ones concerning technical, constructive and structural systems;
- organize and coordinate multiple specialized competences from the structural and plant-engineering to the legislative and evaluative ones, to check different phases of the building process;
- use informatics both in the fields concerning project analysis & elaboration and building product management.

How

Teaching methods adopted by the professor in the construction sector are articulated in:

- frontal lectures;
- ex tempore, tests and questionnaires in the classroom to verify learning of topics blocks previously illustrated during frontal lectures;
- intermediate controls of the working procedure with attribution of credits, by assessment and discussion on the papers in the classroom;
- synthesis experiences mainly with analysis and design features, in-house with periodical revisions;
- workshops, one day long or more in a row, during which approach methods to building problems and maturation levels reached are checked;
- preparation for synthetic texts on discussion topics in the different subjects proposed by the teaching;
- design works in progress done in the classroom, integrated from the contribution of correlated subjects with methodological seminars.

Teaching supports used are the traditional ones such as: essays, handbooks, sector specialized magazines, teaching lecture notes, multimedia tools, conducted tours, study trips.

Who

In the Faculty of Architecture of the Second University of Studies of Naples construction subjects are taught by architects and engineers in equal proportion. After a starting period in which the School has used the contribution of external professors and supply teachers coming from others Italian faculties, at the moment courses are held by full professors, associate professors and researchers, specialist in different sectors of disciplines.

Professors' background reveals a training done mainly inside the University, through PhD courses, Masters, post-graduate courses in Italy and abroad, on top of an experience of professional practice that guarantees the

knowledge of practical and working problems connected to project realization.

In addition teaching avails itself of the mature contributions of the research, transferred and validated in training experience.

See the Studies Planning

When and to What Extent


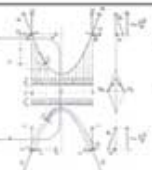


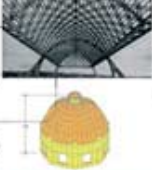
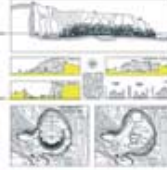
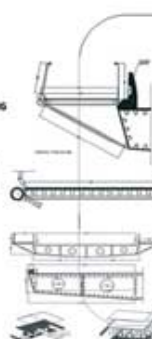

With the advent of more and more complex systems, the modern architect finds himself/herself more in the position of managing a team of specialists than of designing entire building by himself/herself. He/she needs to communicate and coordinate with the consultants of the many disciplines. He/she must deal with materials, structural, mechanical, electrical, fire protection, acoustical, lighting, water problems, finding the final and most efficient solution, designing the important details. For this task he/she needs to know the environmental requirements, the right terminology, the physical principles, the functions of the various systems and how they interact with the other building components. He/she also needs to be able to handle any problem during initial design and design development, sizing all the functional components of the building. Construction teaching has the mission of transfer this knowledge and these abilities gradually during the training of the architecture's student.

Virtual Reforms

ENHSA WORK-TEAM: prof. arch. M. Isabella AMIRANTE (Coordinator), prof. arch. L. MAFFEI, prof. ing. M. CONTALDO, prof. ing. G. FRUNZIO, prof. arch. S. RINALDI, dott. arch. R. VALENTE, dott. arch. C. SANNINI

CONSTRUCTION PROFESSORS: (Full professor) arch. M. Isabella AMIRANTE, ing. L. MAFFEI; (Associated) ing. M. CANNAVIELLO, ing. M. CONTALDO, ing. G. FAELLA, ing. G. FRUNZIO, ing. G. IANNACE, arch. M. MAROCCO, arch. F. MUZZILLO, arch. S. RINALDI; (Researchers) arch. A. BOSCO, ing. R. FRANCHINO, arch. G. GAZZILLO, arch. R. VALENTE; (External professors) ing. M. MONACO, arch. C. CENNAMO.

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<p>first</p>	<p>TECHNOLOGY OF ARCHITECTURE (Integrated course) 4 CUF</p> <p>Knowledge of Building Technology 3 CUF +</p> <p>Materials and Design of Building Components 3 CUF</p> <p>Analysis and knowledge of materials and elements of the construction. Acquisition of the basic knowledge to understand the components of the elements of construction building context.</p> 	<p>HISTORY OF ARCHITECTURE (Integrated course) 8 CUF</p> <p>Medieval History 3 CUF +</p> <p>Modern History 3 CUF</p>	
<p>second</p>	<p>STATICS (Interdisciplinary course) 8 CUF</p> <p>Application of mechanics to the study of static equilibrium of rigid and elastic bodies. Topics include construction and resolution of forces, moments and reaction, equivalent force systems, free-body diagrams, equilibrium of particles and rigid bodies, forces in trusses and beams, first and second moments of area, moments and product of inertia.</p> 	<p>CONSTRUCTION 1 (Design Lab.) 12 CUF</p> <p>Design of Construction Systems 8 CUF +</p> <p>Computer Science 4 CUF</p> <p>Application of building systems of architecture referring to a design representation aimed through control of sustainability and workability of the project. Competence in recognizing quality of architectural work in its technical and formal acts.</p> 	<p>CONTEMPORARY HISTORY (Interdisciplinary course) 8 CUF</p>
<p>third</p>	<p>STRUCTURAL MECHANICS AND STRENGTH OF MATERIALS (Interdisciplinary course) 8 CUF</p> <p>Development of the ability to formulate and solve structural problems. Topics include knowledge to investigate the response of deformable solids; understanding of the concepts of stress and strain; stiffness and flexibility methods; regularity and compatibility; Virtual work and total potential energy; response of truss structures to static loads; verification and interpretation of structure responses.</p> 	<p>HISTORY OF ART AND ARCHITECTURE (Integrated course) 8 CUF</p> <p>History of Architecture Criticism and Literature 4 CUF +</p> <p>Institute of Art History 4 CUF</p>	<p>PRESERVATION OF ARCHITECTURE (Integrated course) 8 CUF</p> <p>Administrative Law 4 CUF +</p> <p>Cultural Heritage Legislation 4 CUF</p>
<p>fourth</p>	<p>STRUCTURAL ANALYSIS AND DESIGN (Design Lab.) 12 CUF</p> <p>Design of rc, and pcc, structures 8 CUF</p> <p>Analysis and design of reinforced concrete and pre-stressed concrete structures. Design of beams and columns for flexion, shear, axial load, torsion, and exchange design of reinforced concrete frame structures for gravity and lateral loads; applications to the construction of buildings.</p> <p>Constitution of Mataro Building 2 CUF +</p> <p>Design of Structural Systems 2 CUF</p> <p>Understanding of current practice for analysis and design of structures of masonry; methods of analysis for linear structures; direct stiffness assembly procedure for structural analysis; design of moment-resisting frames.</p> 	<p>ENVIRONMENTAL SYSTEMS DESIGN (Integrated course) 8 CUF</p> <p>Public Hygiene of Buildings and of the Environment 4 CUF +</p> <p>Environmental Design 4 CUF</p> <p>Knowledge of technologies to improve quality of the indoor and outdoor environment; methodology of approach to project with application of sustainable technologies for a correct relationship between human and natural process.</p> 	
<p>fifth</p>	<p>DESIGN (Final Design Lab.) 12 CUF</p> <p>HISTORY (Final Design Lab.) 12 CUF</p> <p>RESTORATION (Final Design Lab.) 12 CUF</p> <p>URBAN PLANNING (Final Design Lab.) 12 CUF</p> <p>TECHNOLOGY (Final Design Lab.) 12 CUF</p> <p>Design according to environmental sustainability criteria with attention to the condition of least transmittance, ventilation, and to landscape features, show the use of incompatible technological systems.</p> <p>DESIGN OF STEEL STRUCTURES (Interdisciplinary course) 4 CUF</p> <p>Behavior and design of steel structural members and connections. Topics include tension members, compression members, beams and beam-columns, trapezoid shear and moment connections, welded and bolted. Behavior and characteristics of steel structural systems. A team project is assigned to conduct the design of a steel building structure.</p> <p>TESTING ASSESSMENT AND MONITORING OF CONSTRUCTIONS (Interdisciplinary course) 4 CUF</p> <p>Experimental behaviour of materials and structures. Topics include introduction to experimental methods, test planning, model preparation, loading of systems, instrumentation, data acquisition and data processing; non-destructive methods; materials testing - steel, concrete, masonry; structural testing - set-ups, loading devices, sensing devices.</p> 	<p>URBAN HISTORY (Integrated course) 8 CUF</p> <p>Urban Planning History 4 CUF +</p> <p>The Evolution of Towns and Settlements 4 CUF</p> <p>LANDSCAPE AND GARDEN HISTORY (Interdisciplinary course) 4 CUF</p> 	



Second University of Naples / Italy Faculty of Architecture Luigi Vanvitelli



SUN

WHAT AND WHY

What is the context of construction building in your field and what are the relationships between the site and the user?

Performance, technology and working conditions in an urban environment from sustainable design and design to building in a green city.

- basic concepts of technological transformations in building and settlement sites;
- able and able to use innovative technologies in the field of historical, restoration building projects and interventions in urban planning in the field of programming;
- integrate in urban planning the growing complexity of the specific subject to technical requirements, including the area linked to energy saving and of the area concerning technical, constructive and structural systems;
- integrate and coordinate multiple operational components from the structure and plant engineering to the legislative and economic ones; (prior attention to the building process);
- able information for project analysis and evaluation and building project management.

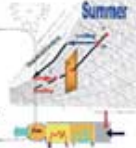
HOW

What are the educational methods for the development of learning methods related to architectural design?


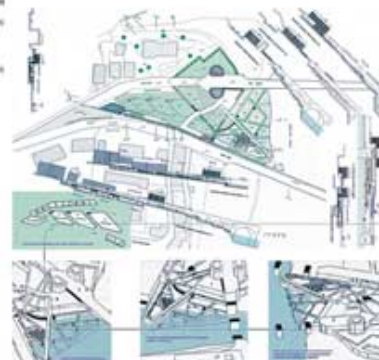
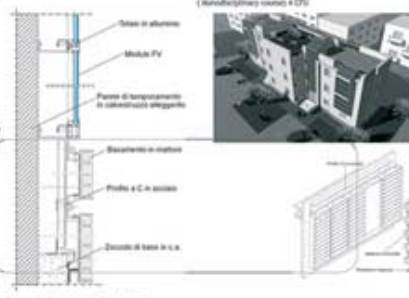
- formal lectures;
- seminars, visits and site visits; practical exercises;
- laboratory work and the practical application of the theoretical concepts;
- workshops, site visits and building experimentation;
- presentation of projects; presentation of the design process; design works in progress; construction of projects;
- learning history and site visits; theoretical seminars, research activities.

<p>ARCHITECTURAL DESIGN 1 (Design Lab.) 12 CFU</p> <p>Architectural Design 6 CFU +</p> <p>History of Architectural Design Techniques 2 CFU +</p> <p>Restoration techniques 2 CFU +</p>	<p>INSTITUTES OF ARCHT (Manufactory courses) 8 CFU</p>	<p>THERMODYNAMICS AND HEAT TRANSFER (Manufactory course) 4 CFU</p> <p>Basic concepts and applications of balance of mass and energy, of thermodynamics, properties of simple substances, of psychrometrics, of mechanisms of heat transfer.</p>  $Q = \frac{A \cdot \Delta T}{R_{tot}}$ $R_{tot} = \frac{1}{h_{ext}} + \frac{e}{\lambda} + \frac{1}{h_{int}}$	<p>DRAWING (Manufactory course) 4 CFU</p>	<p>10</p>
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<p>ARCHITECTURAL DESIGN 2 (Design Lab.) 12 CFU</p> <p>Architectural Design 6 CFU +</p> <p>Building Construction 2 CFU + Integrative in the project of architecture of the creative and constructive aspects.</p> <p>History and Types of building architecture 2 CFU +</p> 	<p>GENERAL ARCHT (Manufactory course) 8 CFU</p>	<p>TOWNS AND TERRITORY ANALYSIS (Manufactory course) 8 CFU</p>	<p>DESCRIPTIVE GEOMETRY (Manufactory course) 8 CFU</p>	<p>22</p>
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<p>ARCHITECTURAL DESIGN 3 (Design Lab.) 12 CFU</p> <p>Architectural Design and Urban Design 8 CFU +</p> <p>Morphological and Topological Building Analysis 4 CFU</p>	<p>URBAN PLANNING (Design Lab.) 12 CFU</p> <p>Urban Planning Techniques 8 CFU +</p> <p>Evaluation and Environmental Economy 2 CFU +</p> <p>Environmental Analysis and Urbanism 2 CFU</p>	<p>BUILDING ENVIRONMENTAL CONTROL (Manufactory course) 8 CFU</p> <p>Systems for energy conservation, thermal control, active and passive methods, behaviour of building envelope to steady and transient thermal and humidity conditions. Architectural control: mass propagation, sound quality, solar control, Visual comfort, light, colour, illumination levels, air quality control, Design strategies.</p> 	<p>THEORY AND HISTORY OF RESTORATION (Manufactory course) 8 CFU</p>	<p>SURVEY (Manufactory course) 8 CFU</p> <p>16</p>
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<p>ARCHITECTURAL DESIGN 4 (Design Lab.) 12 CFU</p> <p>Architectural Design 3 CFU +</p> <p>Working Design 2 CFU Integrative in the project of construction related to working definition of architectural solutions.</p> <p>Applied Structural Design CFU + Development of the ability to draw and detail components of reinforced concrete and steel buildings; use of concrete and steel in combination; technical requirements; types of concrete and construction methods used for building structures.</p> 	<p>ENVIRONMENTAL ECONOMY (Manufactory course) 4 CFU</p>	<p>DESIGN OF URBAN INFRASTRUCTURES (Manufactory course) 8 CFU</p>	<p>INDUSTRIAL DESIGN (Integrated course) 8 CFU</p> <p>Industrial Design 4 CFU +</p> <p>Product design 4 CFU</p>	<p>RESTORATION (Design Lab.) 12 CFU Restoration 8 CFU +</p> <p>Benefits of Monuments and Historic Buildings 2 CFU + Structural analysis and synthesis of historical buildings, introduction to heritage conservation, history and philosophy of historic preservation, basic concepts, guidelines, methods and techniques currently used to preserve cultural heritage, urban, historic and landscape architecture, techniques in waterproofing waterproofing.</p>  <p>26</p>
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<p>EVALUATION AND PROFESSIONAL PRACTICE (Manufactory course) 8CFU</p> 	<p>THEORY OF DECISION MAKING (Manufactory course) 2 CFU</p> <p>MATHEMATICS FOR SOCIAL SCIENCE (Manufactory course) 2 CFU</p>	<p>MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS (Manufactory course) 4 CFU</p> <p>Design processes, equipment and building organization for heating, ventilating and air conditioning (HVAC), noise and vibration, fire and life protection systems.</p> 	<p>ARCHITECTURAL ACOUSTICS AND LIGHTING SYSTEMS (Integrated course) 4 CFU</p> <p>Basic scientific, acoustical design of spaces for music, drama, conferences. Systems and materials for sound absorption and sound insulation. Water control design in urban planning. Architectural design of artificial lighting systems.</p>	<p>VISUAL PERCEPTION AND COMMUNICATION (Manufactory course) 4 CFU</p> <p>ENVIRONMENTAL AND URBAN SURVEY (Manufactory course) 4 CFU</p>  <p>20</p>
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Ittelli / Aversa (CE)

DE PROFESSORI: (Researcher)
PH
Prof. Antonio

DESSA NORA TEAM: (Coordinator)
prof. arch. M. Isabella SERRANTE

PROFESSORI: (External professors)
ing. M. MONACO
prof. arch. C. CERIANO

PROFESSORI: (Researcher)
ing. F. FRANCONI
arch. G. CASTELLO
prof. arch. L. RAVETI
prof. ing. R. CONTALDO
prof. ing. G. FRANGO
prof. arch. S. RINALDI
doc. arch. S. VALZITE
doc. arch. C. SABBINI

The degree course in Architecture has been set up in 1996 with the current curriculum; according to EEC directive 85/384. It grants the qualification of Doctor in Architecture, necessary to become an architect.

The graduated are able to plan realization and transformation processes of physical context with full knowledge of the formal, distributive, functional, structural, technical, constructive, managerial, economical and environmental aspects. They can read works projects and organize their final realization. If necessary, they are able to organize other specialists in the fields of architecture, engineering, urban planning and architectural restoration. The duration of the course is five years (total 300 credits) and it foresees the completion in three periods (108+140+52 credits) oriented respectively:

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THIRD PERIOD to study completion, eventually with training activities based on

stages and apprenticeship, for the final degree exam. (38 CFU for the fifth year and 14 CFU for the stage).

Teaching activity is organized in monodisciplinary courses, integrated courses (carried out by two professors of the same discipline or different disciplines) and design laboratories for the development of theoretical and practical activities purposive to project. The final synthesis design laboratory includes the mature and complete preparation of a project, managed with the contribution of many disciplines.

<p>WHY When the goal function of your design is to be realized?</p> <p>When the goal function of your design is to be realized? In the Faculty of Architecture of the second university of Naples construction subjects are treated by architects and engineers in close cooperation with a teaching staff in which the authors use the contribution of various professors and experts teachers, coming from other Italian faculties, at the national and international level to face problems, research problems and research opportunities in different sectors.</p> <p>Partnership between research and teaching makes the University through Professors, teachers, and graduate students, to face and answer. There is an experience of professional practice that guarantees the knowledge of practice and working environment through their research.</p> <p>In addition, teaching areas have of the nature structures of the research, results and are included in ongoing research.</p> 	<p>WHEN AND TO WHAT EXTEND Design and teaching areas of construction in your School. Specify the extent of the teaching activities.</p> 	<p>VIRTUAL REFORMS When is your School's virtual environment teaching of construction?</p> <p>With the advent of new and more complex systems, the most pertinent tool virtual reality in the position of managing a team of designers that of designing virtual building through. It needs to communicate and coordinate with the requirements of many disciplines. It must deal with materials, structural, mechanical, electrical, the production, acoustics, lighting, water protection, heating the fire and most affected urban, designing the urban fabric, the historical, to be able to know the environmental requirements, the right technology, the precise principles, the functions of the urban systems and how they interact with the other building components. It also needs to be able to handle any problem during virtual design and design development and along all building functional elements. Communication teaching has the mission of transferring knowledge and new learning gradually during the course of the professional studies.</p> 
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