



Dipartimento di Architettura e Territorio – dArTe

Corso di Studio in Architettura quinquennale – Classe LM-4

Degree course	Magistral Single-Cycle "Architecture"
Course code	64NL4
Lecturer	Renato Laganà
Course name	Design and Organization of the construction site safety
Disciplinary area	B
Disciplinary field of science	ICAR 11
University credits - ECTS	6 ECTS
Teaching hours	60
Course year	fourth year
Semester	second semester

Synthetic description and specific course objectives

The application of the European directives on health and safety in the workplace, which in Italy led to the drafting of the Consolidated Safety and Health Law (Legislative Decree 81/2008 as amended), placed at the center of the architect knowledge related to the building production and the construction site organization. The new legal context has created two specific new types of designers: the Design Safety Coordinator and the Execution Safety Coordinator. To these professional must be added the activities of engineers and construction managers that assume specific safety and health responsibility, in the projects drafting and in monitoring the work implementation, as regulated in the Procurement Code (Legislative Decree 163 / 2006, as amended, and implementing regulations - Presidential Decree no. 207/2010 as amended by Decree 13.05.2011, 70).

Starting from the general definition of safety in architectural design activity and the specific requirement - performance indications, the course develops some arguments set out in Annex XIV of the aforementioned Dlvo 81/2008 and subsequent amendments relating to the design and organization of the construction sites within the scheduled hours for lectures and educational tests.

Course entry requirements

To follow the course, the student must have an understanding of the basic principles of specifications designed to meet the complexity of the building process, its organization and management in the operational phase.

Course programme

The course, lasting six months (6 credits), is organized into two parts: the first, preparatory, we analyze the legal aspects - regulatory and risk analysis in manufacturing and in the second phase are treated the instruments of planning and programming safety in relation to the project documents to be produced for the safe management of the construction site.

Each phase is divided into a series of lectures that provide a path of "cascade". knowledge
Part 1 - Legal aspects and regulatory risk analysis

- The basic legislation for work safety and health ; contract law rules concerning the aspects of safety and health at work legislation on insurance against accidents at work and occupational diseases.

- European standards and their value, the standards of good practice, the directives of the product;

- The Act on Health and Safety in the workplace with particular reference to Title I. The parties in the System of Prevention Company: tasks, obligations, civil and criminal liability.

Methodologies for the identification, analysis and risk assessment.

- The specific legislation on Health and Safety at temporary or mobile work and in share. Title IV of the Act relating to Health and Safety in the workplace.

- Risk of falling from heights. Scaffolding and temporary works;

- The electrical risk and protection against lightning;

- The risk in the excavations, in demolition, in underground works and tunnels;
 - The risks associated with the use of machinery and work equipment with particular reference to equipment in lifting and carrying;
 - Physical hazards: noise, vibration, microclimate, lighting;
 - The risks related to the rehabilitation of asbestos;
 - The biological risk;
 - The risks associated with manual handling of loads;
 - The risks of fire and explosion;
 - The risks for assembly and disassembly of prefabricated elements;
 - The personal protective equipment and safety signs.
- Part 2 - The planning and programming of safety on site.
- Safety organization in the shipyard. The schedule of works;
 - The documentation requirements by clients, businesses, safety coordinators;
 - The methodological criteria for:
 - a) the development of the safety plan and coordination and integration with the operational Safety Plans and the Safety File;
 - b) the elaboration of operational Safety Plan;
 - c) the preparation of the dossier;
 - d) the establishment of P.I.M.U.S. (Plan of Installation, Operation, Disassembly) of scaffolding;
 - e) the estimated safety costs.

Expected results

The knowledge gained helps to activate and strengthen the student's ability to act taking into account the safety aspects in the planning stages and keep in mind the evolution of production processes that take place in the construction site.

Course structure and teaching

Lectures: 48 hours of lectures
 Practical class: 10 esercitative
 Practical / Workshops: 2 visits construction sites

Student's independent work

In addition to the study, the student is required to identify independently the "case study" for which he will find all the information you need - either directly or on the web or in the library - to be transferred to an elaborate agreed with the teacher.

Testing and exams

The course includes the development of a training exercise on a case study related to the main themes of the discipline, the discussion of which form an integral part of the oral examination of profit. It also provides a test of mid-term evaluation which will focus on the first part of the program and the evaluation of which will be considered in the outcome of the final oral examination.

The final exam will also focus on the verification of the case study and about the topics discussed in the lectures in reference texts listed below and to the materials provided by the teacher.

Suggested reading materials

Bibliography

Gottfried A. (1992), *Ergonomics Building. Applications of methods and tools*, Aesculapius., Bologna.
 Rota G.L., Rusconi G. (2008), *The Codes Technical: Security & Shipyards*, Professional UTET.
 Various Authors (2011)., *Designing and managing safety on construction sites*, UTET / Wolters Kluwer ed. S.r.l Italy, Milan.
 Laganà R.G. (2011), *The management of site safety*, Falzea ed., Reggio Calabria.
 Laganà R.G. (2011), *Innovative aspects of safety in construction*, Falzea ed., Reggio Calabria

Sitography reference
www.lavoro.gov.it - www.inail.it - / / osha.europa.eu / en - www.edilportale.it

Other Teaching Materials
Handouts produced by the teacher.