

# INTERNATIONAL TELEMATIC UNIVERSITY UNINETTUNO

L'Università senza confini.  
University without boundaries.

[www.uninettunouniversity.net](http://www.uninettunouniversity.net)



## FACULTY OF ENGINEERING

# Degree Course in Civil and Environmental Engineering

## The Degree Course

The Faculty of Engineering of the International Telematic University UNINETTUNO is the outcome of the meeting between the winning model of distance teaching of which this university has been a pioneer worldwide and the consolidated training experience in the field of applied technologies. More specifically, the degree course in Civil and Environmental Engineering is extremely innovative, based on an interdisciplinary model complying with international standards and outdoes the traditional academic approach based on the separation among different fields of knowledge. The proposed model deals with the dynamics of the constructions sector and their impact on the environment. The graduate in Civil and Environmental Engineering possesses basic knowledge of mathematics, general and applied physics, of materials and of the structures used for civil constructions, of electrotechnics and plants, of graphical representation and land survey, public works and environmental laws, hydraulics, economics and property estimate. In addition, he has a working knowledge of the main basic disciplines and of some applicative disciplines related to civil and environmental engineering. The cultural and professional profile of the graduate in Civil and Environmental Engineering is therefore that of technician having an suitable cultural background and a good basic training and knowledge of the most important disciplines characterising the sector of the civil constructions and land management measures, paying particular attention to environmental questions that allow him to plan land management measures, to manage civil plants and design simple public works. By means of the videlessons of the most important international scientists, supplemented by multimedia educational materials, exercises, virtual classrooms and other tools of analysis, more-in-depth study and assessment, along their study path, the students of the degree course in Civil and Environmental Engineering are constantly supported by tutors, researchers and area professors in a continuous and stimulating confrontation based on interactivity.

## Three-year Study Programme

### I Year

- Calculus and Linear Algebra
- Mathematical methods for Engineering
- Basics of Computer Science
- Physics
- Chemical Basics of Technologies
- Technical English
- Technical Design and Architecture

### II Year

- Economics and Business Management
- Energy Plants for Constructions
- Construction Science
- Statics and Dynamics of Mechanic Systems
- Medical and Environmental Engineering
- Hydraulics and Hydraulic Constructions
- Property Estimate

### III Year

- Geology, geodesy and geo-technics
- Construction techniques
- Roads and infrastructure Constructions
- Security and Building Sites
- City Planning and Sustainability
- 2 Subjects at free choice
- Final Exam

## How to study

The psycho-pedagogic and didactic model, born from the results achieved by several international research projects, was realised by Prof. M. A. Garito and by her research team.

This model is based on cognitive and connectionist theories and concretises the shift:

- From teacher's central role to the student's central role;
- From knowledge transfer to knowledge creation;
- From integration between practice and theory from a passive and competitive learning to active and collaborative learning.

The student is at the centre of the training path, guided by the new profile of the telematic professor-tutor who has the task of supplying the tools that can facilitate his web-based learning and communication path.

The whole teaching and learning process takes place on the Internet. On the www.uninettunouniversity.net portal there is a dedicated area: The Didactic Cyberspace, where teaching and learning are performed in four languages: Arabic, English, French and Italian. The Internet-based transfers directly to the student's desk lessons, multimedia products, databases, exercises, evaluation and self-evaluation systems, online tutoring, forums, chats and thematic wikis.

### ▪ Videoleasons:

The digitised videoleasons are the starting-point of the learning process. Each video lesson is structured on different issues and indexed in order to give the student the possibility to follow the entire videolesson or to select the issue he wished to study more in depth. Each issue is linked, in an hypertextual way, to essays, books, texts of exercises, virtual laboratories, selected bibliographies, lists of websites (links of interest for the subject, selected by professors and tutors).

### ▪ Virtual laboratory:

It is a environment in which the student integrates theory with practice by a "learning by doing" process.

### ▪ Online Exercises:

This section includes online interactive exercises linked to the issues treated in the videoleasons.

### ▪ Online tutoring/virtual classroom:

Online tutoring is organized in classes of 20 or 30 students, with an advanced system of Agenda that is able to acknowledge the single user and customise the training activity. An advanced system of qualitative and quantitative tracking makes it possible to continuously monitor the learning process of each single student.

The tutoring activities take place:

- In a synchronic mode by means of chats, video-chats, video and audio-conferencing systems, that are implemented in the Didactic Cyberspace, but also in the three-dimension classroom set up on UTIU Island of Knowledge on Second Life.
- In a diachronic way by means of forums, wikis and social networks.

The virtual classroom is an environment where direct interaction between teachers, tutors and students takes place, where knowledge is shared. The virtual classroom interactive practice exercises, mid-term assessment tests take place; dialogue and learning take place in a cooperative a collaborative way.



Bernardino Chiaia delivers a lecture for the UTIU

## How to enrol

Enrolments can be made only on the Internet, in the area devoted to the Administrative Secretariat of the portal www.uninettunouniversity.net. Payments can be made online by credit card or bank transfer or postal service.

**For information and training support**

**Toll - Free Number 800 333 647**

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