QANTUS Tempus project Genoa 25th - 26th May



Italian HE Education System and Environment related Teaching Offer at University of Genoa

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Reference to the Bologna process

Berlin Communiqué of the Conference of Ministers, September 2003

From a staff centred approach to a student oriented approach

Reference to the Bologna process

 Action lines and tools of Bologna Process: three cycle system, ECTS, competences, learning outcomes, *Qualifications* Framework for EHEA, Quality Assurance etc.

"Ministers encourage the MSs to elaborate a framework of comparable and compatible qualifications for their HE systems, which should seek to describe qualifications in terms of workload, level, learning outcomes, competences and profile. They also undertake to elaborate an overarching framework of qualifications for the EHEA. Within such frameworks, degrees should have different defined outcomes. First and second cycle degrees should have different orientations and various profiles in order to accommodate a diversity of individual, academic and labour market needs. First cycle degrees should give access, ..., to second cycle programmes. Second cycle degrees should give access to doctoral studies".

Reference to the Bologna process

"Old-Style Approach" - Staff centered design

Resources already available

Tradition

Interests of the Academic Staff

Existing
Organization of
Studies

"New Approach after Bologna" - Student centered design

Fit for purpose

Change of Paradigm

Learning Outcomes

Organization related to the expected results

Qualification Framework: motivations

Understand and Compare

Qualifications Framework for the European Higher Education Area is aimed at facilitating the correct understanding and comparability of qualifications in the Higher Education systems of each country.

Overview of EU teaching offer

A further aim of the Framework is to offer a comprehensive overview of the European teaching and learning offer, targeted at the students coming from all over the world.

Common Rules Each country committed to put together a National Qualifications Framework - NQF which is compatible with the Qualifications Framework for the European Higher Education Area.

Qualification Framework: Italian view

Information

It is a tool, which describes the qualifications awarded by the Italian Higher Education institutions, in terms of expected competences and learning outcomes.

Comprehensive

It is modelled on The Qualifications Framework for the European Higher Education Area - QF for EHEA.

Transparent

Make the Italian Higher Education system more transparent and understandable

To enhance students mobility

Enhance international mobility of Italian students and graduates and facilitate their access to advanced-level studies

To facilitate employers understanding

Facilitate employers' understanding and appraisal of the qualifications awarded by Italian Higher Education Institutions

Italian HE cycles

First Cycle

Laurea

AIMS

To provide undergraduates with adequate knowledge of general scientific principles, mastery of related methods, and specific professional skills.

DURATION: 3 years WORKLOAD: 180 ECTS (1 credit: 25 hours of work)

Second Cycle

Laurea Magistrale / Specialistica

To provide graduates with advanced education for highly qualified professions in specific sectors, as well as with adequate training for advanced independent research.

DURATION: 2 years WORKLOAD: 120 ECTS (1 credit: 25 hrs)

Third Cycle

Dottorato di Ricerca To provide postgraduates with training for highly specialized research WORKLOAD: n.a. DURATION: min. 3 years

Sectorial Qualification Framework

At moment no SQF are available in Italy.

In order to carry out recognized professions (Professional Qualifications Framework) and to assume personal responsibilities, a State Exam is mandatory.

This test allows to be recorded into the Professional Charter ("Albo Professionale")

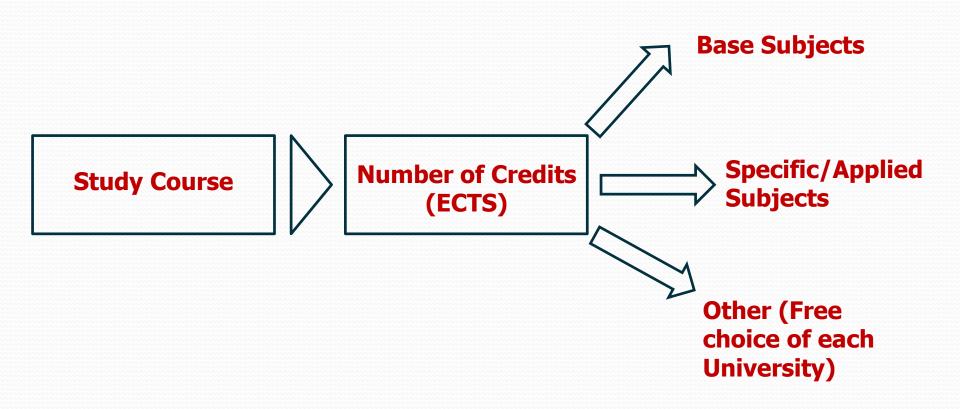
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Study course regulations in Italy 1/2

According to Specific the number of requirements credits in terms of defined for number of Study each credits for Course discipline, the each single SP is framed subject, as within a defined by category **Ministry** (Classe) guidelines A final draft of the **Study Course is** submitted to the Ministry for the check of the consistency of the requirements

Study course regulations in Italy 2/2



Learning Outcomes of the Study Classes

Classes in the Field of Engineering

Civil and Environmental Engineering

Industrial Engineering

Engineering of Information

For each of the classes the Italian Ministry of Education provides general learning outcomes and number of minimum amount of credits in the different disciplines

Learning Outcomes of the Study Classes

Civil and Environmental Engineering (L-7): learning outcome for the First Cycle of HE

The graduates in this class of study must:

- Know the methodological and operative aspects of mathematics and other base subjects, in order to interpret and describe the typical problems of engineering;
- Know the methodological and operative aspects of engineering subjects in general and in a deep way for those strictly related to their class, where they are able to identify the problems and to apply modern solution techniques
- Be able to apply techniques and instruments for the engineering design of components, systems and processes
- Be able to make experimental activity and to understand and analyze the results

- ...

Learning Outcomes of the Study Classes

Environmental Engineering (LM-35): learning outcome for the Second Cycle of HE

The graduates in this class of study must:

- Have a deep knowledge of the methodological and operative aspects of mathematics and other base subjects, in order to interpret and describe the typical problems of engineering;
- Have a deep knowledge of the methodological and operative aspects of engineering subjects in general and in a deep way for those strictly related to their class, where they are able to identify the problems and to apply modern solution techniques

- ...

Applied Subjects: Environmental Engineering

In order to design a study course in Environmental Engineering (e.g. second cycle), it must contain at least 45 ECTS of listed specific subjects.

Specific subjects must be balanced with fundamental subjects.

These are mandatory requirements in order to get the approval of the study course.

The process is the same for all the study courses of both first and second level of HE.

Attività	Ambiti	Settori scientifico-disciplinari	CFU	Tot.
formative:	disciplinari			CFU
Caratterizzanti	Ingegneria per	BIO/07 - Ecologia		45
	l'ambiente e	CHIM/12 - Chimica dell'ambiente e dei		
	territorio	beni culturali		
		GEO/02 - Geologia stratigrafica e		
		sedimentologica		
		GEO/03 - Geologia strutturale		
		GEO/05 - Geologia applicata		
		GEO/11 - Geofisica applicata		
		ICAR/01 - Idraulica		
		ICAR/02 - Costruzioni idrauliche e		
		marittime e idrologia		
		ICAR/03 - Ingegneria sanitaria -		
		ambientale		
		ICAR/05 - Trasporti		
		ICAR/06 - Topografia e cartografia		
		ICAR/07 - Geotecnica		
		ICAR/08 - Scienza delle costruzioni		
		ICAR/09 - Tecnica delle costruzioni		
		ICAR/20 - Tecnica e pianificazione		
		urbanistica		
		ING-IND/24 - Principi di ingegneria		
		chimica		
		ING-IND/25 - Impianti chimici		
		ING-IND/27 - Chimica industriale e		
		tecnologica		
		ING-IND/28 - Ingegneria e sicurezza degli		
		scavi		
		ING-IND/29 - Ingegneria delle materie		
		prime		
		ING-IND/30 - Idrocarburi e fluidi del		

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Teaching offer at University of Genoa

First Cycle

Bachelor in Environmental and Civil Engineering Bachelor in Environmental and Natural Sciences

Second Cycle

Master in Environmental and Civil Engineering

Master in Environmental and Energy Engineering

Master in Environmental and Natural Science

THANKS FOR YOUR ATTENTION!

MORE INFO ABOUT UNIVERSITY OF GENOA: http://www.unige.it/internationalstrategies/index.shtml <intstrat@unige.it>

