



POLITECNICO
DI MILANO



School of Civil, Environmental & Land Planning Engineering

*Outline of M.Sc. programme contents in
Environmental & Land Planning Engineering*

Stefano CERNUSCHI

Dean of Environmental & Land Planning engineering study council

- B.Sci. programme courses
 - Civil Engineering and Environmental & Land Planning Engineering at Milano Leonardo campus
 - Civil & Environmental Engineering at Lecco campus
- Master Sci. programme courses
 - Civil Engineering, **Environmental & Land Planning** and Geoinformatic Engineering at **Milano Leonardo campus**
 - Civil Engineering for Risk Mitigation at Lecco campus (fully in English)
- Students attendance
 - bachelor degree: nearly 500/year (50% civil eng. Milano , 40 % environmental eng. Milano, 10% env. & civil eng. at Lecco)
 - master degree: nearly 300/year (55% civil eng. Milano , 35% environmental eng. Milano, 10% env. & civil eng. at Lecco)





○ Programme course contents focused to the preparation of engineers with most of the multidisciplinary technical and scientific tools required for

- analysis of environmental phenomena
- design of technical and management interventions



main objectives of properly addressing the wide range of issues arising from

- interaction of man with nature
- interaction of man with the environment

within the general framework of sustainability and/or sustainable development

- Tracks available → requirements needed to address the inherent complexity of engineering problems covering protection, remediation and management of environmental and land resources
 1. Land protection and natural risks prevention
 2. Environmental monitoring and diagnostics
 3. Natural resources planning and management
 4. Environmental protection and remediation technologies
 5. **Environmental engineering for sustainability (full in english)**



ENVIRONMENTAL ENGINEERING FOR SUSTAINABILITY (english track)



addressing expected impacts and mitigation from natural hazards and human activities on the general environment



PROGRAMME CONTENTS

| 1st year | | Sem | CFU | | Professor |
|------------|---|-----|-----|--------------------|-----------------|
| MAT/07 | MATHEMATICAL PHYSICS | 1 | 8 | 16 (2 out of 4) | Vivarelli |
| ICAR/02 | WATER AND FOOD SECURITY | 1 | 8 | | Rulli |
| ICAR/02 | MARITIME ENGINEERING | | 8 | | Passoni |
| ICAR/20 | URBAN GOVERNANCE MODELLING | | 8 | | To be defined |
| ICAR/03 | WATER AND WASTEWATER TREATMENT TECHNOLOGIES | | 8 | | Canziani |
| CHIM/07 | INTRODUCTION TO GREEN AND SUSTAINABLE CHEMISTRY | | 1 | 8 | Citterio |
| ICAR/01 | GROUNDWATER HYDRAULICS | 2 | 10 | | Guadagnini/Riva |
| ING-INF/04 | MANAGEMENT OF NATURAL RESOURCES | 2 | 10 | | Castelletti |
| ICAR/09 | ENGINEERING SEISMOLOGY | 2 | 10 | | Paolucci |
| TOTAL | | | 62 | | |

| 2° year – Leonardo campus | | Sem | CFU | | Professor |
|---------------------------|---|-----|-----|-------------------|---------------|
| BIO/07 | ECOSYSTEMS CONSERVATION AND MANAGEMENT | 1 | 10 | 8 (1 out of 3) | Gatto |
| ICAR/03 | SOLID WASTE MANAGEMENT AND TREATMENT | 1 | 10 | | Grosso |
| ICAR/02 | WATER AND FOOD SECURITY | 1 | 8 | | Rulli |
| ICAR/02 | MARITIME ENGINEERING | 1 | 8 | | Passoni |
| ICAR/20 | MODELLING IN URBAN GOVERNANCE | 1 | 8 | | To be defined |
| ICAR/03 | WATER AND WASTEWATER TREATMENT TECHNOLOGIES | 1 | 8 | | Canziani |
| ING-IND/09 | POWER GENERATION SYSTEMS | 2 | 8 | | Binotti |
| Elective | Table E | 1/2 | 10 | | |
| TOTAL | | | 46 | | |

| 2° year – Piacenza/Leonardo Campus | | Sem | CFU | Professor |
|---|--|-----|-----|---------------|
| BIO/07 | INDUSTRIAL ECOLOGY | 1 | 8 | Gatto |
| ICAR/03 | AIR POLLUTION CONTROL ENGINEERING | 1 | 10 | Cernuschi |
| ICAR/03 + ING-IND/09 | BIO-WASTE and WASTE to ENERGY TECHNOLOGIES | 1 | 10 | Grosso/Viganò |
| ING-IND/09 | POWER GENERATION SYSTEMS | 2 | 8 | Binotti |
| Vari | Table E | 1/2 | 10 | |
| TOTAL | | | 46 | |

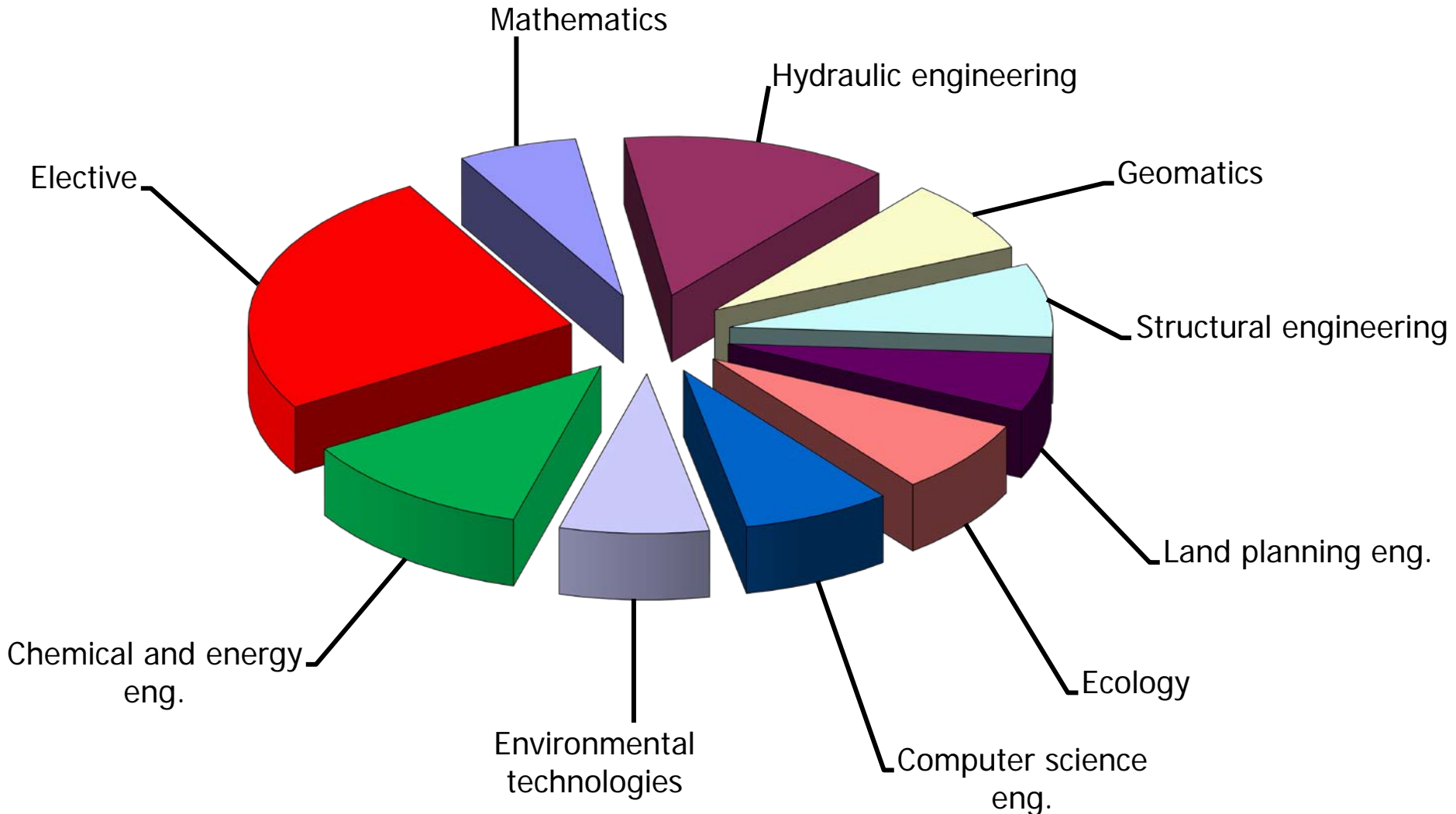
| Table E (elective courses) | | Sem | CFU | Professor |
|---|--|-----|-----|------------------|
| Env. Land Planning Engineering | | | | |
| ICAR/03 | SOIL REMEDIATION | 1 | 10 | Saponaro |
| ING-INF/04 | ADVANCED ENVIRONMENTAL SYSTEMS ANALYSIS | 1 | 10 | Guariso/Giuliani |
| ICAR/06 | PHOTOGRAMMETRY AND PHOTOINTERPRETATION | 1 | 10 | Reguzzoni |
| ICAR/07 | SLOPES STABILITY | 2 | 10 | di Prisco |
| GEO/11 | GEOPHYSICAL DATA PROCESSING | 1 | 10 | Zanzi |
| ICAR/20 | URBAN RENEWAL AND PLANNING | 2 | 10 | Fossa |
| Chemical Engineering | | | | |
| ING-IND/27 | PROCESSES FOR ENERGY AND ENVIRONMENT | 1 | 10 | Nova |
| ING-IND/22 | CHEMISTRY AND MATERIALS FOR ENERGY AND ENVIRONMENT | 2 | 10 | Dotelli/Gallo S. |
| Civil Engineering | | | | |
| ICAR/09 | BUILDINGS IN SEISMIC AREAS | 1+2 | 10 | Chesi |
| Safety and Prevention Engineering in the Process Industry | | | | |
| ING-IND/19 | RELIABILITY, SAFETY AND RISK ANALYSIS | 2 | 10 | Zio |



Polimi Web site

Study plan, courses,
professors, deadlines,
lecture schedules,
examinations,

Environmental engineering for sustainability - english track



- Cooperation and interaction with courses within
 - Civil and construction engineering
 - Energy engineering
 - Chemical process engineering
 - Architecture
 - Urban and land design and planning

- Main professional fields of interest
 - Natural resources and sustainability
 - Natural and anthropic risks
 - Environmental management & remediation technologies
 - Sustainable infrastructure development



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MILANO
LEONARDO
CAMPUS

ENVIRONMENTAL AND INFRASTRUCTURE ENGINEERING

PHD PROGRAMS



POLITECNICO
DI MILANO

MILANO
LEONARDO
CAMPUS

STRUCTURAL, SEISMIC AND GEOTECHNICAL ENGINEERING

PHD PROGRAMS



2016 QS World University Rankings [Engineering & Technology] -
field of Civil & Environmental Engineering

- PoliMi ranked ***17th World, 5th EU, 1st Italy***
- employer's reputation: ***14th in the World, 3rd in EU, 1st in Italy***

Technical advisory for study plan filling up & presentation
thursday 29th, Bovisa campus, building B7,
PC classroom CS.02