



STUDENTS EXCHANGE PROGRAM

LABORATORIES AND OPPORTUNITIES

Our departments participate in many student exchange programs both inside and outside the European Union. Within those programs, students can spend one or two semesters abroad attending courses at a foreign university and/or working toward the final thesis/project design in a research center, construction industry, consultancy or design office, public institution, etc. Several different scholarship opportunities are available to actuate these exchanges. Currently, the following destinations are available :

• Erasmus Student Mobility for Study (SMS)

Technische Universitaet Dresden (D) - Université de Liege (B) - Norges Teknisk-Naturvitenskapelige Universitet (N) - Universidad Rey Juan Carlos (E) - Un. Pol. de Madrid (E) - ETSII Es. Tec. Sup. de Ing. Ind. (E) - Universitat Politècnica de Catalunya ETSECPBB (E) - Universidade do Porto (P) - Un. Tecnica de Lisboa - Inst. Sup. Tecnico (P) - Universidade de Coimbra (P) - Universidade de Aveiro (P) - Universidade de Minho, Braga (P) - University of Maribor (P) - Meliksah University (T) - Poznan University of Technology (PL) - Gdansk University of Technology (PL) - Vilnius Gediminas Technical University (LT) - Lulea University of Technologies (S) - Brno University of Technology (CZ) - Czech Technical University in Prague (CZ) - Institute Nationale des Scinces Appliquées (F) - University of Malta (M) - University of Patras (G) - Aristotelió Panepistimio Thessalonikis (G) - Universitea Tehnica din Cluj-Napoca (RM) - University of Technology and Economics, Budapest (H)

• Erasmus Student Mobility for Traineeship

Italrom Ingiere Internationala srl, Bucarest (RM) - Univ. Ljubljani Inst. Za konstrukcije in protresno inzenirstvo (SL) - Laboratorio Nacional de Engenharia Civil, Lisboa (P) - Tun Abdul Razak Research Centre, Hertford (UK) - Luis Bozzo Estructuras y Proyectos, Barcelona (E) - ARUP, Birmingham (UK) - Cambridge Centre for Smart Infrastr. and Construction (UK) - A_squared Studio Consulting Engineers Ltd, Richmond (UK) - ICARUSS Ingenieurs Conseils Associés, Paris (F) - CH2M - London (UK)

• International Agreements with foreign University

University of California, Berkeley (USA) - Universidad Nacional de Cuyo, Mendoza (Argentina) - Indian Institute of Technolgy, Madras (India)

Several educational and research activities of the Master course are developed in the Laboratories of DIST (<http://dist.dip.unina.it/>) and DICEA (<http://dicea.dip.unina.it/>) Departments. The Laboratories are provided with very advanced equipment for both static and dynamic testing of materials and structures, including two 3x3 m shaking tables, each with a maximum payload of 200kN. Students may find there a very interesting and exciting place to improve their knowledge and abilities during the course and in the preparation of the final thesis.



Graduates of the Master program will be able to plan, design and supervise the construction and retrofitting of buildings, houses, industrial plants, bridges and other road/railway/infrastructures, water containment structures like dams and tanks, coastal and off-shore structures, etc. The arising demand for safety and protection against natural and man-induced risks is also the framework where the skills acquired in the Master program meet the continuously evolving needs of Civil Protection.

Main employers of Master's graduates are national and international construction companies, engineering and consultancy agencies, public authorities and research institutions. Self-employment and running one's own company or office is another possible field of activity of Master's graduates.



Department
of Structures
for Engineering
and Architecture

DIST

STRUCTURAL AND GEOTECHNICAL ENGINEERING (STReGA)

INTERNATIONAL MASTER COURSE

**ANALYZE, TEST, DESIGNING
SAFE AND SUSTAINABLE STRUCTURES
AND GEOTECHNICAL SYSTEM**

www.strega.unina.it

POLYTECHNIC SCHOOL OF BASIC SCIENCES

university of naples federico II



THE MASTER PROGRAM

The international graduate program in *Structural and Geotechnical Engineering* (Laurea Magistrale belonging to the class of 2nd level degrees LM-23 in Civil Engineering) is a two-years Master of Engineering course offered by the Department of Structures for Engineering and Architecture of the University of Naples Federico II. The program is open to students of any nationality with a good knowledge of English.

Aim of the program is to form experts in structural and geotechnical engineering, with a special attention to earthquake engineering, new structural materials, retrofit and upgrading of existing constructions (of historical/monumental interest also), innovative system of structural response control, new monitoring and diagnostic technologies, advanced technologies for foundation and excavation engineering, seismic geotechnical engineering and wind engineering. The program is intended to provide students, within a multi-cultural educational environment, firm technical bases as well as decision-making and leadership potential.

Program organization

All courses and activities are given in English.

The program duration is two years (4 semesters) and corresponds to the acquisition of 120 ECTS (European Credit Transfer System) credits. The first three semesters and partly the fourth semester are dedicated to the attendance of courses, each organized with in-class teaching, practice, design and laboratory activities. During the fourth semester a final Master thesis/design project is to be completed, usually in cooperation with Italian and foreign research centers, industries, construction companies, design and consultancy offices.

Admission Requirements

A Bachelor (3 or 4 years) degree in Civil/Architectural/Building/Environmental Engineering offered by a recognized Italian or foreign University is required for admission, as well as a sufficient knowledge of English as certified by a TOEFL/IELTS/Cambridge ESOL examination or other similar official language certifications. A Commission specifically appointed by the Council of Degree Course decides about admissions and if necessary indicates specific pre-requisite courses needed to be completed before admission.

Final exam

The final exam consists in the public defense of the Master thesis/design project before a Graduation Committee. The final grade given to the student is a combination of the average scores obtained in all the courses attended in the Master program and the score of his/her final exam.

Tuition fees and Scholarships

Tuition fees are those normally required for the two-years Master of Engineering courses offered by the University of Naples Federico II. For foreign students only, scholarships and tuition fee waivers are available. Every year, Italian Ministry of Foreign Affairs launches a call to offer scholarships to foreign students who want to study in Italy. Generally, candidatures deadline is March 31st, so interested students are invited to visit http://www.esteri.it/MAE/EN/Ministero/Servizi/Stranieri/Opportunita/BorseStudio_stranieri.htm.

CONTACTS

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ACADEMIC CALENDAR & MASTER COURSES

Deadline for application: END OF MAY
Response on admission and scholarship: END OF JULY
Registration: END OF OCTOBER
Fall semester: END OF SEPTEMBER - MIDDLE OF DECEMBER
Exam period: MIDDLE OF DECEMBER - END OF FEBRUARY
Spring semester: END OF FEBRUARY - MIDDLE OF JUNE
Exam period: END OF JUNE - END OF SEPTEMBER

FIRST YEAR

ECTS credits

Fall semester

- | | |
|---|---|
| • Theory and design of steel constructions | 9 |
| • Earthquake engineering and structural control | 9 |
| • Innovative building materials | 9 |

Spring semester

- | | |
|--|---|
| • Foundation engineering | 9 |
| • Limit analysis of structures | 9 |
| • Advanced applied engineering mathematics | 9 |

SECOND YEAR

Fall semester

- | | |
|---|---|
| • Design and retrofit of r.c. constructions | 9 |
| • FEM in non-linear structural analysis | 9 |
| • Micromechanics of heterogeneous materials | 9 |

Spring semester

- | | |
|--------------------------------------|----|
| • Advanced metallic structures | 9 |
| • Tunnels and underground structures | 9 |
| • Internship | 9 |
| • Final exam | 12 |