Why ENROLLING ?

Because it is the only Master's degree program totally focused on Materials Engineering in the entire panorama of educational offer of the Central and Southern Italy*

Because the optimal number of students favors a direct interaction with professors, ensuring a lower than average time for graduation and a high level of satisfaction for the Master's degree program**

Because the variety of Materials categories in which it is possible to specialize allows you to customize your training, acquiring specific skills that can be easily exploited in competitive working contexts.

Because Materials Engineers are - and will increasingly be - indispensable not only in high-tech industries and research centers for the study and creation of advanced materials, but also in the present industrial context, in which the engineering of traditional materials is essential.

*Source: Universitaly (https://www.universitaly.it/)

** Data by AlmaLaurea (https://www.almalaurea.it/)

Info

sul Corso di Laurea
/about the Degree Course
www.scingmat.unina.it

sul Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale
/about the Department of Chemical, Materials and Production Engineering
www.dicmapi.unina.it

sulla Scuola Politecnica e delle Scienze di Base
/about the Scuola Politecnica e delle Scienze di Base
www.scuolapsb.it

sul Corso di Studi e sui requisiti di accesso
/ about the Course of Study and the access requirements
prof. Giovanni Filippone (Coordinatore didattico)
giovanni.filippone@unina.it

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UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
SCUOLA POLITECNICA E DELLE SCIENZE DI BASE

COLLEGIO DEGLI STUDI DI **INGEGNERIA**

MASTER'S DEGREE COURSE IN **INGEGNERIA DEI MATERIALI**

DI C Ma PI

Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale
Università degli Studi di Napoli Federico II

EDUCATIONAL TRAINING

The Master's degree course is divided into two years and aims to train industrial engineers with solid skills on the main classes of Materials, which are studied from the atomic to the industrial production scale. Particular attention is paid to the environmental sustainability of materials and related manufacturing processes.

PRIMO ANNO	CFU
Modelli e metodi numerici per l'Ingegneria	9
Termodinamica dei materiali	9
Metallurgia ed Elementi di Tecnologia dei Metalli	9
Scienza e Tecnologia dei Polimeri	12
Tecnologia dei Materiali Compositi	9
Tecnologia dei Materiali Ceramici	9

SECONDO ANNO	
Progettazione Molecolare dei Materiali	6
Corrosione e Protezione dei Materiali	9
Materiali per le Nanotecnologie	12
Materiali Multifasici	6
Altre conoscenze utili per l'inserimento nel mondo del lavoro	3
Attività formativa a scelta autonoma	12
Prova Finale	15

Master's degree course in

ITALIANO

SPECIALIZATION AREAS

The specialization areas are manifold. Students can choose among numerous exams suggested for the autonomous choice (6 CFUs each), which are classified in five thematic areas and are well distributed over the two semesters in order to facilitate their inclusion in the training path.

Alternatively, students can propose personalized study plans to deepen their knowledge in themes of specific interest.

Thematic areas

Materials & environment

- Environmental sustainability of organic materials
- Environmental sustainability of Inorganic Materials

Simulation
- Simulation of fluid dynamic behavior of materials
- Simulation of Structural Behavior of Materials

Functional materials
- Biomaterials
- Artificial organs and prostheses
- Materials and Technologies for Photovoltaics

Surfaces and Interfaces
- Advanced Laboratory for the Characterization of Nanomaterials and Nanostructures
- Surface Treatments of Materials
- Science and Technology of Surfaces and Interfaces

Mechanics of Materials
- Mechanics of Continuous Media
- Two-dimensional solids and Structural Applications
- Theory of Materials and Structures
- Mechanics of Complex Fluids

JOB OPPORTUNITIES

Graduates in Materials Engineering are typically employed in the mechanical, chemical, aeronautical, and aerospace industries, as well as in other sectors such as packaging, biomedical, agro-food, environmental, energy, construction and cultural heritage ones.

Other possible job opportunities are represented by laboratories and R&D centers of companies and public or private bodies, the private practice (possibility of joining the Register of Industrial Engineers) and teaching.

The versatility of the Master's Degree in Materials Engineering at the University of Naples Federico II is evidenced by a lower unemployment rate of our graduates one year after graduation (7.2% on average in the last five years) compared to graduates of the same Degree class (LM53) who have obtained the qualification at other Italian Universities (9.1%) and, more generally, with respect to all graduates of the "Engineering" area (9.5%).

*Source: AlmaLaurea (https://www.almalaurea.it/); idata represents the averages recorded over the last five years.

ACCESS REQUIREMENTS

Enrolment is allowed to all graduate students having minimum curricular requirements, mostly satisfied for students with a bachelor's degree in the Industrial Engineering area. For students lacking these requirements, curricular additions are foreseen by enrolling in single exam courses or personalized Study Plans.