



UNIVERSITÀ DEGLI STUDI DI NAPOLI  
**FEDERICO II**



**Politecnico  
di Torino**

## MSc Course in **Industrial Chemistry for Circular and Bio Economy**

**Industrial Chemistry** is the manufacturing art concerned with the transformation of matter into useful materials in useful amounts



**Circular and Bio Economy** is the sustainable, resource-efficient valorization of waste, residue and biomass in integrated multi-output production chains

# The study programme – YEAR I.I

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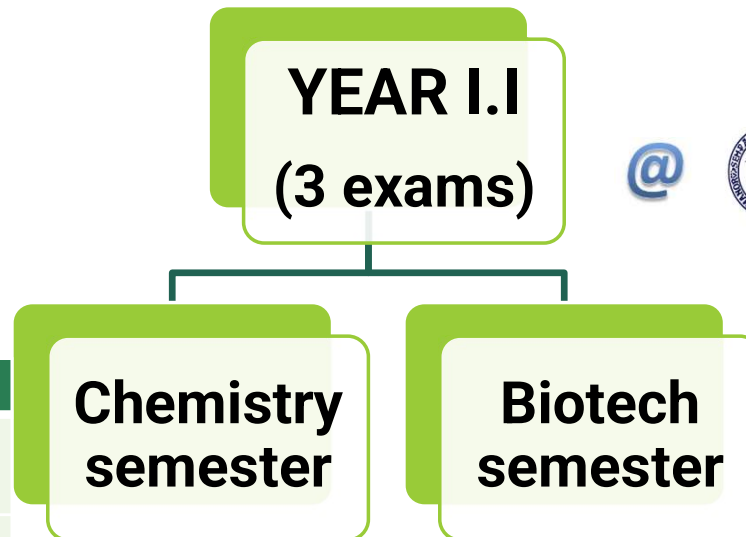
- ❑ Alignment courses are provided in a mixed mode (MOOC+FRONTAL).
- ❑ MOOCs will be provided on the **Federica Web Learning** platform -



 **Federica**  
**Web Learning**  
Università di Napoli Federico II

# The study programme – YEAR I.I

- Since the Course of Study is expected to enroll students with different cultural backgrounds, **two alignment paths** are provided to ensure the achievement of the specific objectives of the training path.



## YEAR I - SEMESTER I

Complements of Physical and Analytical Chemistry	CFU 11 (6+5)
Complements of Inorganic and Organic Chemistry	CFU 10 (5+5)
Circular Platforms for energy and materials Recovery	CFU 10 (5+5)

## YEAR I - SEMESTER I

Bioinorganic Chemistry and Industrial Enzymology	CFU 11 (6+5)
Complements of Microbiology and Biotechnology	CFU 10 (5+5)
Circular Platforms for energy and materials Recovery	CFU 10 (5+5)

# The study programme – YEAR I.II

**YEAR I.II**  
**(5 exams)**

## YEAR I - SEMESTER II

Industrial Chemistry	CFU 8
Polymers: production, recycle and characterization	CFU 6
Green Unit Operations	CFU 9
Industrial Biotechnology	CFU 7
Additional language skills (Italian) or further knowledge of computer science	CFU 3



# The study programme – YEAR II

**YEAR II  
(4 exams)**

## YEAR II - SEMESTER I

Green plants design	CFU 11
Industrial green simulation process	CFU 7
Elective course	CFU 6
Elective course	CFU 6



**or Challenge**

**Traineeship  
and Thesis**

## YEAR II - SEMESTER II

Traineeship	CFU 4
Thesis	CFU 22



# Traineeship

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- ❑ Internships/training stages at organizations or companies that have an agreement with the University.
- ❑ Main websites dedicated to traineeship:
  - ✓ Università di Napoli Federico II:  
<http://www.orientamento.unina.it/tirocini-per-iscritti/>
  - ✓ Career Service Office (POLITO):  
<https://careerservice.polito.it/studenti/tirocini>



# Thesis

Thesis can be done once students have acquired **60 CFU**.

