



BACHELOR'S DEGREE IN
CHEMICAL ENGINEERING FOR INNOVATION AND PROCESS SUSTAINABILITY
DEGREE PROGRAMME COORTE 2023/24

Course contents are available at this [link](#)

1st year

Sem	Teaching course	SSD*	TAF*	Credits	h
Common courses					
1	Mathematical Analysis 1	MAT/05	A	9	90
1	Chemistry 1	CHIM/07	A	9	90
2	Physics 1	FIS/01	A	8	80
2	Geometry and Algebra	MAT/03	A	7	70
2	Chemistry 2	CHIM/07	A	6	60
Curriculum Renewable resources					
1	Chemistry Laboratory	CHIM/07	F	3	30
2	Elements of Chemical Engineering of Renewable Sources	ING-IND/24	F	3	30
Curriculum Materials					
1	Introduction to Materials Science	ING-IND/22	F	3	30
2	Laboratory of Materials Science	ING-IND/22	F	3	30
Curriculum Food Engineering					
1	Chemistry Laboratory	CHIM/07	F	3	30
2	Elements of Food Engineering	ING-IND/24	F	3	30

2nd year

Sem	Teaching course	SSD*	TAF*	Credits	h
Common courses					
1	Mathematical Analysis 2	MAT/05	A	8	80
1	Physics 2	FIS/01	A	7	70
1	Integrated course: Numerical Analysis and Applications to Chemical Engineering				
1	- Module: Applied Mathematics	MAT/08	A	6	60
2	- Module: Process Engineering Calculations	ING-IND/26	B	6	60



2	Thermodynamics	ING-IND/24	B	9	90
2	Transport Phenomena	ING-IND/24	B	6	60
2	Chemical Reaction Engineering	ING-IND/24	B	6	60
Curriculum Renewable resources					
1	Fluid Mechanics	ICAR/01	C	9	90
Curriculum Materials					
1	Basic Solid Mechanics	ICAR/08	C	6	60
Curriculum Food Engineering					
1	Fluid Mechanics	ICAR/01	C	9	90

3rd year

Sem	Teaching course	SSD*	TAF*	Credits	h
Common courses					
1	Chemical Plant Design	ING-IND/25	B	9	90
1	Electrotechnics	ING-IND/31	B	6	60
2	Economic and Management Sustainability	ING-IND/35	B	6	60
2	Automatic Control in Process Industries	ING-IND/26	B	9	90
Curriculum Renewable resources					
1	Materials Science Fundamentals	ING-IND/22	B	6	60
1	Sustainable Energy Technologies and Systems	ING-IND/09	C	9	90
2	Renewable Resource Production Processes	ING-IND/27	B	9	90
Curriculum Materials					
1	Metallic Materials Engineering	ING-IND/22	B	9	90
1	Integrated course: Materials design and development - Module: Materials Science Fundamentals	ING-IND/22	B	6	60
2		ING-IND/22	C	6	60
2	Polymers Science	CHIM/04	C	6	60
Curriculum Food Engineering					
1	Integrated course: Food Chemistry and Engineering - Module: Food Engineering	ING-IND/24	B	6	60
1		CHIM/10	C	6	48
2	Industrial Systems Design	ING-IND/17	B	6	60
2	Integrated course: Microbiology and Hygiene - Module: Microbiology	BIO/19	C	4	40
2		MED/42	C	2	24



Additional credits to be acquired

Sem	Teaching course	SSD*	TAF*	Credits	h
	English Language Test ¹		E	3	
	Elective activities ²		D	12	
	Other activities		F	6	
	Final Exam		E	3	

TOTAL CREDITS 180

(1) The credits of European language level can be acquired:

- passing the English language test at B1 European level (CEFR) at Centro Linguistico d'Ateneo,
- showing appropriate certification of B1 European level (CEFR) knowledge.

(2) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.

***Abbreviations**

SSD	Scientific Disciplinary Sector
TAF	Type of Educational Activity