







**MASTER'S DEGREE IN
CHEMICAL AND BIOTECHNOLOGICAL PROCESS ENGINEERING
DEGREE PROGRAMME 2023/2024**

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

1st year

| Sem | Teaching course | SSD* | TAF* | Credits | h |
|-----|---|------------|------|---------|----|
| 1 | Applied Statistics for Industrial Engineering | ING-IND/26 | B | 9 | 90 |
| 1 | Principles of Chemical Engineering and Processes | ING-IND/24 | B | 9 | 90 |
| 1 | Integrated course: Industrial and Energetic Processes - Module: Industrial Processes | ING-IND/27 | B | 6 | 60 |
| 2 | | ING-IND/27 | B | 6 | 60 |
| 2 | Environmental Conscious Energy and Chemical Processes | ING-IND/25 | B | 9 | 90 |

2nd year

| Sem | Teaching course | SSD* | TAF* | Credits | h |
|-----|---|------------|------|---------|-----|
| 1 | Process modeling and simulation  | ING-IND/26 | B | 9 | 90 |
| 1 | Chemical and Biological Reactors  | ING-IND/24 | B | 9 | 90 |
| 1 | Safety and environmental chemical engineering with design project  | ING-IND/25 | B | 12 | 120 |
| 2 | Advanced systems of process control  | ING-IND/26 | B | 9 | 90 |

Additional credits to be acquired


| Sem | Activity | SSD* | TAF* | Credits | h |
|-----|--|------|------|---------|---|
| | 2 courses from tab 1 | | C | 12 | |
| | Elective activities ¹ | | D | 9 | |
| | English Language Test or other activities ² | | F | 3 | |
| | Internship | | F | 6 | |
| | Final Examination | | E | 12 | |

TOTAL CREDITS 120

- (1) The elective activities must be consistent with the personal educational plan and they need approval by the Degree Programme Board.
- (2) The credits of European language level can be acquired passing the English language test at B2 European level (CEFR) at Centro Linguistico d'Ateneo. If the student can show appropriate certification of B2 European level (CEFR) knowledge other activities could be acquired.



Tab 1. Courses TAF C (2 from the list)

| Sem | Teaching course | SSD* | TAF* | Credits | h |
|-----|---|------------|------|---------|---|
| 1 | Fundamentals of Machine Design | ING-IND/14 | C | 6 | |
| 1 | Industrial Energy Technologies | ING-IND/09 | C | 6 | |
| 1 | Biochemistry | BIO/10 | C | 6 | |
| 1 | Surface Forces and Adsorption  | CHIM/02 | C | 6 | |
| 1 | Project management | SECS-P/08 | C | 6 | |
| 2 | Chemistry and Technology of Food | CHIM/10 | C | 6 | |
| 2 | Microbiology | MED/07 | C | 6 | |

***Abbreviations**

| | |
|-----|--------------------------------|
| SSD | Scientific Disciplinary Sector |
| TAF | Type of Educational Activity |