
CHEMICAL ENGINEERING STUDY PLAN

FIRST YEAR 60 ECTS

Annual

- Physics (12 ECTS)

1st semester (Sep-Jan)

- Basic Laboratory Operations (ENG) (6 ECTS)
- General Chemistry I (EFC) (6 ECTS)
- Introduction to Computation (6 ECTS)
- Mathematics I (6 ECTS)

2nd semester (Jan-Jun)

- Basics of Chemical Engineering and Biotechnology (ENG) (6 ECTS)
 - Biology (6 ECTS)
 - General Chemistry II (EFC) (6 ECTS)
 - Mathematics II (6 ECTS)
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SECOND YEAR 60 ECTS

Annual

- Numerical Methods for Chemical Engineering (EFC) (9 ECTS)
- Experiments in Chemical Engineering I (EFC) (9 ECTS)

1st semester (Sep-Jan)

- Applied Statistics (6 ECTS)
- Applied Thermodynamics (EFC) (6 ECTS)
- Fluid Mechanics (ENG) (6 ECTS)
- General Economy and Business Organisation (6 ECTS)

2nd semester (Jan-Jun)

- Chemical Processes Kinetics (EFC) (6 ECTS)
 - Computer Assisted Design and Graphical Expression (6 ECTS)
 - Heat Transfer (6 ECTS)
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THIRD YEAR 60 ECTS

Annual

- Experiments in Chemical Engineering II (EFC) (9 ECTS)
- Process and Product Engineering (EFC) (9 ECTS)

1st semester (Sep-Jan)

- Chemical Reactor Design (ENG) (6 ECTS)
- Mass Transfer (ENG) (6 ECTS)
- Principles of Electric and Electronic Engineering (6 ECTS)
- Strength of Materials (6 ECTS)

2nd semester (Jan-Jun)

- Instrumentation and Control of Chemical Processes (6 ECTS)
 - Materials Engineering (6 ECTS)
 - Processes of Separation (ENG) (6 ECTS)
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FOURTH YEAR 60 ECTS

1st semester (Sep-Jan)

- Environmental Engineering (EFC) (6 ECTS)
- Mechanical Design of Processes Equipment (EFC) (6 ECTS)

2nd semester (Jan-Jun)

- Professional Placement (ENG) (12 ECTS)
- Project Organization and Management (EFC) (7,5 ECTS)

Optional courses

- Engineering of Biotechnology Processes (4,5 ECTS)
- Chemical Engineering and Sustainability (EFC) (4,5 ECTS)
- Economic Analysis of Chemical Processes (EFC) (4,5 ECTS)
- Energy Engineering (EFC) (4,5 ECTS)
- Environmental Biotechnology (ENG) (4,5 ECTS)
- Oil and Petrochemistry (EFC) (4,5 ECTS)
- Quality Management (EFC) (4,5 ECTS)
- Risk and Safety Analysis in Industrial Plants (EFC) (4,5 ECTS)
- Scientific and Technical writing skills in Basque (6 ECTS)

Optional courses

- Scientific and Technical oral skills in Basque (6 ECTS)

FINAL YEAR PROJECT (ENG) (10,5 ECTS)

ENG: Courses taught in English

EFC: English Friendly Courses, taught in Spanish or in Basque, but support, tutorials and student reporting and exams in English.