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)

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)

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)
• Strenght 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)

FOURTH YEAR 60 ECTS
1st semester (Sep-Jan)
• Environmental Engineering (EFC) (6 ECTS)
• Mechanical Design of Processes Equipment (EFC) (6 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)

2nd semester (Jan-Jun)
• Professional Placement (ENG) (12 ECTS)
• Project Organization and Management (EFC) (7,5 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.