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Undergraduate Degree Chemical Technology

Career opportunities

Graduates in Chemical Technology will be able to work as:

- technicians and technical coordinators in the implementation, monitoring and optimization of industrial processes in industries such as pulp and paper, petrochemical, pharmaceutical, ink, agro-food, fibreboard, etc.
- laboratory analysts in microbiology, environmental and biotechnology;
- sales and marketing technicians in the chemical industry;
- technicians in production planning, integrated quality management, environmental safety, effluent treatment monitoring and coordination of health and safety plans.

Entry requirements

Regional Preferences

(50%): Aveiro, Braga, Castelo Branco, Coimbra, Évora, Guarda, Leiria, Lisboa, Portalegre, Porto, Santarém, Setúbal, Viana do Castelo and Viseu.

Entrance Examinations

One of the following groups of courses:

- 02 Biology and Geology
or 07 Physics and Chemistry
or 02 Biology and Geology
and 16 Mathematics*
- or 07 Physics and Chemistry
and 16 Mathematics*
- or 02 Biology and Geology
and 07 Physics and Chemistry*
- or 18 Portuguese and 16 Mathematics*
- or 07 Physics and Chemistry
and 18 Portuguese
- or 02 Biology and Geology
and 18 Portuguese

** Students who have taken the national Mathematics A or Mathematics B exams are eligible to take this entrance exam.*

Course curriculum

year 1 . semester 1

COURSE UNITS . ECTS

- Linear Algebra . 5.0
- Mathematical Analysis . 6.0
- Computation Applied to Technology . 4.5
- Physics . 5.0
- Introduction to Chemical Technology . 4.0
- General Chemistry . 5.5

year 2 . semester 1

COURSE UNITS . ECTS

- Biochemistry . 5.0
- Material and Energy Balances . 5.0
- Heat and Mass Transfer . 5.0
- Bioresources . 5.0
- Physical Chemistry . 5.0
- Solutions Chemistry . 5.0

year 3 . semester 1

COURSE UNITS . ECTS

- Project Assessment Tools . 4.0
- Simulation in Technology . 5.0
- Option I . 5.0
- Industrial Processes and Environment . 5.0
- Industrial Utilities . 5.5
- Separation Processes II . 5.5

OPTIONAL UNITS I

- Bioenergy . 5.0
- Paper Pulp Technology . 5.0
- Food Technology . 5.0
- Bioremediation . 5.0

year 1 . semester 2

COURSE UNITS . ECTS

- Microbiology . 5.0
- Fluid Mechanics . 5.0
- Analysis and Treatment of Experimental Data . 5.0
- Inorganic Chemistry . 5.0
- Chemical Thermodynamics . 5.0
- Organic Chemistry . 5.0

year 2 . semester 2

COURSE UNITS . ECTS

- Integrated Management Systems . 5.0
- Separation Processes I . 5.0
- Reactors . 5.0
- Chemical Processes . 5.0
- Chemical Analysis . 5.0
- Instrumentation and Equipment . 5.0

year 3 . semester 2

COURSE UNITS . ECTS

- Final Project . 11
- Option II . 5.0
- Health and Safety . 3.0
- Effluent Treatment . 5.5
- Process Control . 5.5
- OPTIONAL UNITS II**
- Biotechnology . 5.0
- Paper Technology . 5.0
- Electrochemistry and Corrosion . 5.0
- Food Safety . 5.0