

# **ECTS INFORMATION PACK YEAR 2008-09**

## **1. INFORMATION ABOUT THE MOBILITY COORDINATOR**

Allan Mackie  
Office 319  
Department of Chemical Engineering  
Av. dels Països Catalans, 26  
Sescelades Campus  
43007 Tarragona (Spain)  
Tel: (977) 55.96.74  
Fax: (977) 55.96.21  
E-mail: [soetseq@urv.cat](mailto:soetseq@urv.cat) (Deputy director ETSEQ)

## **2. DESCRIPTION OF THE SCHOOL OF CHEMICAL ENGINEERING**

**Below is a list of the courses that are taught at the School of Chemical Engineering**

Chemical Engineering.  
Industrial Engineering, speciality in Mechanics.  
Technical Industrial Engineering, speciality in Industrial Chemistry.  
Master in Environmental Engineering.  
Master's Degree in Chemical and Process Engineering.  
Master's Degree in Nanoscience and Nanotechnology.

**School of Chemical Engineering web site:** <http://www.etseq.urv.es/etseq/>

### **Websites of the Departments**

Department of Chemical Engineering: <http://www.etseq.urv.es/DEQ/>  
Department of Mechanical Engineering: <http://www.etseq.urv.es/DEM/>

## **3. DESCRIPTION OF THE PROGRAMME IN CHEMICAL ENGINEERING**

**Number of courses:** 5

**University credits:** students must do a minimum of 405 credits (214,5 from core subjects 76.5 from compulsory subjects, 73,5 from optional/non-compulsory subjects and 40.5 from free-choice subjects)

\* Credits are used as units of evaluation in teaching programmes. Each subject in the curriculum has an equivalent number of credits. Each credit corresponds to ten hours of theoretical or practical classes or their equivalent. The award of credits is subject to the systems of the University for verifying the acquisition of knowledge..

For the University's own subjects adapted to the EHEA system, which follow the teaching methodology of the ECTS system, 25-30 hours of a student's workload are equivalent to 1 credit.

The subjects on the curricula are of the following types:

1. Core subjects. These are set by the Spanish Ministry of Education and Culture, and must be included in all curricula leading to the award of the same official degree.
2. Compulsory subjects. These subjects are set by the University as an obligatory part of a student's degree course.

3. Optional subjects. These subjects are set by each University. They are included in the University's curricula and students may select from the range of subjects available.

4. Free-choice subjects. Each University includes a percentage of these subjects as part of its total teaching load in each curriculum.

For further information regarding Chemical Engineering go to:

- Subjects:  
[https://moodle.urv.net/docnet/guia\\_docent/index.php?centre=20&ensenyament=2001&consulta=assignatures](https://moodle.urv.net/docnet/guia_docent/index.php?centre=20&ensenyament=2001&consulta=assignatures)
- Timetables: [http://www.etseq.urv.cat/home/arxiu/horaris/2008-2009/Horaris\\_EQ\\_2008-09.pdf](http://www.etseq.urv.cat/home/arxiu/horaris/2008-2009/Horaris_EQ_2008-09.pdf)
- Calendar:  
[https://moodle.urv.net/docnet/guia\\_docent/index.php?centre=20&apartat=30&subapartat=357](https://moodle.urv.net/docnet/guia_docent/index.php?centre=20&apartat=30&subapartat=357)

Language in which subjects are taught:

- English is used to teach the subjects of Master's Degree in Chemical and Process Engineering and the Master in Environmental Engineering such as “**Optional subjects for Intensifying RESEARCH**”, as well as all the subjects in the Master's Degree in Nanoscience and Nanotechnology.
- Catalan and or Spanish are used to teach the remaining subjects without some exceptions (see “Language” in the previous subject section).

#### 4. RECOMMENDED SEQUENCE OF COURSES FOR THE CHEMICAL ENGINEERING PROGRAMME

##### COMPULSORY AND CORE SUBJECTS

| FIRST YEAR   |          |                                      |              |             |
|--------------|----------|--------------------------------------|--------------|-------------|
|              | Code     | Subject                              | ECTS credits | URV credits |
| 1st semester | 20011021 | Algebra (annual)                     | 2            | 2.25        |
|              | 20011020 | Calculus (annual)                    | 4            | 4.5         |
|              | 20011022 | Physics                              | 8            | 9           |
|              | 20011018 | Fundamentals of Chemical Engineering | 6            | 6           |
|              | 20011019 | Statistics                           | 4            | 4.5         |
|              | 20011025 | Inorganic Chemistry                  | 6            | 6           |
| 2nd semester | 20011021 | Algebra (annual)                     | 2            | 2.25        |
|              | 20011020 | Calculus (annual)                    | 4            | 4.5         |
|              | 20011017 | Transport Phenomena                  | 4            | 6           |

|  |          |                                |   |      |
|--|----------|--------------------------------|---|------|
|  | 20011016 | Fluid Mechanics I              | 4 | 6    |
|  | 20011001 | Numerical Methods              | 4 | 4.5  |
|  | 20011002 | Physical Chemistry             | 6 | 6    |
|  | 20011012 | Transport Phenomena Laboratory | 6 | 10.5 |

| SECOND YEAR  |          |  |              |             |
|--------------|----------|--|--------------|-------------|
|              | Code     | Subject  | ECTS credits | URV credits |
| 1st semester | 20011207 | Computing and Programming Techniques in Engineering (optional) | 4            | 4.5         |
|              | 20011010 | Graphic Expression   | 4            | 6           |
|              | 20011014 | Technical Thermodynamics I                                     | 6            | 6           |
|              | 20011011 | Chemical Engineering Laboratory I (annual)                     | 4            | 6           |
|              | 20011024 | Chemical Laboratory I  | 4            | 6           |
|              | 20011004 | Analytic Chemistry   | 6            | 6           |
|              | 20011204 | Biochemistry (optional)  | 4            | 6           |
| 2nd semester | 20011105 | Electrotechnics  | 6            | 6           |
|              | 20011013 | Applied Kinetics   | 6            | 6           |
|              | 20011003 | Organic Chemistry  | 6            | 6           |
|              | 20011011 | Chemical Engineering Laboratory I (annual)                     | 4            | 7.5         |
|              | 20011023 | Chemical Laboratory II   | 4            | 6           |
|              | 20011015 | Heat Exchange Operations                                       | 4            | 6           |
|              | 20011208 | Communication Techniques in Engineering (optional)             | 2            | 3           |
|              | 20011209 | Mathematical Methods in Engineering (optional)                 | 4            | 6           |

| THIRD YEAR   |          |                       |              |             |
|--------------|----------|-----------------------|--------------|-------------|
|              | Code     | Subject               | ECTS credits | URV credits |
| 1st semester | 20012008 | Separation Operations | 6            | 6           |
|              | 20012006 | Industrial Chemistry  | 8            | 9           |
|              | 20012005 | Chemical Reactors     | 6            | 6           |

|              |          |   |   |     |
|--------------|----------|---|---|-----|
|              | 20012007 | Projects /Technical Office  | 6 | 6   |
|              | 20012029 | Chemical Engineering Laboratory II (annual)                                 | 4 | 4.5 |
|              | 278317   | Problem Solving Strategies: Elemental Dr. Watson. (Extracurricular courses) | 3 | 4.5 |
|              |          |   |   |     |
| 2nd semester | 20012030 | Environmental Technology  | 6 | 6   |
|              | 20012009 | Control and Instrumentation of Chemical Processes                           | 6 | 6   |
|              | 20012027 | Economy and Industrial Organisation   | 8 | 6   |
|              | 20012029 | Chemical Engineering Laboratory (annual)                                    | 2 | 4.5 |
|              | 20012212 | Fluid Mechanics II (optional)   | 4 | 6   |
|              | 20012219 | Fundamentals of Biochemical Engineering (optional)                          | 4 | 6   |
|              | 20012221 | Separation Processes (optional)   | 4 | 6   |
|              | 20012210 | Catalytic Reaction Engineering (optional)                                   | 4 | 6   |
|              | 20012229 | Hydraulic Machines (optional)   | 4 | 6   |

| FOURTH YEAR  |          |  |              |             |
|--------------|----------|--|--------------|-------------|
|              | Code     | Subject  | ECTS credits | URV credits |
| 1st semester | 20012028 | Fabrication Processes Laboratory (annual)            | 4            | 6           |
|              | 20012031 | Simulation and Optimization of Chemical Processes    | 6            | 6           |
|              | 20012104 | Technical Thermodynamics II (annual)                 | 3            | 4.5         |
|              | 20012230 | Practicals in Project Management (annual) (optional) | 4            | 6           |
|              | 20012220 | Energy Production and Management (Optional)          | 6            | 6           |
|              | 20012211 | Principles of Polymeric Systems (optional)           | 6            | 6           |
|              | 20012215 | Materials Science (optional)                         | 6            | 6           |
|              |          |  |              |             |
| 2nd semester | 20012026 | Design of Equipment and Plants                       | 8            | 9           |
|              | 20012028 | Fabrication Processes Laboratory (annual)            | 4            | 6           |
|              | 20012230 | Practicals in Project Management (annual) (optional) | 4            | 6           |
|              | 20012104 | Technical Thermodynamics II (annual)                 | 3            | 4.5         |
|              | 20012217 | Statistic Techniques and Quality Control (optional)  | 4            | 4.5         |

|  |          |                                |   |   |
|--|----------|--------------------------------|---|---|
|  | 20012223 | Polymer Engineering (optional) | 4 | 6 |
|--|----------|--------------------------------|---|---|

| FIFTH YEAR   |          |  |              |             |
|--------------|----------|--|--------------|-------------|
|              | Code     | Subject  | ECTS credits | URV credits |
| 1st semester | 20012102 | Industrial practices                                       | 15           | 21          |
|              | 20012103 | Research Laboratory (annual)                               | 7.5          | 4.5         |
|              | 20012226 | Advanced Control (optional)                                | 6            | 4.5         |
|              | 20012224 | Modelling and Computing of Industrial Processes (optional) | 6            | 6           |
|              | 20012202 | Process Energy Analysis (optional)                         | 6            | 6           |
|              | 20012237 | Dispersion of Contaminants (optional)                      | 4            | 6           |
|              |          |  |              |             |
| 2nd semester | 20012103 | Research Laboratory (annual)                               | 7.5          | 3           |
|              | 20012101 | End-of-degree project                                      | 15           | 33          |
|              | 20012240 | Environmental Management (Optional)                        | 6            | 4.5         |
|              | 20012238 | Treatment of Atmospheric Pollution (Optional)              | 6            | 4.5         |
|              | 20012239 | Water Treatment (optional)                                 | 6            | 4.5         |
|              | 20012201 | Durability of Industrial Materials (optional)              | 6            | 6           |