

## **Generic skills**

These studies incorporate 7 generic skills common to all UPC degrees plus 3 specific of the Physical Engineering Degree.

### **01 EIN - ENTREPRENEURSHIP AND INNOVATION**

Knowing about and understanding how businesses are run and the sciences that govern their activity. Having the ability to understand labor laws and how planning, industrial and marketing strategies, quality and profits relate to each other.

#### **GOALS BY LEVELS**

01 EIN N1 - Showing enterprise, acquiring basic knowledge about organizations and becoming familiar with the tools and techniques for generating ideas and managing organizations that make it possible to solve known problems and create opportunities.

01 EIN N2 - Taking initiatives that give rise to opportunities and to new products and solutions, doing so with a vision of process implementation and market understanding, and involving others in projects that have to be carried out.

01 EIN N3 - Using knowledge and strategic skills to set up and manage projects. Applying systemic solutions to complex problems. Devising and managing innovation in organizations.

### **02 SCS - SUSTAINABILITY AND SOCIAL COMMITMENT**

Being aware of and understanding the complexity of social and economic phenomena that characterize the welfare society. Having the ability to relate welfare to globalization and sustainability. Being able to make a balanced use of techniques, technology, the economy and sustainability.

#### **GOALS BY LEVELS**

02 SCS N1 - Analyzing the world's situation critically and systemically, while taking an interdisciplinary approach to sustainability and adhering to the principles of sustainable human development. Recognizing the social and environmental implications of a particular professional activity.

02 SCS N2 - Applying sustainability criteria and professional codes of conduct in the design and assessment of technological solutions.

02 SCS N3 - Considering social, economic and environmental factors in the application of solutions. Undertaking projects that tie in with human development and sustainability.

### **03 TLG - THIRD LANGUAGE**

Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.

#### 04 COE - EFFICIENT ORAL AND WRITTEN COMMUNICATION

Communicating verbally and in writing about learning outcomes, thought-building, and decision-making. Taking part in debates about issues related to the own field of specialization.

##### GOALS BY LEVELS

04 COE N1 - Planning oral communication, answering questions properly, and writing straightforward texts that are spelt correctly and are grammatically coherent.

04 COE N2 - Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well-structured and free of spelling and grammatical errors.

04 COE N3 - Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.

#### 05 TEQ - TEAMWORK

Being able to work as a team member, either as a member or as leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.

##### GOALS BY LEVELS

05 TEQ N1 - Working in a team and making positive contributions once the aims, and group and individual responsibilities, have been defined. Reaching joint decisions on the strategy to be followed.

05 TEQ N2 - Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.

05 TEQ N3 - Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the results.

Dirigir y dinamizar grupos de trabajo, resolviendo posibles conflictos, valorado el trabajo hecho con las otras personas i evaluando la efectividad del equipo así como la presentación de los resultados generales.

#### 06 URI - EFFECTIVE USE OF INFORMATION RESOURCES

Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

##### GOALS BY LEVELS

06 URI N1 - Planning oral communication, answering questions properly, and writing straightforward texts that are spelt correctly and are grammatically coherent.

06 URI N2 - Designing and executing a good strategy for advanced searches using specialized information resources, once the various parts of an academic document have been identified and bibliographical references provided. Choosing suitable information based on its relevance and quality.

06 URI N3 - Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.

07 AAT - SELF-DIRECTED LEARNING.

Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.

GOALS BY LEVELS

07 AAT N1 - Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

07 AAT N2 - Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions, and expanding on the recommended information sources.

07 AAT N3 - Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

08 CRPE EF - ABILITY TO IDENTIFY, FORMULATE, AND SOLVE PHYSICAL ENGINEERING PROBLEMS.

Planning and solving physical engineering problems with initiative, making decisions and with creativity. Developing methods of analysis and problem solving in a systematic and creative way.

09 CSC EF - ABILITY TO CONCEIVE, DESIGN, IMPLEMENT, AND OPERATE COMPLEX PHYSICAL ENGINEERING SYSTEMS

Ability to conceive, design, implement, and operate complex systems in the fields of micro and nano technology, electronics, advanced materials, photonics, biotechnology, and space and nuclear sciences.

10 ECI EF - EXPERIMENTATION AND KNOWLEDGE OF TOOLS AND INSTRUMENTS.

Coping comfortably in a physical engineering lab environment. Operating physical engineering tools and instruments, and interpreting their manuals and specifications. Evaluating the errors and limitations of measurements and simulation results.