

## **MASTER'S DEGREE IN PRODUCTION ENGINEERING**

### **DESCRIPTION**

This Master's program is focused on providing engineers and technicians with the knowledge and skills necessary to hold leadership positions in the areas of operations, production, and logistics of industrial and service companies in order to improve their competitiveness and their ability to manage, organize and plan in the field of the company, and other institutions and organizations. It also seeks to strengthen skills such as the ability to communicate with colleagues, with the academic community as a whole and with society in general about their areas of knowledge.

The program involves courses that deal with production processes, product design, through the use of simulation programs, their quality, process optimization and everything related to Production from the raw material down to the final product. Some of the topics include Electronics, Fluid Dynamics, materials, metrology, assembly design, maintenance and a wide range of knowledge aimed at obtaining satisfactory results, without neglecting the environment and ensuring sustainability.

**MÁSTER UNIVERSITARIO EN INGENIERÍA DE PRODUCCIÓN**  
**MASTER'S DEGREE IN PRODUCTION ENGINEERING**  
**(PLAN 56AF)**

(All classes are taught in Spanish)

|                                             | CODE                      | ASIGNATURAS                                                    | COURSES                                                          | ECTS | TYPE |
|---------------------------------------------|---------------------------|----------------------------------------------------------------|------------------------------------------------------------------|------|------|
| <b>1<sup>st</sup> Semester</b><br>(30 ECTS) | <a href="#">563000139</a> | Diseño y Desarrollo de Productos                               | Design and Development of Products                               | 5    | C    |
|                                             | <a href="#">563000140</a> | Ingeniería de Procesos Productivos                             | Engineering of Productive Processes                              | 5    | C    |
|                                             | <a href="#">563000141</a> | Ingeniería de la Calidad Total                                 | Engineering of the Total Quality                                 | 5    | C    |
|                                             | <a href="#">563000142</a> | Automatización y Robótica                                      | Automatization and Robotics                                      | 4    | C    |
|                                             | <a href="#">563000143</a> | Diseño y Fabricación asistidos por Ordenador (CAD-CAM)         | Computer-Aided Design and Manufacturing (CAD-CAM)                | 4    | C    |
|                                             | <a href="#">563000144</a> | Producción Limpia, Ecología Industrial y Desarrollo Sostenible | Clean Production, Industrial Ecology and Sustainable Development | 3    | C    |
|                                             | <a href="#">563000145</a> | Matemáticas Aplicadas a la Ingeniería de Producción            | Mathematics Applied to Production Engineering                    | 4    | C    |
| <b>2<sup>nd</sup> Semester</b><br>(30 ECTS) | <a href="#">563000137</a> | Análisis de Productos por Elementos Finitos                    | Product Analysis by Finite Elements                              | 4    | C    |
|                                             |                           | Prácticas en Empresa y Desarrollo Profesional *                | Internships and Professional Development-Practical Training *    | 6    | C    |
|                                             | 563000138                 | Trabajo Fin de Máster                                          | Final Master Project                                             | 12   | C    |
|                                             |                           | <b>ASIGNATURAS OPTATIVAS (ELEGIR 8 ECTS):</b>                  | <b>OPTATIVE COURSES (Choose 8 ECTS):</b>                         |      |      |
|                                             | <a href="#">563000126</a> | Seguridad y Ergonomía                                          | Security and Ergonomy                                            | 4    | E    |
|                                             | <a href="#">563000127</a> | Tecnologías aplicadas al Mantenimiento Industrial              | Technologies Applied to Industrial Maintenance                   | 4    | E    |
|                                             | <a href="#">563000128</a> | Aplicaciones Industriales de los Láseres                       | Industrial Applications of Lasers                                | 4    | E    |
|                                             | <a href="#">563000129</a> | Visión Artificial                                              | Artificial vision                                                | 4    | E    |
|                                             | <a href="#">563000130</a> | Diseño del Montaje en Fabricación Industrial                   | Design of Assembly in Industrial Manufacturing                   | 4    | E    |
|                                             | <a href="#">563000131</a> | Metrología                                                     | Metrology                                                        | 4    | E    |
|                                             | <a href="#">563000132</a> | Análisis y Simulación Térmica                                  | Analysis and Thermal Simulation                                  | 4    | E    |
|                                             | <a href="#">563000133</a> | Modelado y Simulación                                          | Modelling and Simulation                                         | 4    | E    |
|                                             | <a href="#">563000134</a> | Certificación y Calificación de Productos                      | Certification and Qualification of Products                      | 4    | E    |
|                                             | <a href="#">563000135</a> | Selección y Diseño de Materiales                               | Selections and Design of Materials                               | 4    | E    |
|                                             | <a href="#">563000136</a> | Diseño y Cálculo de Uniones Estructurales                      | Design of Structural Junctions                                   | 3    | E    |

TYPES of COURSES: **C** = Compulsory, and **E** = Elective

\*Three ways to take this course:

- 563000125 Professional Internships (6 ECTS)
- [563000122](#) + [563000123](#) Professional development seminars (3 ECTS) and Mini Projects (3 ECTS)
- [563000123](#) + [563000124](#) Mini Projects (3 ECTS) and Employability and Entrepreneurship (3 ECTS)