Degree Industrial Organisation and Logistics Engineering

Competences	1st course									2nd course										3rd course										4th course														
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	Physics I	Calculus	Graphic Expression	Chemistry	Physics 2	À Linear Algebra	Business Management	Computer Science Basic	Material Science	Numerical Methods	Theory of Mechanisms	Thermal Engineering	Electrical Engineering Basics	Environmental Technologies and Sustainability	Statistical Methods	Fluid Mechanics	Electronic Engineering Basics	Industrial Automation	Production Management	Quantitative Methods	Strategic Marketing	Organizational Behavior	Logistics	Economic Engineering	Strategic Direction	Quantitative Methods for Logistics	Information and Distribution Systems	Industrial Economics and Innovation	Industrial Legislation and Integrated Management	Internship	Bachelor Thesis	Technical Projects	Enterprise	Modeling, Simulation and Applied Statistics	Industrial Plant Design	Enterprise Taxation	Leadership Skills	Financial Planning	Resource Management	Eco-Innovation	Data Analysis	Mobility	Cross-curricular Subject
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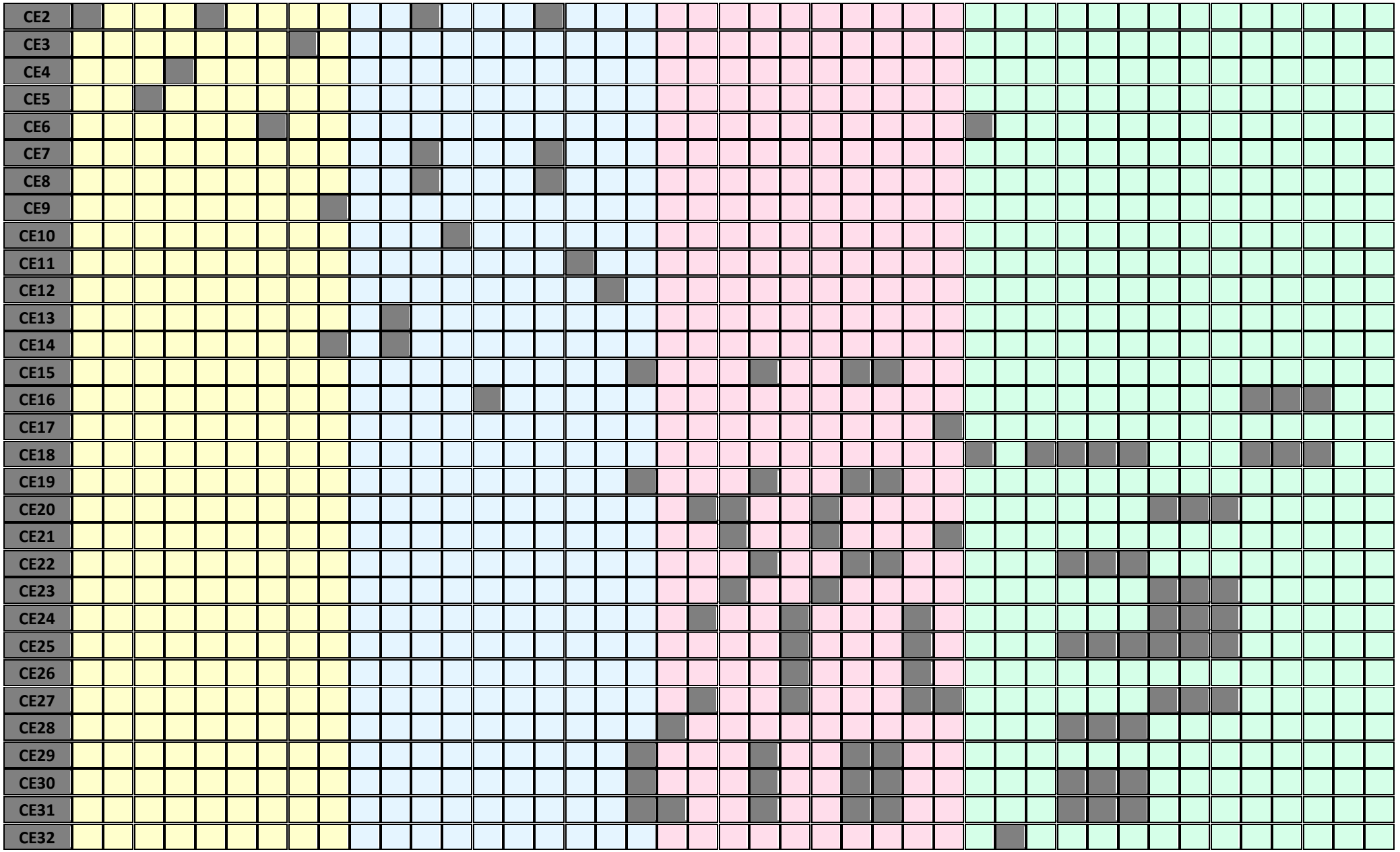
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Basic Competences

B01 That students have demonstrated to possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects that imply knowledge coming from the vanguard of his/her field of study.
B02 That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.
B03 That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
B04 That students can transmit information, ideas, problems and solutions to a specialized and non-specialized public.
B05 That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

Transversal Competences

CT1. To develop a proper understanding and oral and written expression of Catalan and Spanish.
CT2. To develop meaningful command of a foreign language, especially English.
CT3. To implement new technologies and technologies of information and communication.
CT4. To apply basic knowledge of entrepreneurship and professional environments.
CT5. To apply essential notions of scientific thinking.

General Competences

CG1. To conceptualize the drafting, signing and development of projects in the field of engineering in industrial organization.
CG2. To direct the activities subject of the engineering projects described in the previous section.
CG3. To synthesize basic and technological subjects, which enable them to learn new methods and theories, and provide them with versatility to adapt to new situations.
CG4. To solve problems with initiative, make decisions, creativity, critical reasoning and to communicate and transmit knowledge, skills and abilities in the field of Industrial Organization Engineering.
CG5. To carry out measurements, calculations, valuations, appraisals, surveys, studies, reports, work plans and other analogous work.
CG6. To implement specifications, regulations and mandatory rules.
CG7. To analyze and assess the social and environmental impact of technical solutions.
CG8. To apply the principles and methods of quality.
CG9. To organize and plan in the field of the company, and other institutions and organizations.
CG10. To work in a multilingual and multidisciplinary environment.
CG11. To understand and apply the necessary legislation in the exercise of the profession of Industrial Organization Engineer

Specific Competences

CE1. To develop the ability to solve mathematical problems arisen in the engineering field. Aptitude to apply knowledge on linear algebra; geometry; differential geometry; differential and integral calculus; differential equations and in partial derivatives; numerical methods; algorithmic, numerical; statistics and optimization.
CE2. To conceptualize and command the fundamental concepts about the general laws of mechanics, thermodynamics, fields and waves and electromagnetism and their application to solve problems in engineering.
CE3. To acquire fundamental knowledge of the use and programming of computers, operating systems, databases and computer programs with applications in engineering.
CE4. To apply the principles of fundamental knowledge of general chemistry, organic and inorganic chemistry and their applications in engineering.
CE5. To apply spatial vision and knowledge of graphic representation techniques, both by traditional methods of metric geometry and descriptive geometry, as well as by computer-aided design applications.
CE6. To acquire the concept of company, institutional and legal framework of the company. Business organization and management.
CE7. To conceptualize applied thermodynamics and heat transmission. To recognize the basic principles and their application to solving engineering problems.
CE8. To conceptualize the basic principles of fluid mechanics and their application to solving problems in the field of engineering. To calculate pipes, channels and fluid systems.
CE9. Apply the basics of science, technology and materials chemistry. To recognize the relationship between the microstructure, the synthesis or processing and the properties of the materials.
CE10. To implement the principles of circuit theory and electrical machines.
CE11. To conceptualize the basics of electronics.
CE12. To acquire knowledge about the basics of automation and control methods.
CE13. To implement the principles of machine theory and mechanisms.
CE14. To conceptualize the principles of strength of materials.
CE15. To apply the basic knowledge of production and manufacturing systems.
CE16. To define the basic knowledge and applications of environmental technologies and sustainability.
CE17. To recognize the organizational structure and the functions of a Project Office.
CE18. To acquire capacity for planning and developing new projects, products and processes.
CE19. To have applied knowledge of basics and principles of quality management and technological innovation.
CE20. To have applied knowledge of basics and principles of strategic planning.
CE21. To acquire capacity to manage human resources and risk prevention and safety at work.
CE22. To acquire capacity to design enterprise information systems.
CE23. To acquire capacity to design organizational systems and job assessment.
CE24. To acquire capacity to prepare investment analysis and feasibility assessments.
CE25. To acquire capacity to calculate and analyze costs.
CE26. To acquire capacity to calculate and interpret financial statements.
CE27. To have applied knowledge of basics and principles of market research.
CE28. To acquire capacity to design and optimize industrial plants and productive processes.
CE29. To acquire capacity to design and optimize the logistics and transportation.
CE30. To acquire capacity to supply chain management.
CE31. To acquire capacity for production planning and control, maintenance program implementation and perform statistical process control.
CE32. To be able to develop an original and individual project, and to present and defend it in front of a university court, consisting of a project in the field of industrial organization and logistics of a professional nature, in which all the competences are integrated and synthesized.