

[MHD302] INDUSTRIAL CONSTRUCTIONS AND PLANNING

GENERAL INFORMATION

Studies	UNIVERSITY MASTER IN INDUSTRIAL ENGINEERING		Subject	?
Semester	1	Course	1	Mention / Field of specialisation
Character	COMPULSORY		Language	CASTELLANO
Plan	2025	Modality	Face-to-face	Total hours 33 class hours + 42 non-class hours = 75 total hours
Credits	3	Hours/week	1.83	

2030 AGENDA GOALS



PROFESSORS

ELKORO UGARTEBURU, ANDER

REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	(No previous knowledge required)

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
MH2517 - Demonstrate capacity for the design, construction and operation of industrial plants.		x		0,76
MH2518 - Demonstrate knowledge of construction, building, facilities, infrastructure and urban planning in the field of industrial engineering.		x		1,04
MH2519 - Demonstrate knowledge and skills in structural design and calculation.		x		0,08
MH2526 - Apply acquired knowledge and problem-solving skills in new, unfamiliar or changing environments within broader (or multidisciplinary) contexts related to their area of study.		x		0,12
MH2527 - Demonstrate the ability to integrate knowledge and deal with the complexity of formulate judgments based on incomplete or limited information, including reflections on the SDGs, human rights and fundamental rights, and on social, health and safety, environmental, economic and industrial implications and responsibilities.		x		0,32
MH2528 - Communicate its conclusions and the ultimate knowledge and rationale behind them to specialized and non-specialized audiences in a clear and unambiguous manner.		x		0,24
MH2529 - Possess the learning skills that will enable them to continue studying in a manner that will be largely self-directed or autonomous.		x		0,2
MH2530 - Work with people, involving them and leading them in a dynamic directed towards a common objective that includes reflection on their ethical and social responsibility, with a global vision of the work to be carried out and the characteristics required (quality, deadlines, etc.), assuming responsibility for the decisions taken.		x		0,24

Total: 3

KC: Knowledge or Content / SK: Skills / AB: Abilities

SECONDARY LEARNING RESULTS

RMH113 [!] *Conoce las distintas etapas de un proyecto de construcción y redacta una memoria de proyecto incluyendo todos los documentos necesarios (planos, presupuesto, cálculos...) cumpliendo con la normativa vigente.*

LEARNING ACTIVITIES	CH	NCH	TH
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	1 h.	4 h.	5 h.
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	3 h.	7 h.	10 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	3 h.	7 h.	10 h.
Carrying out exercises and solving problems individually and/or in teams	1 h.	4 h.	5 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	50%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	
Individual written and/or oral tests or individual coding/programming tests	50%	Individual written and/or oral tests or individual coding/programming tests	

CH - Class hours: 8 h.
NCH - Non-class hours: 22 h.
TH - Total hours: 30 h.

RMH112 [!] *Emplaza y define un edificio industrial y/o máquina, su cimentación y elementos de contención, teniendo en cuenta la arquitectura industrial, las características geotécnicas, la ordenación del territorio y el urbanismo industrial.*

LEARNING ACTIVITIES

	CH	NCH	TH
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints	1 h.	2 h.	3 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	16 h.	10 h.	26 h.
Carrying out exercises and solving problems individually and/or in teams	8 h.	8 h.	16 h.

EVALUATION SYSTEM

W

Individual written and/or oral tests or individual coding/programming tests

100%

MAKE-UP MECHANISMS

Individual written and/or oral tests or individual coding/programming tests

CH - Class hours: 25 h.
NCH - Non-class hours: 20 h.
TH - Total hours: 45 h.

CONTENTS

TOPIC 1:PROCESSING AND DOCUMENTATION OF A PROJECT. INTRODUCTION TO BTC.TOPIC 2:INDUSTRIAL ARCHITECTURETOPIC 3:BTC:BASIC DOCUMENT STRUCTURAL SAFETY AND BUILDING ACTIONSTOPIC 4:FOUNDATIONSTOPIC 5: GEOTECHNICAL ANALYSISSTOPIC 6: INDUSTRIAL PLANNINGTOPIC 7:SMART CITIES/BUILDINGS

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Presentations by external Lecturers
Moodle Platform
Class presentations

Bibliography

Casanova, M., Ramon, X. & Forcada, N. Diseño de complejos industriales; fundamentos. Barcelona: Edicions UPC, 2008
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Ministerio de Fomento, Código Técnico de la Edificación CTE, 2010
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Heredia R., "Arquitectura y Urbanismo Industrial", E.T.S.I.I. de Madrid, 1981