

[MHD202] INDUSTRIAL CONSTRUCTIONS AND PLANNING

GENERAL INFORMATION

Studies	UNIVERSITY MASTER IN INDUSTRIAL ENGINEERING	Subject	?
Semester	1	Course	1
Character	COMPULSORY	Mention / Field of specialisation	
Plan	2022	Modality	Face-to-face
Credits	3	Hours/week	1.67
		Language	CASTELLANO
		Total hours	30 class hours + 45 non-class hours = 75 total hours

PROFESSORS

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REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
[!] <i>Fundamentos de Teoría de Estructuras</i>	(No previous knowledge required)

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
MHRA17 - To demonstrate capacity for the design, construction and operation of industrial plants		x		0,76
MHRA18 - To demonstrate knowledge about construction, building, facilities, infrastructure and urban planning in the field of industrial engineering		x		1,04
MHRA19 - To demonstrate capacity for the management of technological Research, Development and Innovation		x		0,08
MHRA27 - To demonstrate the ability to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social, health and safety, environmental, economic and industrial implications and responsibilities		x		0,32
MHRA28 - To communicate your conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way		x		0,24
MHRA30 - To work with people, involving and directing them in a dynamic aimed at 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 that it requires (quality, deadlines,...), assuming responsibility for the decisions made		x		0,24
MHR126 - To apply the knowledge acquired and your problem-solving skills in new, little-known or changing environments within broader (or multidisciplinary) contexts related to your area of study		x		0,12
MHR129 - To possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous		x		0,2
Total:				3

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

ENAE LEARNING RESULTS

ENAE LEARNING RESULTS	ECTS
ENA124 - Knowledge and comprehension: Deep knowledge and comprehension of the engineering disciplines of their speciality, at the level necessary to acquire the rest of the competencies of the degree.	0,5
ENA129 - Analysis in engineering: Ability to identify, formulate and solve engineering problems defined incompletely, and/or with conflicts, which accept different valid solutions and require considering knowledge beyond those of their discipline and take into account the social, health and security, environmental, economic and industrial implications; to select and apply the most appropriate methods of analysis, calculation and experimental, as well as the most innovative methods for solving problems.	0,5
ENA131 - Engineering projects: Ability to project, develop and design new complex products (parts, components, finished products, etc.), processes and systems with specifications defined incompletely and/or with conflicts, which require the integration of knowledge from different disciplines, and consider social, health and safety, environmental, economic and industrial aspects; to select and apply the appropriate methodologies or employ creativity to develop new project methodologies.	0,5
ENA133 - Research and innovation: Ability to identify, find and obtain the required data.	0,5
ENA135 - Research and innovation: Ability to consult and apply codes of good practices and security in their speciality.	0,5
ENA141 - Practical application of engineering: Ability to apply standards of engineering practice.	0,5
Total:	3

SECONDARY LEARNING RESULTS

RMH106 [!] *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

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		13 h.	13 h.
Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints		2 h.	2 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects		20 h.	20 h.
Carrying out exercises and solving problems individually and/or in teams		3 h.	2 h.
Seminars, debates and/or workshops to deepen and/or share experiences.		2 h.	2 h.
Carrying out visits and/or learning trips to other university centres, laboratories, companies and/or thermal power plants		1 h.	1 h.
Tutoring sessions and monitoring of training activities		2 h.	2 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Individual written and/or oral tests or individual coding/programming tests	100%	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.			

RMH107 [!] *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
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams		5 h.	5 h.
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		2 h.	2 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		12 h.	12 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	4 h.		4 h.
Tutoring sessions and monitoring of training activities		3 h.	3 h.
Reading and personal and/or shared analysis of relevant and current publications (books, articles, catalogues, etc.) related to the speciality	1 h.	3 h.	4 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	100%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	
CH - Class hours: 5 h.			
NCH - Non-class hours: 25 h.			
TH - Total hours: 30 h.			

CONTENTS

TOPIC 1: PROCESSING AND DOCUMENTATION OF A PROJECT. INTRODUCTION TO THE TECHNICAL BUILDING CODE. TOPIC 2: INDUSTRIAL URBAN PLANNING

TOPIC 3: INDUSTRIAL ARCHITECTURE

TOPIC 4: FOUNDATIONS

TOPIC 5: GEOTECHNICAL STUDY.

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

Presentations by external Lecturers
Topic related web quires
Moodle Platform
Class presentations
Specific Master Software
Slides of the subject
[!]
<https://www.codigotecnico.org/index.php/menu-seguridad-estructural.html>

Bibliography

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Pedro Jiménez Montoya, Francisco Morán Cabré, Juan Carlos Arroyo Portero. Hormigón armado. Barcelona : Gustavo Gili , 2009