



## 1. General information

**Course:** STRUCTURES I**Type:** CORE COURSE**Degree:** 378 - UNDERGRADUATE DEGREE PROGRAMME IN ARCHITECTURE**Center:** 606 - SCHOOL OF ARCHITECTURE OF TOLEDO**Year:** 2**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 11312**ECTS credits:** 6**Academic year:** 2021-22**Group(s):** 40**Duration:** C2**Second language:** English**English Friendly:** Y**Bilingual:** N

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## 2. Pre-Requisites

Not established

## 3. Justification in the curriculum, relation to other subjects and to the profession

Not established

## 4. Degree competences achieved in this course

## Course competences

Code	Description
E33	Ability to conceive, calculate, design, integrate and execute building structures and urban complexes
G01	Capacity for analysis and synthesis
G02	Organizational and planning skills
G04	Problem solving
G05	Decision making
G06	Critical thinking
G07	Working in a team
G08	Working in an interdisciplinary team
G10	Interpersonal skills
G12	Self-directed learning
G13	Adaptation to new situations
G16	Creativity
G17	Leadership
G19	Innovation
G24	Ethical commitment and professional ethics

## 5. Objectives or Learning Outcomes

## Course learning outcomes

Description

To provide the student with the ability to understand the mechanical behaviour of structures.

To involve the student in the ability to analyze the structures (obtaining stresses, strains, displacements, deformations and others) and the mechanical behavior of the soil as a structural element, applying the rules, codes and regulations established by law in the obtaining of actions as well as in the analysis of structures.

## Additional outcomes

## 6. Units / Contents

**Unit 1:****Unit 2:****Unit 3:****Unit 4:****Unit 5:**

## 7. Activities, Units/Modules and Methodology

	Related Competences					
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Training Activity	Methodology	(only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	E33 G01 G02 G04 G05 G06 G07 G08 G10 G13 G16 G17 G19 G24	1.1	27.5	N	-	
Class Attendance (practical) [ON-SITE]	Project/Problem Based Learning (PBL)	E33 G01 G02 G04 G05 G06 G07 G08 G10 G13 G16 G17 G19 G24	1.1	27.5	N	-	
Final test [ON-SITE]	Assessment tests	E33 G01 G02 G04 G05 G06 G12 G13 G16 G17 G19 G24	0.2	5	Y	Y	
Writing of reports or projects [OFF-SITE]	Group Work	E33 G01 G02 G04 G05 G06 G07 G08 G10 G12 G13 G16 G17 G19 G24	1.6	40	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study	E33 G01 G02 G04 G05 G06 G07 G08 G10 G12 G13 G16 G17 G19 G24	2	50	N	-	
<b>Total:</b>			<b>6</b>	<b>150</b>			
<b>Total credits of in-class work: 2.4</b>			<b>Total class time hours: 60</b>				
<b>Total credits of out of class work: 3.6</b>			<b>Total hours of out of class work: 90</b>				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System			
Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Final test	85.00%	85.00%	
Projects	15.00%	15.00%	
<b>Total:</b>	<b>100.00%</b>	<b>100.00%</b>	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
<b>Hours</b>	<b>hours</b>
Final test [PRESENCIAL][Assessment tests]	5
Writing of reports or projects [AUTÓNOMA][Group Work]	10
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
<b>Unit 1 (de 5):</b>	
<b>Activities</b>	<b>Hours</b>
Class Attendance (theory) [PRESENCIAL][Lectures]	4
Class Attendance (practical) [PRESENCIAL][Project/Problem Based Learning (PBL)]	7
Study and Exam Preparation [AUTÓNOMA][Self-study]	9
<b>Unit 2 (de 5):</b>	
<b>Activities</b>	<b>Hours</b>
Class Attendance (theory) [PRESENCIAL][Lectures]	6.5
Class Attendance (practical) [PRESENCIAL][Project/Problem Based Learning (PBL)]	8.5
Writing of reports or projects [AUTÓNOMA][Group Work]	10
Study and Exam Preparation [AUTÓNOMA][Self-study]	14
<b>Unit 3 (de 5):</b>	
<b>Activities</b>	<b>Hours</b>
Class Attendance (theory) [PRESENCIAL][Lectures]	8
Class Attendance (practical) [PRESENCIAL][Project/Problem Based Learning (PBL)]	6
Writing of reports or projects [AUTÓNOMA][Group Work]	10
Study and Exam Preparation [AUTÓNOMA][Self-study]	10
<b>Unit 4 (de 5):</b>	
<b>Activities</b>	<b>Hours</b>
Class Attendance (theory) [PRESENCIAL][Lectures]	5
Class Attendance (practical) [PRESENCIAL][Project/Problem Based Learning (PBL)]	4
Study and Exam Preparation [AUTÓNOMA][Self-study]	6
<b>Unit 5 (de 5):</b>	
<b>Activities</b>	<b>Hours</b>
Class Attendance (theory) [PRESENCIAL][Lectures]	4
Class Attendance (practical) [PRESENCIAL][Project/Problem Based Learning (PBL)]	2
Writing of reports or projects [AUTÓNOMA][Group Work]	10
Study and Exam Preparation [AUTÓNOMA][Self-study]	5
<b>Global activity</b>	
<b>Activities</b>	<b>hours</b>

Final test [PRESENCIAL][Assessment tests]	5
Class Attendance (theory) [PRESENCIAL][Lectures]	27.5
Class Attendance (practical) [PRESENCIAL][Project/Problem Based Learning (PBL)]	27.5
Writing of reports or projects [AUTÓNOMA][Group Work]	40
Study and Exam Preparation [AUTÓNOMA][Self-study]	50
<b>Total horas: 150</b>	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Den Hartog, J.P.	Strength of materials	Dover			1961	Resistencia de Materiales
Foces A. y Garrido Jose A.	Foces A. y Garrido Jose A.	Secretariado de Publicaciones Universidad de Valladolid	Valladolid		2011	Resistencia de Materiales
Hanaor, A.	Principles of structures	Blackwell Science			1998	Estructuras en general
Jennings, A.	Structures, from theory to practice	Spon Press	London, UK		2004	Estructuras en general
MacDonald, Angus J.	Structure and architecture	Arquitectural Press			2001	Estructuras en general
Mario Salvatori	Estructuras para Arquitectos	La Isma	Buenos Aires		1976	Estructuras en general
Ortiz Berrocal, L.	Resistencia de materiales	MacGraw-Hill	Madrid		2007	Resistencia de Materiales
Timoshenko S.P, Gere J.M.	Resistencia de materiales	Thomsom			2002	Resistencia de Materiales
Torroja Miret, Eduardo	Razón y ser de los tipos estructurales	CSIC	Madrid		1991	Estructuras en general