



Guía Docente				
Datos Identificativos				2022/23
Asignatura (*)	Análise Estrutural de Edifícios Históricos	Código	630548017d	
Titulación				
Descritores				
Ciclo	Período	Curso	Tipo	Créditos
Mestrado Oficial	2º cuatrimestre	Primeiro	Optativa	3
Idioma	Castelán			
Modalidade docente	Non presencial			
Prerrequisitos				
Departamento	Construcións e Estruturas Arquitectónicas, Cívís e AeronáuticasEnxeñaría Civil			
Coordinación	Martín Gutiérrez, Emilio	Correo electrónico	emilio.martin@udc.es	
Profesorado	Martín Gutiérrez, Emilio	Correo electrónico	emilio.martin@udc.es	
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Descrición xeral	O enfoque da materia oríentase á aplicación práctica dos métodos numéricos en estudos de estabilidade e de comportamento estrutural vinculados a edificacións con valor histórico e obras de rehabilitación en xeral. Desenvólvense así competencias instrumentais útiles en labores periciais ou no momento de valorar comparativamente a incidencia de diferentes alternativas de intervención.			

Competencias / Resultados do título	
Código	Competencias / Resultados do título

Resultados da aprendizaxe			
Resultados de aprendizaxe	Competencias / Resultados do título		
Adquirir coñecementos xenéricos sobre técnicas instrumentais de auscultación e seguimento de construcións históricas.	AP5 AP8		
Profundar no estudo do comportamento mecánico da obra de fábrica e dos modelos que permiten abordar a súa caracterización analítica.	AP5 AP8		
Familiarizarse coa utilización de ferramentas que faciliten as tarefas de inspección e control técnico, e que poidan servir para analizar as repercusións a ter en conta ante unha determinada intervención.	AP5 AP8	BP1 BP2	CP4 CP6 CP12 CP13
Propor unha aproximación ás técnicas de diagnose estrutural de edificacións con valor histórico e obras de rehabilitación en xeral, utilizando aplicacións informáticas baseadas na programación de métodos numéricos.	AP5 AP8	BP1 BP2	CP4 CP6 CP12 CP13
Fomentar o desenvolvemento de capacidades actitudinais de carácter autónomo: tendencia á aprendizaxe continua, habilidade para resolver problemas de forma efectiva, capacidades de análise e síntese, organización e planificación persoal, xestión produtiva da documentación, e utilización de tecnoloxías da información e das comunicacións.		BP4	CP1 CP5

Contidos	
Temas	Subtemas
Principios, técnicas e ferramentas para a toma de datos.	
Complementariedade de técnicas instrumentais e analíticas.	
Comportamento mecánico da obra de fábrica.	
Técnicas de simulación numérica.	

Planificación



Metodoloxías / probas	Competencias / Resultados	Horas lectivas (presenciais e virtuais)	Horas traballo autónomo	Horas totais
Sesión maxistral	A5 B1 B2	12	12	24
Obradoiro	A5 B1 B2 C4 C6 C12 C13	9	13.5	22.5
Solución de problemas	A5 B1 B2 C4 C6 C12 C13	0	5	5
Traballos tutelados	A5 A8 B1 B2 B4 C1 C4 C5 C6 C12 C13	0	22.5	22.5
Atención personalizada		1	0	1

*Os datos que aparecen na táboa de planificación son de carácter orientativo, considerando a heteroxeneidade do alumnado

Metodoloxías	
Metodoloxías	Descrición
Sesión maxistral	Consiste nunha metodoloxía expositiva que, en formato non presencial, canalízase mediante sesións síncronas, utilizando a plataforma de videoconferencias da Universidade, visionado de gravacións, e/ou estudo da documentación aloxada en Moodle.
Obradoiro	Propónse a exercitación mediante prácticas guiadas desenvolvidas con medios informáticos. Contempla a adquisición dunha metodoloxía operativa sobre a base de supostos prácticos cun nivel crecente de complexidade.
Solución de problemas	Propónse probas de carácter práctico, nas que se ha de afrontar situacións problemáticas concretas, deseñadas a partir dos contidos traballados previamente.
Traballos tutelados	A metodoloxía docente oriéntase basicamente segundo o criterio da aprendizaxe na acción, a efectos de potenciar a adquisición de destrezas específicas. Neste contexto cobra protagonismo a elaboración dun traballo amplo, onde conflúen as competencias profesionalizantes da materia, ligadas por tanto á utilización de aplicacións de análise numérica, con outras de carácter transversal, como son, entre outras, a procura de documentación (a miúdo facendo uso de novas tecnoloxías), a organización e planificación de actividades, a xestión da información, ou a expresión oral e escrita. De forma esquemática, distínguense os seguintes pasos: selección do tema, elaboración dun guión de traballo xenérico, exame in situ, reportaxe fotográfica, levantamento planimétrico, localización e consulta de fontes de referencia, construción e axuste de modelos, interpretación de resultados, e redacción dunha memoria final que atenda á totalidade do traballo. Dado o carácter tutelado do mesmo, deben producirse sesións periódicas de seguimento co profesorado, a fin de optimizar ou, no seu caso, reconducir as actividades en curso.

Atención personalizada	
Metodoloxías	Descrición
Traballos tutelados	Dada a especificidade dos contidos ligados á materia, e o diferente nivel de formación informática con que o alumnado pode acceder á mesma, enténdese crucial articular mecanismos de atención personalizada que atendan ás posibles singularidades. A tales efectos, recórrase ao desenvolvemento de tutorías presenciais e consultas a través dos recursos da plataforma virtual.

Avaliación			
Metodoloxías	Competencias / Resultados	Descrición	Cualificación



Traballos tutelados	A5 A8 B1 B2 B4 C1 C4 C5 C6 C12 C13	O seu desenvolvemento enténdese plenamente individual e de natureza non presencial. Para garantir a autoría do traballo, e a adecuada adquisición de competencias, na súa avaliación enténdense relevantes as sucesivas sesións de control, e por tanto o grao de cumprimento con relación ás indicacións formuladas en cada caso polo profesorado. Outros aspectos a valorar son: a profundidade e rigor do desenvolvemento; a procura de fontes de información; as relacións construídas entre os diferentes apartados; as capacidades de análise e síntese; a corrección do estudo metodolóxico, da diagnose construtiva e estrutural, das modelizacións e das oportunas conclusións; a argumentación; e a calidade gramatical, gráfica e técnica da documentación final.	100
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Observacións avaliación

<!--[if gte mso 9]><xml> Normal 0 21 false false false ES X-NONE X-NONE </xml><![endif]--><!--[if gte mso 9]> <![endif]--><!--[if gte mso 10]><style> /* Style Definitions */ table.MsoNormalTable {mso-style-name:"Tabla normal"; mso-tstyle-rowband-size:0; mso-tstyle-colband-size:0; mso-style-noshow:yes; mso-style-priority:99; mso-style-parent:""; mso-padding-alt:0cm 5.4pt 0cm 5.4pt; mso-para-margin:0cm; mso-para-margin-bottom:.0001pt; mso-pagination:none; font-size:11.0pt; font-family:"Calibri",sans-serif; mso-ascii-font-family:Calibri; mso-ascii-theme-font:minor-latin; mso-hansi-font-family:Calibri; mso-hansi-theme-font:minor-latin; mso-bidi-font-family:"Times New Roman"; mso-bidi-theme-font:minor-bidi; mso-ansi-language:EN-US; mso-fareast-language:EN-US;}</style><![endif]--><p>Como nas restantes materias que integran o presente posgrao,esíxese ademais unha asistencia non inferior ao 80% relativa á totalidade das sesións presenciais programadas.
Este requisito non terá efecto cos estudantes que teñan recoñecida unha dedicación a tempo parcial segundo a Norma que regula o réxime de dedicación ao estudo e a permanencia e a progresión de estudantes de grao e máster na UDC.
Cualquier constatación de plaxio ou incumprimento relevante das condicións establecidas para o desenvolvemento de entregas e/ou exámenes, derivará nunha calificación de suspenso (0) na materia e na convocatoria correspondentes, invalidando calquera valoración obtida en todas as actividades de avaliación previas de cara a outras convocatorias.</p><p><!--[if gte mso 9]><xml> Normal 0 21 false false false ES X-NONE X-NONE </xml><![endif]--><!--[if gte mso 9]> --></p>

Fontes de información

Bibliografía básica	<p>Hendry, A.W, 1998. Structural Masonry. Macmillan.</p> <p>León, J., 2000. Planteamiento del análisis estructural. Identificación de modos de fallo y criterios de decisión.</p> <p>Lombillo, I., Villegas, L., Silió, D., Hoppe, C., 2008. Evaluación no destructiva del patrimonio construido. Revista Internacional Construlink 16, 40?53.</p> <p>Macchi, G., 1992. Diagnosis estructural y rehabilitación de edificios históricos, Cuadernos INTEMAC. INTEMAC, Madrid.</p> <p>Martínez, J.L., Martín-Caro, J.A., León, J., 2001. Comportamiento mecánico de la obra de fábrica, Monografías sobre el análisis estructural de construcciones históricas de fábrica. Universidad Politécnica de Madrid, Madrid.</p> <p>Schuller, M.P., 20003. Nondestructive testing and damage assessment of masonry structures. Prog. Struct. Engng Mater. 5, 239?251. doi:10.1002/pse.160</p> <p>Vázquez M., López, E., 2001. El método de los elementos finitos aplicado al análisis estructural. Noela, Madrid.</p> <p>Bibliografía</p>
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Recomendacións

Materias que se recomenda ter cursado previamente

Materias que se recomenda cursar simultaneamente

Materias que continúan o temario

Observacións

<p>Requírense unhas determinadas destrezas na utilización de ferramentas de deseño asistido por computador, así como uns coñecementos elementais sobre as bases teóricas do método de elementos finitos.<p>

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