



| Guía Docente          |   |                    |                      |          |
|-----------------------|---|--------------------|----------------------|----------|
| Datos Identificativos |   |                    |                      | 2022/23  |
| Asignatura (*)        | Análise Estrutural de Edifícios Históricos  | Código             | 630548017            |          |
| Titulación            |   |                    |                      |          |
| Descritores           |   |                    |                      |          |
| Ciclo                 | Período   | Curso              | Tipo                 | Créditos |
| Mestrado Oficial      | 2º cuatrimestre   | Primeiro           | Optativa             | 3        |
| Idioma                | Castelán  |                    |                      |          |
| Modalidade docente    | Presencial  |                    |                      |          |
| Prerrequisitos        |   |                    |                      |          |
| Departamento          | Construcións e Estruturas Arquitectónicas, Civís e AeronáuticasEnxeñaría Civil  |                    |                      |          |
| Coordinación          | Martín Gutiérrez, Emilio  | Correo electrónico | emilio.martin@udc.es |          |
| Profesorado           | Martín Gutiérrez, Emilio  | Correo electrónico | emilio.martin@udc.es |          |
| Web                   | moodle.udc.es   |                    |                      |          |
| 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<br>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<br>AP8                          | BP1<br>BP2 | CP4<br>CP6<br>CP12<br>CP13 |
| Profundar no estudo do comportamento mecánico da obra de fábrica e dos modelos que permiten abordar a súa caracterización analítica.  | AP5<br>AP8                          |            |                            |
| 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<br>AP8                          | BP1<br>BP2 | CP4<br>CP6<br>CP12<br>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<br>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<br>C13             | 9                                       | 13.5                    | 22.5         |
| Solución de problemas  | A5 B1 B2 C4 C6 C12<br>C13             | 0                                       | 5                       | 5            |
| Traballos tutelados    | A5 A8 B1 B2 B4 C1<br>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      | <p>Aplicase unha metodoloxía expositiva complementada mediante medios audiovisuais, co fin de ilustrar significativamente os contidos tratados e de facilitar a súa comprensión.</p> <p>No entanto, e con independencia do anterior, durante as devanditas sesións perséguese alcanzar unha certa cota de participación por parte do alumnado, potenciando a súa implicación, fomentando a retroalimentación do proceso (e por tanto o carácter bidireccional da comunicación), e dinamizando os mecanismos de aprendizaxe mediante técnicas de interacción.</p>  |
| Obradoiro             | <p>Propónse a exercitación mediante prácticas guiadas desenvolvidas con medios informáticos.</p> <p>Contempla a adquisición dunha metodoloxía operativa sobre a base de supostos prácticos cun nivel crecente de complexidade.</p>  |
| Solución de problemas | <p>Propónse probas de carácter práctico, nas que se ha de afrontar situacións problemáticas concretas, deseñadas a partir dos contidos traballados previamente.</p>   |
| Traballos tutelados   | <p>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.</p> |

| Atención personalizada |  |
|------------------------|--|
| Metodoloxías           | Descrición   |
| Traballos tutelados    | <p>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.</p> |

| Avaliación   |                           |            |               |
|--------------|---------------------------|------------|---------------|
| Metodoloxías | Competencias / Resultados | Descrición | Cualificación |
|              |                           |            |               |



|                     |                                       |  |     |
|---------------------|---------------------------------------|--|-----|
| Traballos tutelados | A5 A8 B1 B2 B4 C1<br>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 |
|---------------------|---------------------------------------|--|-----|

### Observacións avaliación

Como nas restantes materias que integran o presente posgra, 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. Cualquie 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.

### Fontes de información

#### Bibliografía básica

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| Recomendacións   |
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| 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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