



## Teaching Guide

| Identifying Data    |                                                                                                                                                                                  |        |                         |         | 2024/25 |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------------------------|---------|---------|
| Subject (*)         | Marine Cargo Surveying                                                                                                                                                           | Code   | 631G01514               |         |         |
| Study programme     | Grao en Náutica e Transporte Marítimo                                                                                                                                            |        |                         |         |         |
| Descriptors         |                                                                                                                                                                                  |        |                         |         |         |
| Cycle               | Period                                                                                                                                                                           | Year   | Type                    | Credits |         |
| Graduate            | 1st four-month period                                                                                                                                                            | Fourth | Optional                | 6       |         |
| Language            | SpanishEnglish                                                                                                                                                                   |        |                         |         |         |
| Teaching method     | Face-to-face                                                                                                                                                                     |        |                         |         |         |
| Prerequisites       |                                                                                                                                                                                  |        |                         |         |         |
| Department          | Ciencias da Navegación e Enxeñaría Mariña                                                                                                                                        |        |                         |         |         |
| Coordinador         | López López, María Natividad                                                                                                                                                     | E-mail | natividad.lopezl@udc.es |         |         |
| Lecturers           | López López, María Natividad                                                                                                                                                     | E-mail | natividad.lopezl@udc.es |         |         |
| Web                 |                                                                                                                                                                                  |        |                         |         |         |
| General description | Capacitar aos alumnos na teoría e práctica da inspección de danos a carga e a determinación da carga embarcada en buques de carga xeral, graneleros e buques de cargas líquidas. |        |                         |         |         |

## Study programme competences / results

| Code | Study programme competences / results                                                                                                                                                        |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A44  | Capacidad para redactar informes técnicos.                                                                                                                                                   |
| A47  | Capacidad para identificar, analizar y valorar averías y daños a la carga del buque y elaborar los informes correspondientes.                                                                |
| B5   | Traballar de forma autónoma con iniciativa.                                                                                                                                                  |
| B14  | Capacidade de análise e síntese.                                                                                                                                                             |
| B16  | Organizar, planificar e resolver problemas.                                                                                                                                                  |
| B22  | Valorar críticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.                                                            |
| C6   | Valorar críticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.                                                            |
| C8   | Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.                                                |
| C12  | Que os estudantes saiban comunicar as súas conclusións e os coñecementos e razóns últimas que as sustentan a públicos especializados e non especializados dun xeito claro e sin ambigüidades |

## Learning outcomes

| Learning outcomes                                                                                                              | Study programme competences / results |     |     |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----|-----|
| Ability to carry out inspections of the condition of a vessel's cargo, identify damage and defects and make condition reports. | A44                                   | B5  | C6  |
| Ability to calculate cargo on board by means of draughts and soundings.                                                        | A47                                   | B14 | C8  |
| Knowledge of cargo securing systems and means of securing cargo.                                                               |                                       | B16 | C12 |
|                                                                                                                                |                                       | B22 |     |

## Contents

| Topic | Sub-topic |
|-------|-----------|
|       |           |



|                               |                                                                                                                                                                                                                                                                               |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solid bulk cargoes            | <p>Determination of the quantity of cargo loaded</p> <p>Calculation by draft</p> <p>Grain calculations</p> <p>Spreadsheet usage</p> <p>Hold preparation and cleaning</p> <p>Hold humidity and ventilation</p> <p>Cargo segregation</p> <p>Hatches.</p> <p>Tightness tests</p> |
| General cargo and other cargo | <p>General cargo</p> <p>Steel products</p> <p>Wood and forest products</p> <p>Food products</p> <p>Cargo plans</p>                                                                                                                                                            |
| Special cargoes               | <p>Heavy loads</p> <p>Roll-on/roll-off cargo</p> <p>Refrigerated cargo</p> <p>Livestock transport</p> <p>Dangerous goods</p>                                                                                                                                                  |
| Bulk liquids                  | <p>Petroleum Transportation: Load Calculations</p> <p>Petroleum products and chemicals: Load calculations</p> <p>Liquefied Gases: Load Calculations</p>                                                                                                                       |
| Damages and claims            | <p>Pre-loading cargo survey</p> <p>Loading plan and stowage plan</p> <p>Cargo damage and types of damage: deformation, temperature, contamination, dust and stains, rust, humidity, rats and mice, insects, pilferage, sweepings.</p>                                         |
| Stowage and lashing of cargo  | <p>Code of Safe Practices for Cargo Stowage and Securing (CSS Code)</p> <p>Lashing devices: specifications and safety instructions.</p> <p>Forces acting on a unit load.</p> <p>Calculation procedures</p>                                                                    |

## Planning

| Methodologies / tests          | Competencies / Results | Teaching hours (in-person & virtual) | Student's personal work hours | Total hours |
|--------------------------------|------------------------|--------------------------------------|-------------------------------|-------------|
| Problem solving                | A44 B22                | 15                                   | 45                            | 60          |
| Objective test                 | B16 C6 C8              | 2                                    | 6                             | 8           |
| Case study                     | B5 B14                 | 11                                   | 22                            | 33          |
| ICT practicals                 | C12                    | 2                                    | 2                             | 4           |
| Guest lecture / keynote speech | A47                    | 15                                   | 30                            | 45          |
| Personalized attention         |                        | 0                                    |                               | 0           |

(\*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

## Methodologies

| Methodologies   | Description                                                                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Problem solving | O alumnado terá que resolver os problemas sobre estiba e trincaxe da carga                                                                                                      |
| Objective test  | Cando remate o curso o alumno terá que realizar un exame sobre os contidos teóricos da materia e dos problemas de cálculos de cargas sólidas e líquidas e de trincaxe da carga. |
| Case study      | Problemas de cálculo relacionados cos contidos da materia.                                                                                                                      |
| ICT practicals  | Resolución dos problemas que se suban ao Moodle                                                                                                                                 |



|                                |                                  |
|--------------------------------|----------------------------------|
| Guest lecture / keynote speech | Exposición dos temas de materia. |
|--------------------------------|----------------------------------|

### Personalized attention

| Methodologies   | Description                                                                                                   |
|-----------------|---------------------------------------------------------------------------------------------------------------|
| Problem solving | Para a resolución dos problemas propostos, o estudante pode acudir ás tutorías que se habiliten para tal fin. |

### Assessment

| Methodologies   | Competencies / Results | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Qualification |
|-----------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Problem solving | A44 B22                | Os criterios de avaliación contemplados nos cadros A-II/1, A-II/2, A-III/1 y A-III/2 do Código STCW e as súas enmendadas relacionados con esta materia teranse en conta á hora de deseñar e realizar a súa avaliación.                                                                                                                                                                                                                                                                    | 20            |
| Objective test  | B16 C6 C8              | Os criterios de avaliación contemplados nos cadros A-II/1, A-II/2, A-III/1 y A-III/2 do Código STCW e as súas enmendadas relacionados con esta materia teranse en conta á hora de deseñar e realizar a súa avaliación.<br>O exame final global, como avaliación única, consistirá nunha proba composta dunha parte teórica e outra de resolución de problemas con valoración independente, sendo necesario obter un mínimo de 5 puntos en cada unha: a) teórica (50%); b) práctica (50%). | 70            |
| ICT practicals  | C12                    | Os criterios de avaliación contemplados nos cadros A-II/1, A-II/2, A-III/1 y A-III/2 do Código STCW e as súas enmendadas relacionados con esta materia teranse en conta á hora de deseñar e realizar a súa avaliación.                                                                                                                                                                                                                                                                    | 10            |

### Assessment comments

Para poder ser evaluado en la solución de problemas y las práctica a través de TIC, es necesario tener una asistencia a clase del 80% como mínimo.

O alumnado con recoñecemento de dedicación a tempo parcial e dispensa académica de exención de asistencia, segundo establece a "NORMA QUE REGULA O RÉXIME DE DEDICACIÓN AO ESTUDO DOS ESTUDANTES DE GRAO NA UDC (Arts. 2.3; 3.b; 4.3 e 7.5) (04/05/2017) poderá realizar as probas parciais, se as houber, sen necesidade de asistir o 80% das clases presenciais, sempre e cando os profesores sexan debidamente informados ao principio do curso. Sen menoscabo do anterior, os profesores poderán encargarlle a este alumnado diferentes traballos/problemas ó longo do curso para ser expostos en horario de tutorías.

Fraudulent performance of assessment tests or activities, once verified, will directly lead to a failing grade in the exam session in which it is committed: the student will be graded with a "fail" (numerical grade 0) in the corresponding exam session of the academic year, whether the fault is committed at the first or second opportunity. For this, the student's grade will be modified in the first opportunity report, if necessary.

### Sources of information



|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Basic</b>         | <ul style="list-style-type: none"><li>- Andersson, Peter. (1982). Safe stowage and securing of cargo on board ships . Göteborg : MariTerm</li><li>- Bliaut, Charles (2008). Deck stowage and securing of pipes . Newcastle upon Tyne : North of England P&amp;I Association</li><li>- Costa, Juan B. (2008). Tratado de estiba . Sant Francesc de Formentera : Estudios Náuticos Costa</li><li>- Germanischer Lloyd. (2000). Special equipment . Hamburg : Germanischer Lloyd</li><li>- González Blanco, Ricardo. (2006). Manual de estiba para mercancías sólidas.. Barcelona : UPC</li><li>- IMO (2011). Code of Practice for the Safe Loading and Unloading of Bulk Carrier. London: IMO</li><li>- IMO (2011). Code of Safe Practice for Cargo Stowage and Securing. London: IMO</li><li>- IMO (1991). Code of Safe Practice for Ships Carrying Timber Deck Cargoes. London: IMO</li><li>- IMO (1991). International Code for the Safe Carriage of Grain in Bulk. London: IMO</li><li>- Isbeter, J. (2010). Bulk Carrier Practice . London: The Nautical Intitute</li><li>- Meurn, Robert J. (2011). Marine cargo operations : a guide to stowage . Atglen, Pennsylvania : Cornell Maritime</li><li>- Louzán, Felipe (2016). Estiba de Cargas Sólidas. A Coruña, Cartamar</li><li>- Louzán, Felipe (2020). Manual de Buques Petroleros. A Coruña, Cartamar</li><li>- Thomas, R.E. (2012). Thomas' Stowage. The properties and stowage of rhe cargoes. Glasgow: Brown, Son &amp; Ferguson</li><li>- Ventosa, F. (1998). Seamaship (Cargo Hanling and Sstowage) 2. Manila: Rex Book Sstores Inc.</li></ul> |
| <b>Complementary</b> | <br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

#### Recommendations

Subjects that it is recommended to have taken before

Subjects that are recommended to be taken simultaneously

Subjects that continue the syllabus

Other comments

(\*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.