



## Teaching Guide

| Identifying Data       |  |       |            |           | 2022/23 |
|------------------------|--|-------|------------|-----------|---------|
| Subject (*)            | Inglés Técnico Marítimo  |       | Code       | 631311110 |         |
| Study programme        | Licenciado en Máquinas Navais  |       |            |           |         |
| Descriptors            |  |       |            |           |         |
| Cycle                  | Period   | Year  | Type       | Credits   |         |
| First and Second Cycle | Yearly   | First | Obligatory | 5         |         |
| Language               | English  |       |            |           |         |
| Teaching method        | Face-to-face   |       |            |           |         |
| Prerequisites          |  |       |            |           |         |
| Department             | Letras   |       |            |           |         |
| Coordinador            |  |       | E-mail     |           |         |
| Lecturers              |  |       | E-mail     |           |         |
| Web                    |  |       |            |           |         |
| General description    | Esta asignatura se centra en la práctica de las cuatro destrezas lingüísticas en el contexto técnico-marítimo. |       |            |           |         |

## Study programme competences / results

| Code | Study programme competences / results |
|------|---------------------------------------|
|      |                                       |

## Learning outcomes

| Learning outcomes | Study programme competences / results |
|-------------------|---------------------------------------|
|                   |                                       |

## Contents

| Topic                              | Sub-topic  |
|------------------------------------|--|
| 1 Introduction to Maritime English | 1 Introduction to Maritime English<br>2 Numbers in the maritime context: numbers, fractions, decimals, percentages, dates, calculations, measurements, distances, speed, tonnage, time at sea  |
| 2 Ships and machinery: An Overview | 1 Ships<br>2 Machinery: arrangement; slow-speed diesel, medium-speed diesel; steam turbine; operations and maintenance   |
| 3 Diesel engines                   | 1 The two-stroke engine and its cycle<br>2 The four-stroke engine and its cycle<br>3 Comparison<br>4 Power measurement<br>5 The gas exchange process<br>6 Fuel oil system<br>7 Lubrication<br>8 Cooling<br>9 Starting air system<br>10 Control and safety devices<br>11 Operating procedures |
| 4 Steam turbines and gearing       | 1 Turbine types<br>2 Astern arrangements<br>3 Gearing<br>4 Operating procedures  |



|  |   |
|--|---|
| 5 Boilers  | <ol style="list-style-type: none"><li>1 Boiler types</li><li>2 Other boiler arrangements</li><li>3 Combustion</li><li>4 Purity of boiler feed water</li><li>5 Boiler operation</li></ol>  |
| 6 Feed systems                                     | <ol style="list-style-type: none"><li>1 Open feed systems</li><li>2 Closed feed systems</li><li>3 Auxiliary feed system</li><li>4 System components</li></ol>   |
| 7 Pumps and pumping systems                        | <ol style="list-style-type: none"><li>1 Pumps</li><li>2 Pump types: displacement, axial flow and centrifugal</li><li>3 Piping systems</li><li>4 Bilge and ballast systems</li></ol>   |
| 8 Auxiliaries                                      | <ol style="list-style-type: none"><li>1 Air compressor</li><li>2 Heat exchangers</li><li>3 Distillation systems</li><li>4 Oil/water separators</li><li>5 Sewage treatment</li><li>6 Incinerator</li></ol>   |
| 9 Fuel oils, lubricating oils and their treatment  | <ol style="list-style-type: none"><li>1 Fuel oils</li><li>2 Lubricating oils</li><li>3 Oil treatment</li><li>4 Homogenisers</li><li>5 Blenders</li><li>6 Filters and strainers</li><li>7 Microbiological infestation</li></ol>  |
| 10 Refrigeration, air conditioning and ventilation | <ol style="list-style-type: none"><li>1 Refrigeration: refrigerants, system components; Cargo refrigeration</li><li>2 Air conditioning</li><li>3 Ventilation</li></ol>  |
| 11 Deck machinery and hull equipment               | <ol style="list-style-type: none"><li>1 Steam</li><li>2 Hydraulic systems</li><li>3 Electrical operation</li><li>4 Cargo handling equipment</li><li>5 Hatch covers</li><li>6 Stabilising systems</li><li>7 Watertight doors</li><li>8 Bow thruster</li><li>9 Safety equipment</li></ol> |
| 12 Shafting and propellers                         | <ol style="list-style-type: none"><li>1 Thrust block</li><li>2 Shaft bearing</li><li>3 Sterntube bearing</li></ol>  |
| 13 Steering gear                                   | <ol style="list-style-type: none"><li>1 Variable delivery pumps</li><li>2 Telemotor control</li><li>3 Electrical control</li><li>4 Power units</li><li>5 All-electric steering</li><li>6 Twin system steering gears</li><li>7 Steering gear testing</li></ol>                           |



|   |   |
|---|---|
| 14 Fire fighting and safety             | <ul style="list-style-type: none"> <li>1 Detection</li> <li>2 Fire fighting equipment</li> <li>3 Fire fighting strategy</li> <li>4 Safe working practices</li> </ul>  |
| 15 Electrical equipment                 | <ul style="list-style-type: none"> <li>1 Direct current generators</li> <li>2 Alternate current generators</li> <li>3 Alternating current motors</li> <li>4 Batteries</li> <li>5 Emergency generator supply</li> <li>6 Navigation lights</li> <li>7 Insulation resistance measurement</li> <li>8 Electrical hazards</li> </ul>  |
| 16 Instrumentation and control          | <ul style="list-style-type: none"> <li>1 Pressure measurement</li> <li>2 Temperature measurement</li> <li>3 Level measurement</li> <li>4 Flow measurement</li> <li>5 Other variables</li> <li>6 Control theory</li> <li>7 Transmitters</li> <li>8 Controller action</li> <li>9 Controllers</li> <li>10 Correcting unit</li> <li>11 Control systems</li> <li>12 Centralized control</li> <li>13 Unattended machinery spaces</li> <li>14 Bridge control</li> <li>15 Integrated control</li> </ul> |
| 17 Engineering materials                | <ul style="list-style-type: none"> <li>1 Material properties</li> <li>2 Testing of materials</li> <li>3 Iron and steel production</li> <li>4 Heat treatment</li> <li>5 Material forming</li> <li>6 Common metals and alloys</li> <li>7 Non-metallic materials</li> <li>8 Joining metals</li> <li>9 Corrosion</li> </ul>   |
| 18 Watchkeeping and equipment operation | <ul style="list-style-type: none"> <li>1 The Engineering Department</li> <li>?The watchkeeping system</li> <li>?Operating the watch</li> <li>2 Bunkering</li> <li>3 Periodic and safety routines</li> </ul>   |

**Planning**

| Methodologies / tests | Competencies / Results | Teaching hours (in-person & virtual) | Student's personal work hours | Total hours |
|-----------------------|------------------------|--------------------------------------|-------------------------------|-------------|
| Glossary              |                        | 5                                    | 10                            | 15          |
| Diagramming           |                        | 6                                    | 12                            | 18          |
| Workbook              |                        | 10                                   | 20                            | 30          |
| Student portfolio     |                        | 3                                    | 6                             | 9           |
| Objective test        |                        | 2                                    | 0                             | 2           |



|                                |  |    |    |    |
|--------------------------------|--|----|----|----|
| Guest lecture / keynote speech |  | 15 | 15 | 30 |
| Multiple-choice questions      |  | 2  | 2  | 4  |
| Collaborative learning         |  | 5  | 10 | 15 |
| Personalized attention         |  | 2  | 0  | 2  |

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

| Methodologies                  |   |
|--------------------------------|---|
| Methodologies                  | Description   |
| Glossary                       | El alumno elaborará un glosario a lo largo del curso.           |
| Diagramming                    | Se harán esquemas de las lecturas e incluirán en el portafolio. |
| Workbook                       | Lecturas de textos técnicos                                     |
| Student portfolio              | Incluirá esquemas y distintos trabajos.                         |
| Objective test                 | Examen final.   |
| Guest lecture / keynote speech | Clases magistrales para introducir conceptos claves.            |
| Multiple-choice questions      | Controles relacionados con las lecturas.                        |
| Collaborative learning         | Trabajos en parejas sobre una unidad del temario.               |

| Personalized attention |   |
|------------------------|---|
| Methodologies          | Description   |
|                        | <p>OBJETIVOS:Dotar al alumno de una base amplia en terminología básica relacionada con las instalaciones y maquinaria propia del buque así como de una competencia comunicativa hablada, escrita y comprensible que le permita redactar correspondencia comercial y técnica utilizando términos comerciales así como abreviaturas y expresiones propias del mundo marítimo en el que se desarrollará su actividad. Se incluyen técnicas de planificación de la escritura, condensación de la información, ordenación lógica de la misma, técnicas para la utilización de correspondencia comercial e informes técnicos así como diversos procedimientos recomendados por la Organización Marítima Internacional (International Maritime Organization ?I.M.O.?) para la formación de Marineros.El curso desarrollará las capacidades de los alumnos para la utilización del idioma a un nivel medio / alto con el empleo de terminología propia de Inglés Marítimo hasta alcanzar un nivel que les permita la comprensión y utilización de la lengua acorde con los requisitos de la ?International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STWC)?Adquisición de conocimientos suficientes del idioma Inglés de modo que el oficial pueda utilizar e interpretar correctamente las publicaciones sobre maquinaria naval y desempeñar sus funciones.</p> |

| Assessment                     |                        |  |               |
|--------------------------------|------------------------|--|---------------|
| Methodologies                  | Competencies / Results | Description                                      | Qualification |
| Diagramming                    |                        | Ver descripción en Metodologías.                 | 10            |
| Glossary                       |                        | Ver descripción en Metodologías.                 | 5             |
| Collaborative learning         |                        | Ver descripción en Metodologías.                 | 10            |
| Workbook                       |                        | Ver descripción en Metodologías.                 | 10            |
| Student portfolio              |                        | Ver descripción en Metodologías.                 | 5             |
| Objective test                 |                        | Ver descripción en Metodologías.                 | 40            |
| Guest lecture / keynote speech |                        | Asistencia y participación                       | 10            |
| Multiple-choice questions      |                        | Ver descripción en Metodologías.<br>Dos pruebas. | 10            |
| Others                         |                        |  |               |



Assessment comments

Sources of information



|                             |  |
|-----------------------------|--|
| <p><b>Basic</b></p>         | <p>- Taylor, D. (2003). Introduction to Marine Engineering. Oxford, Elsevier</p> <p>- McGeorge, H.D. (2002). Marine Auxiliary Machinery. Oxford, Elsevier</p> <p>- (). www.marineinsight.com.</p> <p>BIBLIOGRAFÍA BÁSICA DE LA ASIGNATURA: · English for Maritime Commerce. Joaquín Buelga ? David Wilson. COMME. · TN BLAKEY. English for Maritime Studies. Prentice / Hall International · BARK, M.A. English for Nautical Students. Brown, Son &amp; Ferguson · LOPEZ E., SPIEGELBERG, J.M. &amp; CARRILO, F. Inglés Técnico Naval. Universidad de Cádiz. · WEEKS, F.F et al. Seaspeak Reference Manual. Pergamon. · WEEKS, F.F. et al Seaspeak Training Manual. Pergamon · WEEKS, F.F. Walvelength. Alhambra. · I.M.O. Standard Marine Communication Phrases · English for Seamen. A.E. Bruce. María del Carmen Aguirre. · Essential Grammar in use. Raymond Murphy. Cambridge University Press · First English Grammar. C. Blissett K. Hallgarten. Language Teaching Publications. · Writing Remedies. Practical Exercises for Technical writing. Edmond H. Weiss. Oryx Press. · Rea?s handbook of English grammar, Style and writing. Research &amp; Education Association. · 501 Grammar &amp; writing questions. Learning Express, LLC · Grammar with Laughter. George Woolard. Language Teaching Publications. · Elementary English Grammar. Digby Beaumont. Macmillan Heinemann. · Key words in Science &amp; Technology. Bill Mascull. Collins Cobuild. · One minute Guide to the Nautical Rules of the road. Charlie Wing. International Marine Ragged Mountain Press. · Longman English Grammar. L.G. Alexander. Longman. · Longman English Grammar Practice, L.G. Alexander. Longman. · Practical English Usage. Michael Swan. Oxford University Press. · Commercial Correspondence. Oxford University Press. A. Ashley. BIBLIOGRAFÍA TÉCNICA · Seaspeak Training Manual. Essential English for International use in Maritime Communications principally by VHF radio. Weeks, Glover, Johnson, Strevens. · Swindells, N.S. (de) Glossary of Maritime Technology Terms. London, Institute of Marine Engineers. · International Shipping Federation, on board training record for Deck cadets. Edition 2.1 London, Marisec. · International Shipping Fderation, On board training record book for Engineer Cadets. Edition 2.1, London, Marisec. · Bridge Procedures Guide. London, Marisec. · International Chamber of Shipping, Guide to helicopter / ship operations. London, Witherby &amp; Co., Ltd. · International Chamber of Shipping, International Shipping Federation, West of England P &amp; I club, Stay safe: don?t be a Statistic. London, Marisec. · Guidelines on the application of the IMO International Safety Management (ISM) Code. London, International Chamber of Shipping, International Shipping Federation · International Chamber of Shipping, International Shipping Federation, Assessment and Development of Safe Management Systems. London, Marisec. · ILO / IMO / WHO International Medical Guide for Ships (IMGS) Geneva, World Health Organisation. · International Chamber of Shipping, International Shipping Federation, Pirates and Armed Robbers. London Marisec. · International Chamber of Shipping. Drug Trafficking &amp; Drug Abuse: Guidelines for Owners and Masters on recognition and detection. London, Witherby &amp; Co. Ltd. · International Chamber of Shipping, Garbage Management Plans. London Marisec. · International Chamber of Shipping, Shipping and the Environment: A code of practice. London, Marise</p> <p>OTROS LIBROS DE CONSULTA: · Chriss, M. &amp; Hayes, G.R. An Introduction to Charters and their use. Department of Transport. The ship Captain?s Medical Guide. HMSO. · FOWLER, J. Reed?s Mediterranean Navigator. Thomas Reed Publications Ltd. · SULLIVAN, E. The Marine Encyclopaedic Dictionary. Lloyd?s of London Press Ltd. · TAYLOR, D.A. Introduction to Marine Engineering. Butterworths. · TAYLOR, D.A. Dictionary of Marine Technology. Butterworths. · J. ALFARO PÉREZ. Diccionario Marítimo y de construcción Naval. Ediciones Garriga, S.A. · LUIS SUÁREZ GIL. Diccionario Técnico Marítimo. Editorial Alhambra, S.A. · FEDERICO BEIGBEDEN ATIENZA. Diccionario Politécnico de las lenguas Española e Inglesa. Ediciones Díaz Santos, S.A. · The Boater?s book of nautical terms. David S. Yetman. Bristol Fashion Publications. · An ocean of words. A dictionary of nautical words and phrases. Peter D. Jeans. Published by Carol Publishing Group. · Collins Cobuild English Language Dictionary. Collins. Suffolk</p> |
| <p><b>Complementary</b></p> | <p>Se ampliará la bibliografía cuando proceda.</p>   |

## Recommendations



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| 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.