



Teaching Guide

| Identifying Data | | | | | 2021/22 |
|----------------------------|--|---------------|---|----------------|---------|
| Subject (*) | Collision Rules, Signals, Bouyage Systems and ISM Code | | Code | 631G01303 | |
| Study programme | Grao en Náutica e Transporte Marítimo | | | | |
| Descriptors | | | | | |
| Cycle | Period | Year | Type | Credits | |
| Graduate | 1st four-month period | Third | Obligatory | 6 | |
| Language | English | | | | |
| Teaching method | Face-to-face | | | | |
| Prerequisites | | | | | |
| Department | Ciencias da Navegación e Enxeñaría Mariña | | | | |
| Coordinador | Campa Portela, Rosa Mary de la | E-mail | rosa.mary.campa@udc.es | | |
| Lecturers | Campa Portela, Rosa Mary de la López López, María Natividad | E-mail | rosa.mary.campa@udc.es natividad.lopezl@udc.es | | |
| Web | | | | | |
| General description | The student will acquire the skills to perform a safe navigation watchkeeping in relation to knowledge and use of regulations to prevent collisions at sea, the different signaling and IALA systems. Likewise, it will acquire the competencies for the management of on-board operational safety through the knowledge of the ISM code as well as the management of human resources on board. | | | | |
| Contingency plan | <p>1. Modifications to the contents No changes are made</p> <p>2. Methodologies *Teaching methodologies that are maintained Case study: Study of situations related to the navigational watch and the bridge resources management ICT Practicals: Solving problems and exercises to re-affirm what has been learned through the use of several apps. Solving problems: A series of activities will be proposed that students will have to complete in their self-learning time using ICT</p> <p>*Teaching methodologies that are modified Keynote Speech: Master class will be scheduled through TEAMS adapting to the requirements of the students and the subject. Objective test: The objective test will consist of a synchronous telematic test on the contents developed in the subject.</p> <p>3. Mechanisms for personalized attention to students Moodle, TEAMS and email synchronously during class and tutorials. Asynchronously during school hours</p> <p>4. Modifications in the evaluation Problem solving (20) The delivery of the activities proposed in this section will be evaluated Case study (10) The delivery of the activities proposed in this section will be evaluated ICT Practicals (20) The delivery of activities through FORMS proposed in this section will be evaluated Objective test (50) Completion of a synchronous telematic questionnaire.</p> <p>*Evaluation observations: Given that there are no restrictions or minimum results for passing the subject, and in anticipation of the unequal participation of students in monitoring it, mainly in the proposed continuous assessment activities, it is necessary to establish an objective test that allows All students must be evaluated on equal terms to pass the subject.</p> <p>5. Modifications to the bibliography or webgraphy No modifications are made. All the necessary material to pass the course is available in Moodle, as well as links to web pages of interest, if any.</p> | | | | |

Study programme competences / results

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



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|-----|---|
| A1 | Controlar as boas prácticas de seguridade e saúde no traballo. |
| A11 | Empregar o inglés, falado e escrito, aplicado á navegación e ao negocio marítimo. |
| A15 | Realizar unha garda de navegación segura. |
| A16 | Manter a seguridade da navegación utilizando o radar, a ARPA e os modernos sistemas de navegación para facilitar a toma de decisións. |
| A17 | Adoptar as medidas axeitadas en casos de emerxencias. |
| A20 | Transmitir e recibir información mediante todo tipo de sinais. |
| A29 | Responder correctamente ás diferentes situacións de emerxencia. |
| A35 | Organizar e dirixir a tripulación aplicando técnicas de liderazgo e de traballo en equipo. |
| B2 | Resolver problemas de xeito efectivo. |
| B4 | Comunicarse de xeito efectivo nun ámbito de traballo. |
| B6 | Traballar de forma colaboradora. |
| B11 | Capacidade de adaptación a novas situacións. |
| B14 | Capacidade de análise e síntese. |
| B16 | Organizar, planificar e resolver problemas. |
| B18 | Dominar a expresión e a comprensión de forma oral e escrita dun idioma estranxeiro. |
| B19 | Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida. |
| B22 | Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben afrontarse. |
| C6 | Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben afrontarse. |
| C11 | Que os estudantes sexan capaces de integrar coñecementos e afrontarse á complexidade de formular xuízos a partires dunha información que, sendo incompleta ou limitada, inclúa reflexións sobre as responsabilidades sociais e éticas vencelladas á aplicación dos seus coñecementos e xuízos |
| 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 | | |
| Realizar eficazmente las maniobras del buque en navegación. Ser capaz de analizar la información de los aparatos del puente para una mejor toma de decisiones | A11 | B2 B4 B11 B14 B16 B18 B19 B22 | C6 C11 C12 |
| Conocer el Reglamento internacional para prevenir los abordajes en la mar, el sistema de Balizamiento IALA, el Código internacional de señales y el Código ISM. | A17 A29 A35 | B11 B14 B19 | C6 |
| Evaluar situaciones de peligro, aplicar las reglas de navegación. | A11 | B6 B14 | C6 |
| Mejorar la gestión de la seguridad del buque, elaborar las listas de comprobación del sistema de gestión, elaborar informes de seguridad, accidentes etc | A1 A17 A29 A35 | B2 B4 | C6 |
| Realizar una guardia de navegación segura. | A15 | | |
| Mantener la seguridad de la navegación utilizando el radar, el ARPA y los modernos sistemas de navegación para facilitar la toma de decisiones. | A16 | | |
| Transmitir y recibir información mediante todo tipo de señales. | A20 | | |



| Contents | |
|---|---|
| Topic | Sub-topic |
| WATCHKEEPING | <p>Knowledge of the content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, as amended</p> <p>Knowledge of the Principles to be observed in keeping a navigational watch</p> <p>The use of routing in accordance with the General Provisions on Ships? Routing</p> <p>The use of information from navigational equipment for maintaining a safe navigational watch</p> <ul style="list-style-type: none"> - Knowledge of blind pilotage techniques - The use of reporting in accordance with the General Principles for Ship Reporting Systems and with VTS procedures |
| COLREGS I | <p>Part A - General</p> <p>Part B - Steering and Sailing</p> <p>Section 1 - Conduct of vessels in any condition of visibility (Rules 4-10)</p> <p>Section II - Conduct of vessels in sight of one another (Rules 11-18)</p> <p>Section III - conduct of vessels in restricted visibility (Rule 19)</p> <p>Part C - Lights and Shapes</p> <p>Part D - Sound and Light signals</p> <p>Part E - Exemptions.</p> |
| COLREGS II | <p>Annex I - Positioning and technical details of lights and shapes.</p> <p>Annex II - Additional signals for fishing vessels fishing in close proximity.</p> <p>Annex III - Technical details of sounds signal appliances</p> <p>Annex IV - Distress signals, which lists the signals indicating distress and need of assistance.</p> |
| <p>International Code of Signals</p> <p>The Morse Code</p> <p>International Flags and Pennants</p> <p>Single letter signals</p> | <p>Visual signaling</p> <p>Ability to use the International Code of Signals - Ability to transmit and receive light signals in Morse, SOS distress signals as specified in Annex IV of the International Regulations to Prevent Collisions, 1972, as amended, and in Appendix 1 of the International Code of Signals, and one-letter visual cues, also specified in the International Code of Signals</p> |
| IALA MARITIME BUOYAGE SYSTEM | <p>Lateral Marks Region A</p> <p>Lateral Marks Region B</p> <p>Direction of Buoyage</p> <p>Cardinal Marks</p> <p>Isolated Danger Marks</p> <p>Safe Water Marks</p> <p>Special Marks</p> <p>Chart symbols and abbreviations</p> |



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| INTERNATIONAL SAFETY MANAGEMENT CODE | <p>Unit 1: Introduction to IMO and ILO.</p> <p>Unit 2: Safety and security prevention and protection. ISM Code and ISPS Code.</p> <p>Unit 3: Ship safety responsibilities.</p> <p>Unit 4: ISM Code: definition, structure, safety policy, ship-owner communication, captain responsibilities. Master authority and leadership.</p> <p>Unit 5: ISM Resources and personnel, human factors- human error. Team work, communication, cultural awareness.</p> <p>Unit 6: ISM Code: Preventive maintenance</p> <p>Unit 7: ISM Code: Procedures (operation, emergency, non-conformities, accident report and accident investigation). Work organization.</p> <p>Unit 8: ISM Code: Company verification and certification.</p> |
| <p>The development and overcoming of these contents, together with those corresponding to other subjects that include the acquisition of specific competencies of the degree, guarantees the knowledge, comprehension and sufficiency of the competencies contained in Table AII / 2, of the STCW Convention, related to the level of management of chief mates of the Merchant Navy, on ships without gross tonnage limitation and Master up to a maximum of 3.000 GT.</p> | <p>Table A-II / 2 of the STCW Convention.</p> <p>Mandatory minimum requirements for certification of masters and chief mates on chief on ships of 500 gross tonnage or more.</p> |

| Planning | | | | |
|--------------------------------|--|--------------------------------------|-------------------------------|-------------|
| Methodologies / tests | Competencies / Results | Teaching hours (in-person & virtual) | Student?s personal work hours | Total hours |
| Case study | A29 B22 | 7 | 7 | 14 |
| Directed discussion | B2 C12 | 6 | 6 | 12 |
| Objective test | A1 B11 | 1 | 1 | 2 |
| Collaborative learning | A11 A15 A17 A20 A35 B4 B6 B14 B16 B18 B19 C6 C11 | 8 | 8 | 16 |
| ICT practicals | A16 B2 B19 C6 | 10 | 10 | 20 |
| Guest lecture / keynote speech | A1 A11 A15 A17 A20 A29 A35 B4 B18 | 40 | 40 | 80 |
| Personalized attention | | 6 | 0 | 6 |

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

| Methodologies | |
|--------------------------------|---|
| Methodologies | Description |
| Case study | study of situations related to the navigation watchkeeping and the management of human resources |
| Directed discussion | Accident/incident reports review on class discussion |
| Objective test | Final exam |
| Collaborative learning | Use of different collaborative learning methods in the classroom |
| ICT practicals | Problem solving and exercises to reaffirm what has been learned in the classroom through the use of various apps. |
| Guest lecture / keynote speech | Teachers classes |

| Personalized attention | |
|------------------------|-------------|
| Methodologies | Description |



| | |
|--|------------------------------|
| Guest lecture / keynote speech ICT practicals Directed discussion Case study Objective test | As per teachers instructions |
|--|------------------------------|

| Assessment | | | |
|------------------------|--|---|---------------|
| Methodologies | Competencies / Results | Description | Qualification |
| Directed discussion | B2 C12 | Realization and delivery of at least 80% of the activities in this section in the classroom | 5 |
| Case study | A29 B22 | Realization and delivery of at least 80% of the activities in this section in the classroom | 10 |
| Objective test | A1 B11 | Final written exam | 80 |
| Collaborative learning | A11 A15 A17 A20 A35 B4 B6 B14 B16 B18 B19 C6 C11 | Realization and delivery of at least 80% of the activities in this section in the classroom | 5 |

| Assessment comments |
|--|
| <p>The attendance at least 80% of the classes and delivery of at least 80% of the activities carried out in the classroom gives the student the right to take the pre-final exam. Students who do not attend class and / or do not turn in the corresponding activities must take the final exam to pass the subject. In this case the final exam will be evaluated out of 100.</p> <p>The ISM Code topic will have a weighting of 40% of the final grade. It is essential to pass both parts to pass the subject.</p> <p>Students with part-time enrollment and academic grant of attendance exemption, as established by the "NORMA QUE REGULA EL RÉGIMEN DE DEDICACIÓN AL ESTUDIO DE LOS ESTUDANTES DE GRADO Y MASTER EN LA UDC (Arts. 2.3; 3.b; 4.3 and 7.5) (05/04/2017) may take the mid-term exams, if any, without having to attend 80% of the face-to-face classes, as long as the professors are duly informed at the beginning of the course. Regardless of the foregoing, the professors may assign these students with different assignments/ problems throughout the course to be presented during tutorials, using the TEAMS system if appropriate in the teacher's opinion.</p> <p>The assessment criteria reflected on table A-II/1 of the STCW Code, and also reflected in the Quality System, are taken into account to design and perform the assessment.</p> |

| Sources of information | |
|------------------------|--|
| Basic | <ul style="list-style-type: none"> - IMO (). INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA. - IALA (). MARITIME BUOYAGE SYSTEM. IALA - IMO (). INTERNATIONAL CODE OF SIGNALS. - IMO (). ISM CODE. |
| Complementary | |

| 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.