

## SUBJECT TEACHING GUIDE

G1050 - Navigation II

Degree in Nautical Engineering and Maritime Transport

Academic year 2021-2022

| 1. IDENTIFYING DATA              |   |                  |                    |                  |                    |
|----------------------------------|---|------------------|--------------------|------------------|--------------------|
| Degree                           | Degree in Nautical Engineering and Maritime Transport |                  |                    | Type and Year    | Compulsory. Year 2 |
| Faculty                          | School of Maritime Engineering                        |                  |                    |                  |                    |
| Discipline                       | Subject Area: Navegation                              |                  |                    |                  |                    |
| Course unit title and code       | G1050 - Navigation II                                 |                  |                    |                  |                    |
| Number of ECTS credits allocated | 6   | Term             | Semester based (2) |                  |                    |
| Web                              |   |                  |                    |                  |                    |
| Language of instruction          | Spanish   | English Friendly | No                 | Mode of delivery | Face-to-face       |

|                  |   |  |  |  |  |
|------------------|---|--|--|--|--|
| Department       | DPTO. CIENCIAS Y TECNICAS DE LA NAVEGACION Y DE LA CONSTRUCCION NAVAL |  |  |  |  |
| Name of lecturer | ANTONIO TRUEBA CORTES   |  |  |  |  |
| E-mail           | antonio.trueba@unican.es  |  |  |  |  |
| Office           | E.T.S. de Náutica. Planta: + 2. DESPACHO (264)                        |  |  |  |  |
| Other lecturers  | JOSE IVAN MARTINEZ GARCIA   |  |  |  |  |

### 3.1 LEARNING OUTCOMES

- Astronomical navigation: Ability to determine the ship position using the celestial bodies.

### 4. OBJECTIVES

Celestial navigation. Ability to use celestial bodies to determine the ship's position.

## 6. COURSE ORGANIZATION

### CONTENTS

|   |  |
|---|--|
| 1 | Cosmography and timing: Astronomy.- The solar system .- The Earth.- The moon.- Other celestial bodies of the solarsystem.- Eclipses and occultations.- Study of the time.- Chronometers. |
| 2 | Astronomical navigation. Nautical Almanac.   |

## 7. ASSESSMENT METHODS AND CRITERIA

| Description   | Type         | Final Eval. | Reassessn | %             |
|---|--------------|-------------|-----------|---------------|
| Theoretical exam at the end of May.   | Written exam | No          | Yes       | 50,00         |
| Theoretical and practical exam.   | Written exam | Yes         | Yes       | 50,00         |
| <b>TOTAL</b>  |              |             |           | <b>100,00</b> |
| <b>Observations</b>   |              |             |           |               |
| The evaluation criteria of the competition are in line with the STCW Convention 2010.<br>A remote assessment scenario may be presented, which would only be used if the competent health and educational authorities so indicate. |              |             |           |               |
| <b>Observations for part-time students</b>  |              |             |           |               |
| Part-time students will agree with the teacher when to take the partial exams based on their availability.  |              |             |           |               |

## 8. BIBLIOGRAPHY AND TEACHING MATERIALS

### BASIC

- Moreu Curbera/ Martínez Jiménez: Astronomía y Navegación, Tomos I y II Librería San José, Vigo.  
 Almanaque Náutico, Armada Española, Servicio de Publicaciones.  
 Bowditch: American Practical Navigator, Defense Mapping Agency Hydrographic Center, Washington D.C., U.S.  
 Anuario de Mareas. Instituto Hidrográfico de la Marina. Armada Española, Servicio de Publicaciones.  
 Tablas de Navegación de Martínez Jiménez
- Ibáñez Fernández, Itsaso; Fundamentos de Navegación Marítima.
- Ibáñez Fernández, Itsaso; Navegación Astronómica: Compendio y Cálculos,
- Mederos Martín, Luis; Navegación Astronómica.