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| Course Title | **Marine Meteorology** | | | | | | |
| Course Code | MANS-212 | | | | | | |
| Course Type | Required | | | | | | |
| Level | 1st Cycle | | | | | | |
| Year / Semester | 2nd Year, Fall Semester | | | | | | |
| Teacher’s Name |  | | | | | | |
| ECTS | 6 | Theory | | Laboratory | Simulation | | Tutorial |
| 4 | | --- | --- | | ----- |
| Course Purpose and Objectives | The main objectives of the course are to:   * present the meteorological instruments on board * introduce the characteristics of the various weather systems * analyze the weather reporting procedures * explain the symbols used in the synoptic chart and in the pilot charts * elaborate on the area weather prognosis given the prevailing weather conditions and other relevant information * display the characteristics of the revolving tropical storms and the best practices to avoid the dangerous semicircle * represent the structure of the depressions * exhibit the operation and the targets of the World Meteorological Organization * describe the meteorological codes * illustrate the weather prognosis procedures * demonstrate the ocean currents systems basics * exhibit the ice basics | | | | | | |
| Learning Outcomes | After completion of the course students are expected to be able to:   * name and utilize the meteorological instruments on board and evaluate their readings * identify the major weather systems * fill a weather report following the proper procedure * receive analytic and forecasting charts, weather bulletins, NAVTEX weather reports, satellite photos * read in detail a synoptic and a pilot chart * make a local weather prognosis given the prevailing weather conditions and other relevant information * recognize the characteristics of revolving tropical storms and employ the best practices to avoid the dangerous semicircle * realize the importance of the services WMO is offering * code and decode meteorological data * apply weather prognosis practices to ensure a safe passage * comprehend the basics on the ocean currents systems * appreciate the development and distribution of sea ice | | | | | | |
| Prerequisites | None | | Required | | | None | |
| Course Content | * Atmosphere, its elements and its natural properties * Atmospheric pressure * Winds and waves * Clouds and precipitation * Visibility * General circulation of atmosphere * Regional wind systems * Air masses and fronts * Barometric Lows and Highs * Tropical revolving storms * Meteorological support for mariners * Meteorological observations on board * Weather forecasting * Ocean currents * Ice | | | | | | |
| Teaching Methodology | Lectures, in-class assignments, sound and video equipment, computer, projector, internet | | | | | | |
| Bibliography | **Required Textbooks/Reading:**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Authors** | **Title** | **Publisher** | **Year** | **ISBN** | | Meteorological office | Meteorology for Mariners | London HMSO | 1996 | 0-114-00367X |   **Recommended Textbooks/Reading:**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Authors** | **Title** | **Publisher** | **Year** | **ISBN** | | Cornish, M., Ives. E. | Reeds Maritime Meteorology | Adlard Coles | 2010 | 978-1408112069 | | Meteorological office | Marine Observer’s Handbook | London HMSO | 1995 | 0-11-400297-5 | | | | | | | |
| Assessment | Homework, in-class assignments, projects, exams, final exam. | | | | | | |
| Language | English | | | | | | |