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| Course Title | **Nautical Electronic Instruments** | | | | | | |
| Course Code | MANS-213 | | | | | | |
| Course Type | Required | | | | | | |
| Level | 1st Cycle | | | | | | |
| Year / Semester | 2nd Year, Fall Semester | | | | | | |
| Teacher’s Name |  | | | | | | |
| ECTS | 6 | Theory | | Laboratory | Simulation | | Tutorial |
| 3 | | --- | 1 | | --- |
| Course Purpose and Objectives | The main objectives of the course are to:   * present the marine compasses (other than magnetic) * present the marine steering gear systems * present the marine speed logs * present the marine echo sounders * present the electronic docking systems * present the Long Range Identification and Tracking receiver * present the Bridge Navigational Watch Alarm System * present the satellite navigation systems * present the Automatic Identification System * present the course recorder * present the Voyage Data Recorder - SVDR * present the hyperbolic navigation systems | | | | | | |
| Learning Outcomes | After completion of the course students are expected to be able to:   * comprehend the working principles of the above equipment * follow the proper operational procedures for each instrument * take into consideration the standard and variable errors of the equipment * cope with the most common malfunctions * meet the necessary maintenance requirements * recognize the capabilities and limitations of the equipment * enhance the navigational development of the information provided | | | | | | |
| Prerequisites | MANS-104 | | Required | | | MANS-214 | |
| Course Content | * Marine compasses of all types (other than magnetic) * Automatic steering gear systems * Speed logs * Echo sounders * Docking systems * LRIT * BNWAS * Satellite navigation principles * Global Positioning System - Galileo * AIS * Data recorder * VDR - SVDR * Hyperbolic navigation systems * e - LORAN | | | | | | |
| Teaching Methodology | Lectures, in-class assignments, sound and video equipment, computer, projector, the above electronic instruments or Bridge simulator or other equivalent method | | | | | | |
| Bibliography | **Required Textbooks/Reading:**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Authors** | **Title** | **Publisher** | **Year** | **ISBN** | | Tetley, L., Calcutt, D. | 1. Electronic navigation systems, 3rd Edition | Elsevier, London | 2001 | 0750651385 |   **Recommended Textbooks/Reading:**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Authors** | **Title** | **Publisher** | **Year** | **ISBN** | | [Stephen, F. Appleyard](http://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&text=Stephen+F.+Appleyard&search-alias=books&field-author=Stephen+F.+Appleyard&sort=relevancerank) | Marine Electronic Navigation, 2nd Edition | [Taylor & Francis](http://www.barnesandnoble.com/s/%22Taylor%20&%20Francis%22;jsessionid=90CE27C160E9917C2D49504EAACB7F66.prodny_store02-atgap10?Ntk=Publisher&Ns=P_Sales_Rank&Ntx=mode+matchall) | 2006 | 9781134963096 | | IMO | Performance standards for ship borne radio communications and navigational equipment | IMO | 2011 | 978-92-801-15239 | | | | | | | |
| Assessment | Homework, in-class assignments, projects, exams, final exam. | | | | | | |
| Language | English | | | | | | |