

**Syllabus of Course Work for Special Graduation
of 1-26 Batch Ex-Cadet of Bangladesh Marine
Academy**

Bangladesh Studies

Course Code : BoMS 1001
Credits : 1.0
Contact Hours : 14

Objectives:

The objectives of this course is to introduce the students with the key concepts like socio-economic, geo-political, institutional, social organizational, context of origin and development of Bangladesh. Socio-political and economic context of Liberation War of Bangladesh and the importance of Bay of Bengal will also be introduced here.

Learning outcomes:

On successful completion of this unit, students should be able to:

- address different contemporary issues of modernization in context of Bangladesh;
- demonstrate an understanding of the key concepts like socio-economic, geo-political, institutional, social organizational, context of origin and development of Bangladesh
- identify the role of foreign investors and development partners in private sector development
- demonstrate an understanding of the importance of Bay of Bengal

Contents:

The socio-political and economic context of Liberation War of Bangladesh and the background of the emergence of Bangladesh as an Independent Country; Agricultural Development and the contribution of agricultural sector to the national economy and society of Bangladesh; The Process of Industrialization in Bangladesh; The evolution of industrial growth in Bangladesh; Sector wise development of industries; The role of private and public sectors in industrial development; An overview of industrial policies of Bangladesh; The contribution of Private Sector in the economy of Bangladesh; Culture, Tradition and Heritage of Bangladesh; Rural Development: The notion and evolution of Rural development; Challenges and Constraints of Rural Development; The Role of NGOs; Bay of Bengal: Introduction to Bay of Bengal; Geostrategic and economic importance of Bay of Bengal

Research Methodology

Course Code : BoMS 1002
Credits : 1.0

Contact Hours : 14

Objectives:

The objective of this course is to introduce students to the research methods used by the engineers including research planning, data collection process, presenting research findings and report preparation.

Learning Outcomes:

On successful completion of this unit, students should be able to:

- Identify a research problem
- Understand and apply the knowledge of the overall process of designing a research study from its inception to its report

Contents:

Introduction to research methodology: meaning, objectives, types of research, methodology vs. methods, research process, qualities of a good research; problems of research in Bangladesh; selecting and defining a research problem; Techniques of defining a problem; Design of research plan: meaning of research design, need for research design, various research design; Sampling strategies and methodology design of sampling programs; Data collection (Primary Method): Collection of data through questionnaires; Collection of data through Schedule; Difference between Questionnaires and Schedules; constructing questionnaire and schedule; Data collection (Secondary Method): Various Methods of Secondary data collection; Case study Method; Accuracy of results: Types of errors and their control, Replication and standard samples, Degrees of accuracy, calculations and level of significance; Presentation of research findings: Data processing, data analysis, graphical representation; Manuscript preparation (thesis/dissertation); Writing techniques of research proposal for funding; Monitoring and evaluation of research projects; Research report preparation; Research extension processes (seminar, symposium, workshop, training program, popular and scientific paper publication).

Maritime History and Culture

Course Code : BoMS 1003

Credits : 1.0

Contact Hours : 14

Objectives:

The aims of this module are to introduce several key aspects of maritime history and Cultural heritage management.

Learning Outcomes:

On completion of the course the students will be able to:

- Compare and contrast the histories of various maritime cultures.
- Explain the role that exploration, commerce and warfare played in maritime history.
- Critically analyses the maritime trade and history
- Understand the Social history: the role of class, race, and gender in maritime history
- Understand the breadth, variety and issues relating to maritime cultural heritage;
- Demonstrate knowledge and understanding of different approaches to maritime heritage protection and ways to disseminate maritime heritage

Contents:

Basic concepts on (Maritime) History, Culture and Heritage; long distance trade in Asia - State Power and Piracy in Maritime Asia today; Heritage: its value & the threats - Globalization of heritage tourism –Protection & Legislation: UNESCO & International Perspectives - Regulators, curators & contractors; Integrated marine heritage management - Maritime heritage sites - Underwater museums and maritime tourism; Heritage events and festivalization- Capacity Building, education and outreach - methods for the dissemination of maritime heritage through education and outreach programmes; Emergence of Maritime Heritage from the Legal Perspective: the UNCLOS.

Maritime Safety and Security

Course Code : BoMS 1004
Credits : 3.0
Contact Hours : 42

Objectives:

The course highlights on related international legislations on various aspects of safety and security in sea. Moreover, the course covers the legal arena for liability in marine collision; salvages and wrecks; towage; pilotage; piracy, hijacking and armed robbery at sea.

Learning Outcomes:

On completion of this course, students are expected to be able to:

- Use the basic provisions of International conventions to establish national, regional and global individual and collective responsibility for maritime safety and security. Moreover, students would be able to act as attorney on behalf of client filing suit for the violation of the safety measures by the concerned authority and claiming compensation for suffering.

Contents:

ISM Code- Key issues, Legal status of code, Practical aspects of the code, Company verification, review and evaluation, Case studies, Regulatory framework for maritime security: International ship and port facility security (ISPS) code. Definitions of key terms and concepts (e.g. safety, risk, hazard etc), Influencing factors on administrative decisions regarding risk and safety (social amplification of risk etc.) *Risk assessment*: Introduction of qualitative (failure mode and effect analysis, hazard and operability studies etc.) and quantitative (fault trees, event trees etc) methods of risk assessment. Risk management: Introduction of risk control options (RCOs) with effects on likelihoods of unwanted events to occur and severity of consequences, Discussion of risk acceptance criteria, the as low as reasonably practicable (ALARP) principle. Formal Safety Assessment (FSA) as a tool in the IMO decision making process. The need to investigate maritime casualties (Legal background): Overview about relevant regulations in different international and maritime legal instruments regarding casualty investigations, Reporting requirements to IMO about maritime casualties, Selected national approaches related to maritime casualty investigations Accident investigation process: Initiation of maritime casualty investigations, Appointment of investigators, collecting of evidence, developing time lines, conducting interviews with witnesses The General System Concept: Understanding the SAR system; legal basis of services, the global concept, national and regional systems, system component.

Maritime Technology

Course Code : BoMS 1005
Credits : 3.0
Contact Hours : 42

Objectives:

The objective of the course is to familiarize the students with the basic concepts and understanding of the overall construction, operating principles, and characteristics of a marine/offshore power plant and its associated auxiliary systems. Emphasis is made on designing common marine and offshore engineering systems, machinery and components.

Learning Outcomes:

On successful completion of this unit, students should be able to:

- draw general layout of typical machinery spaces
- explain the basic working principles of various types power plants used in ships and offshore structures and their associated systems
- describe common shipboard auxiliary systems and equipment
- explain the fire prevention, detection and extinguishing systems

- understand the working principles of pollution control equipment

Contents:

Introduction - Introduction to marine and offshore engineering systems; General layout of typical machinery spaces; Safety arrangements for personnel; Types of power plant and components of various types of power plants used in ships and offshore structures; Operational systems. Auxiliary Systems and Equipment - Bilge; Ballast; Main sea water; Domestic and sanitary hydrophore; Compressed air; Refrigeration; Heating; Ventilation; Air-conditioning; Steering; Propulsion shafting; Stabilizing; Desalination plant; Gearing; Deck machinery; Safety equipment. Fire - Dangers of fires on ship and offshore structures; Types of fires; Fire prevention measures; Fire detection system; Portable firefighting equipment; Fixed fighting installations; Inert gas generation and distribution.