

INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)
PALLAVARAM - CHENNAI
ACCREDITED BY NAAC WITH 'A' GRADE
Marching Beyond 30 Years Successfully

SCHOOL OF MARITIME STUDIES

BBA MARITIME LOGISTICS

REGULATION 2024

CURRICULUM AND SYLLABUS

(Based on Choice Based Credit System)

Department of Nautical Science
School of Maritime Studies
Vels Institute of Science Technology and Advanced Studies, VISTAS

BBA MARITIME LOGISTICS

VISION

- To provide quality educational Programmes that prepare students to work in Shipping, Logistics and Maritime Industry as Logistics professionals by achieving maximum efficiency through excellent management

- To make the department a model of expertise in higher education by effectively providing high-quality education and specialized training to students in a variety of streams, with vast potential for all-round development, so that they can excel in their professions and contribute to the betterment of society.

MISSION

- To be an excellent academic institution dedicated to providing comprehensive training to beginners to the shipping, logistics, and maritime industries.
- To increase Industry-wide awareness to students by understanding and acceptance of Managerial skills, best practices and technologies with global standards of the Maritime Industry
- To develop and enlighten the students by practicing the skills of Entrepreneurship and business activities by catalyzing excellence in Shipping and Logistics sector through its wide variety of services
- To continually upgrade our education and professional skills programmed in accordance with the current advances in the Maritime world by proactive and progressive efforts

Program Source Outcome

To enable the student to emerge as:

PSO 01: Develop candidates' understanding, at an advanced level, of professional concepts and techniques in marine operations fields

PSO 02: Has specialized insight in maritime operations and its process

PSO 03: Can apply knowledge to new area related to maritime logistics

PSO 04: Develop candidates' decision-making abilities

PSO 05: Enhance and develop technical skills and knowledge as relevant to the particular marine role of the individual

PSO 06: Enable candidates to lead innovation in marine organizations logistics and outputs

PSO 07: Enable candidates to manage change and deploy resources in efficient and effective ways

PSO 08: Enable candidates to use their professional skills and knowledge to support the development of the organizational capability of logistics organizations

BBA MARITIME LOGISTICS – Program Outcomes

Program Outcomes (POs)

1. **Communication**: Graduates should communicate effectively on complex engineering activities with the engineering community in particular and with the international community at large. This includes use of communication systems effectively onboard ships, ability to comprehend and write reports, effective presentations, communicate, grasp and follow clear instructions.
2. **Societal Responsibility:** Graduates should be capable of Maintaining a safe engineering watch and sea worthiness of a ship. Graduates should apply appropriate knowledge to evaluate societal, health, legal and cultural issues and the consequent responsibilities appropriate to the professional engineering practice.
3. **Management:** Graduates should be able to operate maintain and repair main, auxiliary machinery and associated control system. Graduate should be capable of using appropriate hand tools, machine tools and measuring instruments. Graduates should be capable of applying management principles to the work as an individual and also as a team in all endeavors.
4. **Environment and Sustainability:** Graduates should understand, practice and meet the global legislative requirements related to the environment with all efforts to prevent pollution and maintain sustainability.
5. **Ethics:** Graduates should apply ethical principles and be committed to professional ethics and responsibilities, following the norms of the profession.
6. **Modern tool usage:** Graduates will be capable of creating, selecting and applying Modern Engineering software tools to predict and prototype complex engineering activity with the understanding of the limitations of such tools.
7. **Design and Development of Solutions:** Graduates should be capable of designing and developing components or processes that meet the specific needs with appropriate consideration to public safety, cultural, societal and environment.
8. **Updating and Upgrading Knowledge:** Graduates should be capable of self-education and clearly understand the value of lifelong learning with updating and

upgrading their technical knowledge to IMO (International Maritime Organization) standards and STCW (Standards of Training, Certification & Watch keeping) requirements.

Program Educational Outcome

PEO 1: Graduates will have a strong foundation in maritime logistics, encompassing the principles, practices, and regulatory frameworks that govern the industry and will be proficient in using modern logistics software, tools, and methodologies to enhance operational efficiency and decision-making in maritime logistics.

PEO 2: Graduates will possess strong communication skills, enabling them to articulate ideas clearly, negotiate effectively, and collaborate with diverse stakeholders in the maritime sector.

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SCHOOL OF MARITIME STUDIES

BBA MARITIME LOGISTICS

CURRICULUM

Total Number of Credits: 140										
Category	Code	Title of the Course	Total Hours	Hours / Week			Credits	Maximum Marks		
				L	T	P		CA	SEE	TOTAL
SEMESTER - I										
CC	24CBML11	Introduction To Shipping	60	5	0	0	4	40	60	100
CC	24CBML12	Shipping Business	60	5	0	0	4	40	60	100
AECC	24ABML11	Business Communication English	60	5	0	0	4	40	60	100
AECC	24ABML12	Mathematics	60	5	0	0	4	40	60	100
SEC	24SBML11	Basics of Electronics	60	5	0	0	4	40	60	100
GE	24GBML11	Introduction To Computer Science	60	5	0	0	4	40	60	100
		Total	360	30	0	0	24			
SEMESTER – II										
CC	24CBML21	Economics of Sea Transport and International Trade	60	5	0	0	4	40	60	100
CC	24CBML22	Legal Principles in Shipping Business	60	5	0	0	4	40	60	100
DSEC	24DBML21	Introduction to Entrepreneurship	60	5	0	0	4	40	60	100
AECC	24ABML22	Environmental Science	60	5	0	0	4	40	60	100
SEC	24SBML21	Advanced Programming Language	60	5	0	0	4	40	60	100
GE	24GBML21	Principles of Management	60	5	0	0	4	40	60	100
		Total	360	30	0	0	24			
SEMESTER – III										
CC	24CBML31	Introduction to Logistics	60	5	0	0	4	40	60	100
CC	24CBML32	Ship Operations & Management	60	5	0	0	4	40	60	100
AECC	24ABML31	Management Information System	60	5	0	0	4	40	60	100
SEC	24SBML31	English Communication Skill 1	60	5	0	0	4	40	60	100
SEC	24SBML32	Investment Analysis	60	5	0	0	4	40	60	100
GE	24GBML31	Introduction to Web Designing	60	5	0	0	4	40	60	100
Total			360	30	0	0	24			

Category	Code	Title of the Course	Total Hours	Hours / Week			Credits	Maximum Marks		
				L	T	P		CA	SEE	TOTAL
SEMESTER – IV										
CC	24CBML41	Marine Insurance	60	5	0	0	4	40	60	100
CC	24CBML42	Shipping Finance	60	5	0	0	4	40	60	100
AECC	24ABML41	EXIM Documentation	60	5	0	0	4	40	60	100
DSEC	24DBML41	Introduction to Marine Engineering	60	5	0	0	4	40	60	100
SEC	24SBML41	English Communication Skill 2	60	5	0	0	4	40	60	100
GE	24GBML41	Total Quality Management	60	5	0	0	4	40	60	100
		Total	360	30	0	0	24			
SEMESTER – V										
CC	24CBML51	Port & Terminal Management	60	5	0	0	4	40	60	100
CC	24CBML52	Supply Chain Management	60	5	0	0	4	40	60	100
AECC	24ABML51	Project Management	60	5	0	0	4	40	60	100
SEC	24SBML51	Brand Management	60	5	0	0	4	40	60	100
GE	24GBML51	Strategic Management	60	5	0	0	4	40	60	100
GE	24GBML52	Introduction to Data Science	60	5	0	0	4	40	60	100
		Total	360	30	0	0	24			
SEMESTER – VI										
CC	24RBML61	Project Work	60	5	0	0	4	40	60	100
CC	24CBML61	Ship Operation Technology	60	5	0	0	4	40	60	100
AECC	24ABML61	Maritime Safety & Security	60	5	0	0	4	40	60	100
GE	24GBML61	Introduction to E-Commerce	60	5	0	0	4	40	60	100
GE	24GBML62	Digital Marketing	60	5	0	0	4	40	60	100
Total			300	25	0	0	20			

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COURSE STRUCTURE – PASS MARKS

Category	Code	Title of the Course	Internal		External		Total Marks
			Min	Max	Min	Max	
SEMESTER – I							
CC	24CBML11	Introduction To Shipping	--	40	24	60	100
CC	24CBML12	Shipping Business	--	40	24	60	100
AECC	24ABML11	Business Communication English	--	40	24	60	100
AECC	24ABML12	Mathematics	--	40	24	60	100
SEC	24SBML11	Basics of Electronics	--	40	24	60	100
GE	24GBML11	Introduction To Computer Science	--	40	24	60	100
SEMESTER – II							
CC	24CMRO21	Economics of Sea Transport and International Trade	--	40	24	60	100
CC	24CMRO22	Legal Principles in Shipping Business	--	40	24	60	100
AECC	24DMRO21	Introduction to Entrepreneurship	--	40	24	60	100
AECC	24AMRO22	Environmental Science	--	40	24	60	100
SEC	24SMRO21	Advanced Programming Language	--	40	24	60	100
GE	24GMR021	Principles of Management	--	40	24	60	100
SEMESTER – III							
CC	24CBML31	Introduction to Logistics	--	40	24	60	100
CC	24CBML32	Ship Operations & Management	--	40	24	60	100
AECC	24ABML31	Management Information System	--	40	24	60	100
DSEC	24SBML31	English Communication Skill 1	--	40	24	60	100
SEC	24SBML32	Investment Analysis	--	40	24	60	100
GE	24GBML31	Introduction to Web Designing	--	40	24	60	100

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BBA MARITIME LOGISTICS

COURSE STRUCTURE – PASS MARKS

Category	Code	Title of the Course	Internal		External		Total Marks
			Min	Max	Min	Max	
SEMESTER - IV							
CC	24CBML41	Marine Insurance	--	40	24	60	100
CC	24CBML42	Shipping Finance	--	40	24	60	100
AECC	24ABML41	EXIM Documentation	--	40	24	60	100
DSEC	24DBML41	Introduction to Marine Engineering	--	40	24	60	100
SEC	24SBML41	English Communication Skill 2	--	40	24	60	100
GE	24GBML41	Total Quality Management	--	40	24	60	100
SEMESTER - V							
CC	24CBML51	Port & Terminal Management	--	40	24	60	100
CC	24CBML52	Supply Chain Management	--	40	24	60	100
AECC	24ABML51	Project Management	--	40	24	60	100
SEC	24SBML51	Brand Management	--	40	24	60	100
GE	24GBML51	Strategic Management	--	40	24	60	100
GE	24GBML52	Introduction to Data science	--	40	24	60	100
SEMESTER - VI							
CC	24RBML61	Project Work	--	40	24	60	100
CC	24CBML61	Ship Operation Technology	--	40	24	60	100
AECC	24ABML61	Maritime Safety & Security	--	40	24	60	100
GE	24GBML61	Introduction to ECommerce	--	40	24	60	100
GE	24GBML62	Digital Marketing	--	40	24	60	100

SEMESTER – I

Code	Subject	lecture	Tutorial	Practical	Credit
24CBML11	INTRODUCTION TO SHIPPING	5	0	0	4

Course Objective:

- Understand the various geographical regions
- Understand the role of different global market
- Understand the different ship types

UNIT – I COMMERCIAL GEOGRAPHY & INTERNATIONAL TRADE 12

Commercial Geography

Continents; geographical regions, for example the Far East, Mediterranean, south-east Asia; location of major countries and ports. All the continents, the major centres of which they are comprised and the manner in which they are grouped in geographical regions. The location of major ports, canals and waterways. Oceans of the world and the seas of which they are comprised. The effects of tides, currents, climate and weather. An awareness of different map projections; latitude and longitude.

International Trade

Understand the role of different markets that comprise the global market. Be aware of the difference between absolute and comparative advantage. Understand the role of shipping as arising from derived demand.

UNIT – II CARGOES AND TRADE ROUTES & SHIP TYPES 12

Cargoes and Trade Routes

Thoroughly understand the different roles of liners and tramps. In liners, understand the main unitized systems and break-bulk operations. Be aware of major liner routes. Understand the major dry bulk trades and the origins and distribution of principal cargoes. The oil and other liquid trades; understand the origin and distribution of principal cargoes, distinguishing between crude oil and products. Be aware of the categorization of cargoes into clean, dirty, chemicals, gas, vegetable oils and juices.

Ship Types

Thoroughly understand the basic characteristics of bulk carriers etc and the type of trades in which they are used. Understand the main sizes of vessel in each class. Expect to illustrate any answers with simple sketches.

UNIT – III CONTRACTS OF CARRIAGES & LAW OF CARRIAGE 12

Contracts Of Carriages

Thoroughly understand the basic contracts; charter parties for tramp and tankers; bills of lading for liners. Be aware of the role of the bill of lading under a charter party. Understand the difference between voyage and time charter parties and the basic elements of each.

Understand the three functions of the bill of lading and its role in international trade. Understand the main specialist abbreviations, terms and expressions used in charter parties and bills of lading.

Law Of Carriage

Understand the duty of care and the nature of tortuous acts outside contracts. Be

aware of the way in which international conventions are established and the major conventions relative to shipping. Understand the basic application of Hague/Hague-Visby, Hamburg and Rotterdam Rules, their requirement for seaworthiness and the limitation of carrier liability. Be aware of the differences between these rules. Understand the legal effect of the bill of lading as a document of title and the implication of its role in the delivery of goods. Be aware of the role of marine insurance and P&I associations.

UNIT – IV SHIP REGISTRATION AND CLASSIFICATION & PRACTITIONERS 12

Ship Registration and Classification

Thoroughly understand the concept of Ship Registration and its flag state.
Understand the difference between registering in the country of beneficial ownership, offshore registry and flag of convenience
Be aware of port state control
Understand the need for classification and the role of classification societies

The Practitioners in Shipping Business

Thoroughly understand the difference between principals and intermediaries.
Understand the role and function:-
Principals - shipowners, charterers, shippers and NVOCs (non-vessel-operating carriers) Intermediaries - Brokers in dry cargo chartering, tanker chartering, ship sale and purchase Port agents and liner agents and the differences between them Ship managers and freight forwarders. Be aware that all classes of intermediaries may be independent businesses or in-house departments of the principal.

UNIT – V : BASIC ACCOUNTING 12

Understand the fundamentals of bookkeeping and corporate accounts.
Thoroughly understand the definitions and functions of revenue, cost, profit, capital. Cash flow, interest.
Be aware of the structure of various different types of business entity and understand the concept of limited liability.

Total Hours: 60

Course Outcome:

CO 01: Understand the awareness of different map projections – latitude and longitude
CO 02:Understand the role of shipping as arising from derived demand
CO 03: Aware of major liner routes
CO 04:Aware of the categorization of cargoes into clean, dirty, chemicals, gas, vegetable oils and juices
CO 05: Understand the difference between voyage and time charter parties and the basic elements of each

Text Books:

1. Introduction to Shipping by Alan Marsh (Publisher: Institute of Chartered Shipbrokers; Revised Edition August 1, 2016
2. Introduction to Shipping 2nd Edition by Cheong Kwee Thiam (Publisher: LexisNexis Emerging Issues Analysis CLE)
3. Basic Accounting: The Step-by-step course in elementary accountancy (Teach

Yourself) by Nishat Azmat and Andy Lymer

Reference Books:

1. Shipping Business 2015 by HE Sultan Ahmed Bin Sulayem (ISBN 978-1-908833-65-5)

Web Source:

https://eylibrary.bitbucket.io/32-solon-simonis-dvm/9781473609136-basic-accounting-teach-yourself-the-step-by-step.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML12	SHIPPING BUSINESS	5	0	0	4

Course Objective:

- Understand the concept of limited liability as applied to the commercial companies
- Understand how companies are organized internally
- Understand the roles of buyers, sellers, brokers and valuers

UNIT – I: THE SHIPPING BUSINESS ENTITY & SHIPPING BUSINESS SECTORS 12

THE SHIPPING BUSINESS ENTITY

Thoroughly understands the concept of limited liability as applied to commercial companies. Understand the differences between private and public companies, conglomerates and multinationals.
Understand how companies are organized internally.
Understand the manner in which limited companies are financed, the methods of raising capital and the rewards shareholders may expect.
Understand statutory requirements controlling limited companies aimed at protecting those who deal with them.
Be aware of the differences between vertical and horizontal integration
Understand the advantages and disadvantages of being a sole trader or partnership rather than incorporation as a limited company.
Understand the principles of quality assurance (ISO 9001).
Be aware of the organizations that may test for and grant QA certificates**.**

SHIPPING BUSINESS SECTOR

Understand how the original interpretation of the term 'shipbroker' has, through the need to specialize, been expanded to encompass all aspects of shipping business.
For each of the following roles students should be able to answer these questions:
a) For whom does the practitioner work?
b) What form of contract is there between that entity and the practitioner?
c) What does the work involve?
d) What types of documentation does the practitioner normally use?
e) How is the practitioner paid?

UNIT – II BUSINESS ETHICS 12

Thoroughly understand that because so much shipping business is arranged by word of mouth, mutual trust is an imperative ingredient. 'Our word, our bond' has always been the Institute's motto.

Understand how practitioners in shipping business may encounter and be in a position to detect or prevent fraud including such things as identifying forged bills of lading, falsified certificates, and false declarations of cargo.
Be aware of the potential for fraud in connection with letters of credit or false insurance claims.
Understand the danger of misdirection of freight payments or misdelivery of cargo.
Understand that wrongly dating bills of lading is a fraud and that issuing a letter of indemnity in exchange for clean (rather than claused) bills of lading is technically fraud.
Be aware of the possibility of major fraud such as documentation for non-existent cargo, piracy, scuttling.
Understand the importance of knowing the bonafides of one's principals and trading partners.

UNIT – III SHIPPING BUSINESS SECTORS 12

Understand how the original interpretation of the term "shipbroker" has, through the need to specialise, been expanded to encompass all aspects of shipping business. For each of the following roles students should be able to answer these questions:-
a) For whom does the practitioner work?
b) What form of contract is there between that entity and the practitioner?
c) What does the work involve?
d) What types of documentation does the practitioner normally use?
e) How is the practitioner paid?

Dry Cargo Chartering

Thoroughly understand the relative positions of charterer and shipowner also the relationship between these principals and the broker(s) involved. Understand how each principal may have its own broker, how these may be "exclusive" appointments or "competitive".
The position of intermediate brokers. Understand the way in which the international chartering market operates, the various prime centres including London, New York, Hong Kong, Tokyo. Be aware of the continued dominance of the London market and the altered role of the Baltic Exchange in recent years.
Understand the way in which negotiation by the brokers – duly authorised by their respective principals – conduct negotiations leading to a "fixture" Thoroughly understand the principal differences between a voyage charter and a time charter and understand the basic structure of each type of contract.
Be aware of the special role of a bareboat charter.
Understand how brokers are remunerated by a brokerage (commission) based upon the owner's earnings under the charter concerned.

Tanker Chartering

Thoroughly understand the similarities and differences between dry cargo and tanker chartering especially: - The restricted number of players in this specialized field. Be aware of the meaning of such expressions as "oil majors" "traders".
Understand the manner in which the market is further compartmentalized depending on the commodities including crude, petroleum products, chemicals, gases, vegetable oils etc. and the way each commodity needs a different type of ship.

Understand the way World scale operates in some sectors of the tanker trade and the reasons for its use. Understand those elements in tanker charter parties that are different from dry cargo forms.
Ship Sale & Purchase
Thoroughly understand the respective roles of Buyers, Sellers, Brokers and Valuers.
Thoroughly understand that the market is divided into the trade in second hand tonnage (the most active sector for brokers), new buildings (the most specialized sector) and demolition (the scrap market).
Understand how negotiations proceed and the limited number of specialized forms covering the sale.

UNIT – IV GEOGRAPHY OF TRADE 12

Understand the major trade routes and the types of ships used for transportation of the five primary raw materials namely coal, ores, grains, fertilizers and oil also general cargo (manufactured goods) with names and locations of the principal ports involved.
Be aware of any particular characteristics and/or hazards involved in the transport these commodities.
Understand the factors that influence the choice of the most favored transport modes for these commodities e.g. palletization, unitization, containerization, refrigeration, multi-modal transport and be aware of the shore-side facilities and infrastructure needed.
Understand the location and seasons of major natural phenomena affecting sea transportation particularly storms and ice.
Be aware of the rationale behind Load line Zones and how knowledge of these can affect voyage planning and estimating.

UNIT – V INTERNATIONAL TRADE AND FINANCE 12

Thoroughly understand the role and function of INCOTERMS in international trade.
Understand the manner in which the obligations and insurable risk and title pass from buyer to seller under each of the terms.
Thoroughly understand the importance of the bill of lading in international trade.
Understand the difference between port/port, through and combined transport B/Ls also the role of Waybills.
Understand the various methods of payment that may be used in international trade including cash and bills of exchange.
Thoroughly understand the special place of Documentary Letters of Credit and how they are established and operate. Be aware of ICC Uniform Custom and Practice.
Understand the manner in which countries regulate imports and exports by means of customs tariffs, licensing etc.
Understand the basics of foreign currency transactions including the system of currency hedging.
Understand the importance of collecting, holding and remitting freight, hire and other funds to principals and clients. Be aware of the system of freight hedging.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the difference between vertical and horizontal integration
CO 02: Adapt the principles of quality assurance (ISO 9000)
CO 03: Enhance the potential fraud in connection with letters of credit or false insurance claims
CO 04: Enhance the possibility of major fraud such as documentation for non-existent cargo, piracy, scuttling
CO 05: Articulate how the original interpretation of the term "shipbroker".

Text Books:

1. The Business of Shipping by James Buckley
2. Legal Principles in Shipping Business 2016 by Sir David Steel, ICS

Web Source:
http://bookinfosite.com/business/l/0870335804.html?utm_source=gs&utm_medium=html

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML11	**BUSINESS COMMUNICATION SKILLS**	**5**	**0**	**0**	**4**

Course Objective:

- The main objective is to enhance communication ability of the students in business and professional setup
- This course specifies on how to write smart business correspondence, communicate and handle variant strategies to tackle competition.

Syllabus:

UNIT – I ORAL COMMUNICATION **12**

Communication: Meaning, Nature, Importance and Purpose of Communication, Types of Communication, Process of Communication, Importance of Communication, Verbal and Non-Verbal Communication.

UNIT – II COMMUNICATIVE GRAMMER **12**

Auxiliary Verbs, Phrasal Verbs, Modal Verbs,

Verb Phrases and Compliments,

Time and Tense, Regular and Irregular Verbs,

Articles – Indefinite, Definite and Zero Articles.

UNIT – III REMEDIAL GRAMMAR **12**

Adverbs- Types of Adverbs and Adverb Phrases.

Preposition – Preposition of Time, Place and Direction.

Use of Prepositions after Verbs, Adjectives and Noun Phrase.

UNIT – IV WRITTEN COMMUNICATION AND LISTENING **12**

Effective Writing Skills: Elements of Effective Writing, Main Forms of Written Communication: Agenda, Minutes, Notices, , Drafting an E-mail,

Correspondence: Personal, Official and Business, Report Writing.

The Process of Listening, Barriers to Listening, Types of Listening.

UNIT – V SKILLS **12**

Presentation Skills, Public Speaking, Preparing the Speech,

Organising the Speech,

Special Occasion Speeches,

Situational Conversation, Welcome address and Farewell Address.

TOTAL: 60 Hrs

Course Outcome:

CO 01: The student learns how to handle different types of business situations.

CO 02: The course helps the students to develop communication skills for a range of business situations- meetings and interviews.

CO 03: It helps the students to polish and perfect their presentation skills.

CO 04: By learning specialist vocabulary and terminologies they are equipped with interpersonal skills.

CO 05: They further learn grammar basics which improves their daily conversation and etiquettes of the language.

Text Books:

1. Geoffrey, Leech and Jan Swartwik, A Communicative Grammar of English.

2. Krishnaswamy N and T. Sriraman. Current English for Colleagues. Mcmillan-1990.

3. T.S Crane. The Oxford Guide to Writing, New York; OUP, 198.

4. Mohan & Banerjee. Developing Communication Skills. Delhi: Macmillan.

5. Neill. English in Situation, OUP.

Reference Books:

1. Randolf, Leech and Swartwik. A Grammar of Contemporary English.

2. Collins Cobuild, English Grammar.

3. Murphy, Essential English Grammar.

4. Halliday,Mak.An. Introduction to Functional Grammar. Arnold Heinenaum.

5. Tikku and Shasikumar, Writing with a purpose, OUP.

6. Taylor, Grant. English Conversation Practice, Delhi: Tata McGraw.

7. Sasikumar and Dhamija, Spoken English, Delhi: Tata McGraw.

Web Source:

http://staffnew.uny.ac.id/upload/132306185/pendidikan/SYNTAX+IN+FUNCTIONAL+GRAMMAR.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML12	MATHEMATICS	5	0	0	4

Course Objective:

- To understand the concepts of ratio, proportion and percentage.
- To understand the concept and application of profit and loss in business. To use the concept of EMI.
- To understand the concept of stock exchange and to calculate Dividend.
- To understand applications of matrices in business.

Syllabus:

UNIT – I RATIO, PROPORTION AND PERCENTAGE 12

Ratio - Definition, Continued Ratio, Inverse Ratio, Proportion, Continued Proportion, Direct Proportion, Inverse Proportion, Variation, Inverse Variation, Joint Variation, Percentage Meaning and Computations of Percentages**.**

UNIT – II PROFIT AND LOSS & INTEREST 12

Profit and Loss

Terms and Formulae, Trade discount, Cash discount, Problems involving cost price, Selling Price, Trade discount and Cash Discount. Introduction to Commission and brokerage, Problems on Commission and brokerage.

Interest

Simple Interest, Compound interest (reducing balance & Flat Interest rate of interest), Equated Monthly Installments(EMI), Problems

UNIT – III SHARES AND DIVIDENDS 8

Concept of Shares, Stock exchange, Face Value, Market Value, Dividend, Equity Shares, Preferential Shares, Bonus Shares, Examples.

UNIT – IV MATRICES AND DETERMINANTS 14

Multivariable data, Definition of a Matrix, Types of Matrices, Algebra of Matrices, Determinants, Adjoint of a Matrix, Inverse of a Matrix via adjoint Matrix, Homogeneous System of Linear equations, Condition for Uniqueness for the homogeneous system, Solution of Non-homogeneous System of Linear equations (not more than three variables). Condition for existence and uniqueness of solution, Solution using inverse of the coefficient matrix, Problems.

UNIT – V MATHEMATICS OF FINANCE **14**

Rates of interest-nominal, effective – and their inter-relationships in different compounding situations. Compounding and discounting of a sum using different types of rates. Types of annuities, like ordinary, due, deferred, continuous, perpetual, and their future and present values using different types of rates of interest. Depreciation of Assets. Valuation of simple loans and debentures. Sinking Fund. (General annuities to be excluded)

Total: 60 Hrs

Course Outcome:

CO 01: Articulate the Continued Ratio and Inverse Ratio

CO 02: Describe the Computations of Percentage

CO 03: Compute the Problems on Commission and Brokerage

CO 04: To nderstand the Equated Monthly Installments (EMI)

CO 05: To be well aware of the concept of Shares

Text Books:

1. Anthony, M. and N. Biggs. Mathematics for Economics and Finance. Cambridge University Press.

2. Ayres, Frank Jr. Theory and Problems of Mathematics of Finance. Schaum's Outlines Series. McGraw Hill Publishing Co.

3. Budnick, P. Applied Mathematics. McGraw Hill Publishing Co.

4. Dowling, E.T. Mathematics for Economics, Schaum's Outlines Series. McGraw Hill Publishing Co.

5. Mizrahi and John Sullivan. Mathematics for Business and Social Sciences. Wiley and Sons.

Reference Books:

1. Wikes, F.M. Mathematics for Business, Finance and Economics. Thomson Learning.

2. Prasad, Bindra and P.K. Mittal. Fundamentals of Business Mathematics. HarAnand Publications.

3. Thukral, J.K. Mathematics for Business Studies. Mayur Publications.

Web Source:

https://www.math.ucdavis.edu/~hunter/m280_09/ch.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24SBML11	BASICS OF ELECTRONICS	5	0	0	4

Course Objective:

- Explain the theory, construction, and operation of basic electronic devices
- Be exposed to basic electronic devices

Syllabus:

UNIT – I SEMICONDUCTOR DIODES **12**

Semiconductors - properties of semiconductor-Semiconductor materials-intrinsic, extrinsic types – diodes - p-n junction under forward bias and reverse bias condition – p-n junction in breakdown region-characteristics of a diode-rectifier circuits- half wave, full wave and bridge rectifier.

UNIT – II SEMICONDUCTOR DEVICES **12**

Zener diode -working principle-characteristics-THYRISTOR-SCR-principle of operation-different modes of operation of SCR-voltage-current characteristics-commutation methods-VARISTOR-THERMISTOR-LED-DIAC-TRIAC

UNIT – III BIPOLAR JUNCTION TRANSISTOR **12**

Transistors-construction-NPN-PNP-junctions-biasing the BJT-common base, common emitter, common collector configurations-principle of operation-characteristics-transistor as an amplifier-active region operation of transistor-transistor as a switch: cut-off and saturation modes

UNIT – IV DIGITAL ELECTRONICS **12**

Number systems-decimal, binary, octal, hexadecimal – converting decimal to binary, octal to decimal, binary to octal, hexadecimal to decimal, binary to hexadecimal, hexadecimal to binary, hexadecimal to octal, binary arithmetic- binary addition, binary subtraction, binary

multiplication, binary division- complement of binary numbers-logic gates-AND gate,OR gate , NOT gate, NAND gate, XOR gate, NOR gate, X-NOR gate, half adder, full adder.

UNIT – V INTRODUCTION TO OPERATIONAL AMPLIFIERS 12

OPAMP IC741- linear op-amp circuits- inverting and non-inverting OPAMP circuits, OPAMP applications: addition, subtraction, integration, differentiation, voltage follower- concept of differential amplifiers- common mode signal, differential mode signal.

Total: 60 Hrs

Course Outcome:

CO – 1: Enumerate about semiconductor

CO – 2: Articulate the applications of diodes in rectifiers

CO – 3: Attain the basic principles of various semiconductor devices

CO – 4: Describe the behavior and characteristics of various semiconductor devices

CO – 5: Determine the behavior and characteristics of BJT

Text Books:

1. R.Muthusubramanian , S.Salivahanan, "Basic electrical and electronics engineering", Tata McGraw-Hill Education, Reprint 2012

Reference Books:

1. Thomas L.Floyd, "Electronic Devices", Pearson Education, 9th edition,2011

Web Source:

http://www.sasurieengg.com/e-course-material/I-year-E-course-material-II-sem/10.GE6252-BEEE.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML11	INTRODUCTION TO COMPUTER SCIENCE	5	0	0	4

Course Objective:

- Able to understand the fundamental of computer programming language
- Able to understand the compilers and various statements
- Able to understand the designing of Websites using HTML with scripting language

Syllabus:

UNIT – I **12**

Binary, ASCII, Algorithms, Pseudo code, Source Code, Compiler, Object Code, Scratch, Statements, Boolean Expressions, Conditions, Loops, Variables, Functions, Arrays, Threads, Event. Linux, C, Compiling, Libraries, Types, Standard Outputs Casting, Imprecision, Switches, Scopes, Strings, Arrays, Cryptography

UNIT – II **12**

Command-line arguments, Searching, Sorting, Bubble Sort, Selection Sort, Insertion Sort, Recursion, Merge Sort

Stack, Debugging, File I/O, Hexadecimal. Strings, Pointers, Dynamic Memory Allocation Heap, Buffer Overflow, Linked Lists, Hash Tables, Trees, Stacks, Queues.

UNIT – III **12**

TCP/IP, HTTP, HTML, CSS, PHP, Java Script, Ajax

UNIT – IV **12**

Model – View – Controller (MVC), Structure Query Language (SQL)

Unit – V **12**

Artificial Intelligence, Exciting conclusion

Total: 60 Hrs

Course Outcome:

CO 01: Understand the Binary and ASCII Statements

CO 02:Define the various statements in Conditions, Loops

CO 03: Articulate the Command Line Arguments and Bubble Sort

CO 04:Compute the concept of Dynamic Memory Allocation

CO 05: Discuss how to create website pages using HTML

Text Books:

1. Programming in Ansi C – E Balagurusamy. Publisher: Mc Graw Hill Education
2. The C Programming Language – Brian W. Kernighan, Dennis M. Ritchie, Publisher: Pearson
3. HTML & CSS design and build Websites – Jon Duckett
4. Eloquent Javascript (A Modern Introduction to Programming) - Marijn Haverbeke
5. University Handouts

Web Source:

http://cslabcms.nju.edu.cn/problem_solving/images/c/cc/The_C_Programming_Language_%282nd_Edition_Ritchie_Kernighan%29.pdf

SEMESTER – II

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML21	ECONOMICS OF SEA TRANSPORT AND INTERNATIONAL TRADE	5	0	0	4

Course Objective:

- Throughout the syllabus, students should be able to relate the theory to empirical evidence.
- This syllabus does not require an understanding of statistical techniques or methods

Syllabus:

UNIT – I **12**

BASIC ECONOMIC CONCEPTS

Understand the basic definitions of economics and maritime economics. Understand the distinction between the micro economic theory of shipping and macro-economic factors affecting international trade and shipping and the differences between them.

Thoroughly understand: factors of production, utility and price, opportunity cost.

Thoroughly understand price mechanism and the relationship between demand, price and quantity.

Be aware of competitive models and demand factors.

THE DEMAND FOR SHIPPING

Thoroughly understand how the demand for shipping arises.

Understand the basic measures of economic activity (GNP and GDP)

Thoroughly understand derived demand, elasticity of demand and the relevance of elasticity.

Understand demand measurement — distance, ton/miles and tonnes/kilometres.

UNIT – II **12**

THE SUPPLY OF SHIPPING

Thoroughly understand the factors influencing the supply of shipping — tonnage, number and flag.

Understand the trends in development of the world fleet, new buildings and scrapping.

Thoroughly understand productivity and supply trends - surplus tonnage, active fleet, market segments.Understand short and long run supply, supply responsiveness and the concept of elasticity.

COST ANALYSIS AND ECONOMIES OF SCALE

Understand basic economic cost concepts - conventional cost analysis in shipping, specific factors affecting the relationship between costs and shipping output.

Thoroughly understand economies of scale in shipping and optimal ship size.

Understand factors affecting costs including fiscal regimes and flag of registry.

Be aware of the relationship between costs and quality.

Understand factors affecting costs including fiscal regimes and flag of registry

Understand empirical testing of theory against trends in ship size and the factors involved over the last two decades.

UNIT – III **12**

COMPETITIVE MARKETS—TRAMPS

Thoroughly understand the dry cargo market structure and characteristics.

Understand market demand structure and the concept of perfect competition.

Understand the use of voyage estimating, breakeven analysis in determining minimum freight rates and the layup decision.

Thoroughly understand the cost structure of tramp ships.

COMPETITIVE MARKETS—TANKERS

Thoroughly understand the structure of the tanker market and the seaborne trade in crude and products.

Understand the imbalance of ownership, identical service, freedom of entry and exit, full information and segmented supply

Be aware of the relationship between the tanker and dry markets.

Understand the effect of political and environmental factors.

Thoroughly understand recent changes in the tanker fleet and fluctuations in freight market indices.

UNIT – IV **12**

LINER TRADES— OLIGOPOLY AND THE COMPETITIVE MARKET

Thoroughly understand characteristics and demand for liner services. Understand trends in liner markets and ship types.

Understand pricing behaviour including price discrimination and profitability and the empirical evidence of lower profits than other shipping markets.

Understand the relationship between profit maximization and optimal utilisation.

Understand the role and function of conferences, alliances and consortia and the differences between these structures

Be aware of the effect of international regulation.

Understand customer demand, the ability to meet customer demand and maximize utilisation.

PORTS, CANALS AND WATERWAYS

Understand the functions of ports, canals and waterways.

Understand the relationship between efficiency and cost and the importance of ship/port time.

Understand investment, criteria and economic factors including cost and tariff structure.

Be aware of arguments for and against public ownership.

UNIT – V **12**

SHIPPING AND INTERNATIONAL TRADE

Understand the patterns of world trade; be aware of world trade statistics.

Understand the demand for shipping.

Understand types of trade flows; inter-industry and intra-industry; absolute and comparative advantage.

Thoroughly understand global trading; the arguments for free trade versus protectionism in its many forms; the role of the World Trade Organisation and G8.

EXCHANGE RATES AND BALANCE OF PAYMENTS

Thoroughly understand how exchange rates are determined; free floating and regulated markets.

Understand the effect of exchange rate fluctuations on shipping.

Understand the components of a balance of payments with particular reference to shipping.

Understand the relationship between exchange rates and the factors affecting their fluctuations and a country's balance of payments.

Total: 60 Hours

Course Outcomes:

CC 01: Understand the basic definition of economics and maritime economics

CC 02: Construct the distinction between the micro economic theory of shipping and macro -economic factors affecting international trade

CC 03: Articulate the factors influencing the supply of shipping — tonnage, number and flag.

CC 04: Compute the relationship between costs and quality

CC 05: Discuss the dry cargo market structure and characteristics.

Text Books:

1. Economics of Sea Transport and International Trade by John Hoar. Publisher: Institute of Chartered Shipbrokers (1 September 2015)

2. Economics of Maritime Transport, theory and practice, Witherby, 1999

3. Maritime Economics (3rd Edn). Stopford, Martin. Routledge 2009

Reference Books:

1. Alderton, Patrick. Reeds sea transport: operation and economics (6th edn). Adlard Coles Nautical, 2011

2. Button, Kenneth. Transport economics (3rd edn). Edward Elgar Publishing, 2010

Web Source:

https://logistics.nankai.edu.cn/_upload/article/50/93/1cf2097840e8af90af4b19979773/9ce547df-a3e1-493c-a4a3-0ebbfe0669b9.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML22	LEGAL PRINCIPLES IN SHIPPING BUSINESS	5	0	0	4

Course Objectives:

- Able to understand the laws used in shipping business
- Thoroughly understand the precise nature of tort.

Syllabus:

UNIT – I INTRODUCTION TO THE LAW & CONTRACT 12

INTRODUCTION TO THE LAW

English law is the most widely used law in shipping business. Nearly all practical documents of an International nature involved with shipping business are based on English Law, therefore, students must thoroughly understand concepts of common law, case law and precedent and how these contrast with status law (knowledge of specific national statutes is not required)

Be aware of the fact that in many countries case law does not apply as all law is codified

Be aware of the difference between civil and criminal courts and of their structure, methods of appeal and choice of forum.

CONTRACT

Thoroughly understand the principles of the law of contract especially the essential ingredients of offer, acceptance, consideration and legality.

Understand how and when a contract comes into existence. Understand how a contract may be broken and the circumstances under which it may be voided and how force majeure may prevent its performance.

Understand how some breaches may frustrate a contract completely whereas others may be voided and how force majeure may prevent its performance. Understand how some breaches may frustrate a contract completely whereas others may require the contract to be fulfilled with compensation for the breach.

UNIT – II TORT & AGENCY 12

TORT

Thoroughly understand the precise nature of tort. Understand the specific situation related to the shipping including failure of a duty of care, i.e., negligence and contributory negligence, misrepresentation and vicarious liability outside a contractual situation.

Understand the tort of conversion including delivery of cargo to the wrong path and the tort of defamation. Be aware the difference between libel and slander

AGENCY

Thoroughly understand general principles of law of agency and how an agency may be created. Be aware of the difference between general agency, specific agency, and agents of necessity.

Understand the duties and rights of the agent or broker under each type of agency. Understand the two different forms of authority express and implied. Understand the responsibilities of the principal to the agent. Understand the agent's right to remuneration and the procedures available to ensure payment

Understand the authority of an agent in concluding contracts with third parties on behalf of the principal including the importance of ensuring that the agent's role is clearly defined. Thoroughly understand the consequences of breach of warranty of authority. Be aware of the procedures for terminating an agency

UNIT – III VOYAGE CHARTERPARTIES & TIME CHARTERPARTIES 12

VOYAGE CHARTERPARTIES

Understand the essential legal difference between voyage charter including consequent voyages and contracts of affreightment, time charters and demise (bareboat) charters.

Thoroughly understand the importance of "time" in charters particularly including the "arrived ship" and laytime. Understand the carriers' right to be paid freight for the carriage of cargo and his liens for nonpayment.

TIME CHARTERPARTIES

In time charter thoroughly understands speed and consumption and "off-hire". Be aware of the possibility of disputes over final voyage under time charters. Understand the right of the owner to receive hire for his vessel and remedies in the event of non-payment.

UNIT – IV BILLS OF LADING & LAW AND THE CARRIAGE OF GOODS BY SEA 12

BILLS OF LADING

Thoroughly understand the role and functions of bills of lading, namely as a receipt (quantity and condition), evidence of a contract (not the contract itself) and as a document of title.

Understand the principal customary clauses in bills of lading including identity of carrier, Himalaya, protection clauses, and clause paramount incorporating one of the international conventions for cargo liability

Be aware of the customary clauses in bills of lading in respect of carriers and merchants rights and responsibilities. Thoroughly understand the legal differences between combined transport bills of lading, through bills of lading and port-to-port bills of lading and difference and role of waybills.

Be aware of electronic alternatives to paper bills of lading. Thoroughly understand the role of bills of lading acts relating to the endorsement and negotiability of the bill of lading as a document of title eg in UK Carriage of goods by sea act (COGSA) 1992.

LAW AND THE CARRIAGE OF GOODS BY SEA

Thoroughly understand the need for an internationally agreed framework of law governing carriage of goods by sea. Understand the differences between the law involved in private carriage ie charter parties and common carriage ie liner bills of lading.

Thoroughly understand the role and function of international conventions relating to cargo liability. Thoroughly understand the principle rights, liabilities and exclusion of liability contained in Hague Rules, Hague/Visby Rules and Hamburg Rules and the differences between the three conventions.

Understand the impact of the principle clauses relating the seaworthiness and limitations of liability Be aware of other additional rules ie UNCTAD/ICC Combined transport rules Be aware of discussion to revise or replace these conventions. Be aware of bills of lading problems relating to multimodal transport arising from differing liability regimes applying to individual modes of transport.

UNIT – V COMMON AREAS OF DISPUTE AND DISPUTE RESOLUTION 12

Thoroughly understand statutes of limitations and time bars and their impact in shipping business. Be aware of those time bars imposed by statutes or international conventions and those which are contractually agreed.

Thoroughly understand the role of arbitration in dispute resolution. Understand the different services provided by maritime arbitrators including short form arbitration and mediation. Be aware of the main arbitration centres especially London, New York and Paris and their respective maritime arbitration associations.

Thoroughly understand the advantages and disadvantages of arbitration v litigation. Understand how losses may be recovered (contract). Understand the remedy against tort feasors and the limitations of compensation that may be obtained.

Be aware of the main areas from which bills of lading disputes arise, title, clean and the claused documents, negotiability and liability**.**

Total: 60 Hrs

Course Outcomes:

CO 01: Evaluate the fact that in many countries case law does not apply as all law is codified

CO 02: Discuss how some breaches may frustrate a contract completely whereas others may require the contract to be fulfilled with compensation for the breach

CO 03: Understand the precise nature of tort

CO 04: Define the responsibilities of the principal to the agent

CO 05: Understand the carriers' right to be paid freight for the carriage of cargo and his liens for nonpayment

Text Books:

1. Legal Principles in Shipping Business by Institute of Chartered Shipbrokers

Code	Subject	Lecture	Tutorial	Practical	Credit
24DBML21	INTRODUCTION TO ENTREPRENEURSHIP	5	0	0	4

Course Objective:

- To develop and strengthen entrepreneurial quality and motivation in students and to impart basic entrepreneurial skills and understanding to run a business efficiently and effectively.

Syllabus:

UNIT – I ENTREPRENEURSHIP 12

Entrepreneur – Types of Entrepreneur – Difference between Entrepreneur and Intrapreneur – Entrepreneur in Economic Growth – Factors affecting Entrepreneur Growth.

UNIT – II MOTIVATION 12

Major Motives influencing an Entrepreneur – Achievement Motivation Training – Self Rating, Business Games, Thematic Apperception Test – Stress Management – Entrepreneurship Development Programs – Needs, Objectives

UNIT – III BUSINESS 12

Small Enterprises – Definition, Classification – Characteristics, Ownership Structures – Project Formulation – Steps involved in setting up a business – identifying, Selecting a Good Business opportunity, Market Survey and Research, Techno Economic Feasibility Assessment – Preparation of Preliminary Project Reports – Project Appraisal – Sources of Information – Classification of Needs and Agencies

UNIT – IV FINANCE AND ACCOUNTING 12

Need – Sources of Finance, Term Loans, Capital Structure, Financial Institution, Management of Working Capital, Costing, Break Even Analysis, Taxation – Income Tax, Excise Duty – Sales Tax

UNIT – V SUPPORT TO ENTREPRENEURSHIP 12

Sickness in small Business – Concept, Magnitude, Causes and Consequences, Corrective Measures – Business Incubators – Government Policy for Small Scale Enterprises – Growth

Strategies in small industry – Expansion, Diversification, Joint Venture, Merger and Sub Contracting.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the types of Entrepreneur

CO 02: Discuss the difference between Entrepreneur and Intrapreneur

CO 03: Classify the major motives influencing an Entrepreneur

CO 04: Understand the Entrepreneurship Development Programs

CO 05: Construct information on definition and classification of small enterprises

Text Books:

1. Entrepreneurial Development, Khanka S.S, S. Chand & Co Ltd

2. Entrepreneurship – Theory and Practices, 9th Edition, Donald F. Kuratko, Cengage Learning, 2014

Reference Books:

1. Entrepreneurship, 8th Edition, Hisrich R D Peters MP, Tata Mc Graw-Hill, 2013

2. Entrepreneurship Theory at Cross Road: Paradigms and praxis, 2nd Edition, Mathew J Manimala, Edition Dream Tech, 2005

Web Source:

https://www.iare.ac.in/sites/default/files/lecture_notes/IARE_Entrepreneurial_Development_NOTES.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML22	**ENVIRONMENTAL SCIENCE**	**2**	**0**	**0**	**3**

Course Objective:

- To able to understand need for public awareness on Environmental Science
- To understand the Ecosystems and Environmental Pollutions
- To understand Human Population and the environment

Syllabus

UNIT – I DEFINTION **8**

a. Definition

b. Scope and importance.

c. Need for public awareness

UNIT – II NATURAL RESOURCES **8**

a. Natural resources

b. Ecosystems

UNIT – III ENVIRONMENTAL POLLUTION **8**

a. Environmental pollution

UNIT – IV SOCIAL ISSUES **8**

a. Social issues and the environment

UNIT – V HUMAN POPULATION **8**

a. Human population and the environment

Total: 40 Hrs

Course Outcome:

CO – 1: Understand, what do you mean by Environmental Science
CO – 2: Articulate the scope and importance of Environmental Science
CO – 3: Define the need for public awareness
CO – 4:Understand the Natural Resources
CO – 5: Define the Ecosystems
Text Books:

1. S.N. Chary , “Environmental Studies”, Macmillan India Limited, 2002
2. M. Prasanthrajan , “A text book on Ecology and Environmental Science”, 2000
3. Erach Bharucha, “Environmental Studies”, UGC, 2004

Code	Subject	Lecture	Tutorial	Practical	Credit
24SBML21	ADVANCED PROGRAMMING LANGUAGE	5	0	0	4

Course Objectives:

- To understand the .NET framework class library
- To understand the Object Oriented Programming using VB.NET
- To understand how to use back end application with VB.NET

Syllabus:

UNIT – I INTRODUCTION TO .NET **04**

Why .NET?, The .NET framework Class Library, Working with the .NET FCL, Namespaces, Types of .NET Namespace

UNIT – II THE VISUAL BASIC .NET LANGUAGE **14**

VB.Net Data types, Operators, Decision Statements- If..then, If..then..else, Select.. Case, Loop Statements- While, Do .. Loop, For .. Next, For Each ..Next, Arrays.

UNIT – III OOP USING VB.NET **14**

Object Oriented features- Abstraction, Encapsulation, Polymorphism, Inheritance, Declaring Classes, Implementing Typecasting, Procedures and Functions, Optional arguments, Error handling in Procedures, Properties, Public and Private variables, Types of Properties, Polymorphism, Inheritance, Method Overriding.

UNIT – IV WINDOWS FORM **14**

Introduction to Class Libraries, Event and Event Handlers, Windows Application, Windows GUI, First Win Forms Application, Controls, Text controls, Selection List Controls, VB.Net is overridden, Some controls with examples. Error handling In Windows Forms: Types of Validations, Types of Errors, Exceptions, Classified Runtime based Exceptions. SDI and MDI Applications: SDI and MDI interfaces, Characteristics of MDI components, Creating MDI Forms.

UNIT – V DATA ACCESS WITH ADO.NET **14**

Overview of Microsoft Database Access Technology, ADO.Net, Creating a Database, ADO.Net Architecture, ADO.Net Class Libraries, Databound Controls, Creating a Data Set, Using XML Data.

Total: 60 Hrs

Course Outcome:

CO – 1: Understand why to use .NET?

CO – 2: Explore the types of .NET Namespace

CO – 3: Elaborate VB.NET data types

CO – 4: Describe the Decision Statements

CO – 5: Describe the Object Oriented Features

Text Books:

1. **Visual Basic .NET The Complete Reference by Noel Jerke**

Reference Books:

1. **Visual Basic .NET Programming Black Book by Steven Holzner**

Web Source:

https://bcaofficial.files.wordpress.com/2017/05/vb-net-black-book.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML21	**PRINCIPLES OF MANAGEMENT**	**5**	**0**	**0**	**4**

Course objective

- The purpose is to expose the student to the basic concepts of management in order to aid the student in understanding how organization functions.
- It will provide the frameworks and tools to effectively analyze and approach various organizational situations.
- To understand the organizations HRM practices, HR planning, Training Activities, Compensation and reward Planning, Performance Appraisal systems.

Syllabus:

UNIT – I MANAGERIAL FUNCTION AND PROCESS 12

Concept and Foundations of Management, Evolution of Management Thoughts; Managerial Functions – Planning, Organizing, Controlling; Decision making; Role of Manager, Managerial skills; Entrepreneurship; Management of innovation; Managing in a global environment, Flexible Systems Management; Social responsibility and managerial ethics; Process and customer orientation; Managerial processes on direct and indirect value chain.

UNIT – II ORGANISATIONAL BEHAVIOUR AND DESIGN 12

Conceptual model of organization behaviour; The individual processes – personality, values and attitude, perception, motivation, learning and reinforcement, work stress and stress management; The dynamics of organization behaviour – power and politics, conflict and negotiation, leadership process and styles, communication; The Organizational Processes - decision making, job design; Classical, Neoclassical and Contingency approaches to organizational design; Organizational theory and design - organizational culture, managing cultural diversity, learning organization; organizational change and development; Knowledge Based Enterprise – systems and processes; Networked and virtual organizations.

UNIT – III HUMAN RESOURCE MANAGEMENT 12

HR challenges; HRM functions; The future challenges of HRM; Strategic Management of human resources; Human resource planning; Job analysis; Job evaluation; Recruitment and selection; Training and development; Promotion and transfer; Performance management; Compensation management and benefits; **Employee morale and** productivity; Management of organizational climate and Industrial relations; Human resources accounting and audit; Human resource information system; International human resource management.

UNIT – IV ACCOUNTING FOR MANAGERS AND FINANCIAL MANAGEMENT 12

Financial accounting – concept, importance and scope, generally accepted accounting principles, preparation of financial statements with special reference to analysis of a balance sheet and measurement of business income, inventory valuation and depreciation, financial statement analysis, fund flow analysis, the statement of cash flows; Management accounting – concept, need, importance and scope; Cost accounting – records and processes, cost ledger and control accounts, reconciliation and integration between financial and cost accounts; Overhead cost and control, Job and process costing, Budget and budgetary control, Performance budgeting, Zero-base budgeting, relevant costing and costing for decision-making, standard costing and variance analysis, marginal costing and absorption costing.

Goals of finance function; Concepts of value and return; Valuation of bonds and shares; Management of working capital: Estimation and financing; Management of cash, receivables, inventory and current liabilities; Cost of capital; Capital budgeting; Financial and operating leverage; Design of capital structure: theories and practices; Shareholder value creation: dividend policy, corporate financial policy and strategy, management of corporate distress and restructuring strategy; Capital and money markets: institutions and instruments; Leasing, hire purchase and venture capital; Regulation of capital market; Risk and return: portfolio theory; CAPM; APT; Financial derivatives: option, futures, swap; Recent reforms in financial sector.

UNIT – V MARKETING MANAGEMENT 12

Concept, evolution and scope; Marketing strategy formulation and components of marketing plan; Segmenting and targeting the market; Positioning and differentiating the market offering; Analyzing competition; Analyzing consumer markets; Industrial buyer behaviour; Market research; Product strategy; Pricing strategies; Designing and managing Marketing channels; Integrated marketing communications; Building customer satisfaction, Value and retention; Services and non-profit marketing; Ethics in marketing; Consumer protection; Internet marketing; Retail management; Customer relationship management; Concept of holistic marketing.

Total: 60 Hrs

Course Outcome:

CO 01: It will make the students knowledgeable on the historical, current, and future issues in management.

CO 02: It will make the students to discuss the managerial issues.

CO 03: Students will be able to apply problem solving and critical thinking abilities to analyze the kinds of choices available for developing alternative organizational behavior approaches in the workplace.

CO 04: Students can analyze the personality and change the attitude of the people in the organization.

CO 05: Enhanced Recruitment activities, Better Training and Development programme, Motivated Workforce and reduced Employee Grievances.

Text Books:

1. Paneerselvam R., Operations Research, Prentice Hall of India, Fourth Print, 2008.

2. N. D Vohra, Quantitative Techniques in Management,Tata Mcgraw Hill, 2010.

3. Hill. Strategic Management : An Integrated approach, 2009 Edition Wiley (2012).

4. John A.Parnell. Strategic Management, Theory and practice Biztantra (2012).

5. Azhar Kazmi, Strategic Management and Business Policy, 3rd Edition, Tata McGraw Hill,2008

6. Charles W.I. Hill and Arun Kumar Jain, International Business, 6th edition, Tata Mc Graw Hill, New Delhi, 2010.

7. K. Aswathappa, International Business, 5 th Edition, Tata Mc Graw Hill, New Delhi, 2012.

8. Rakesh Mohan Joshi, International Business, Oxford University Press, New Delhi, 2009.

Reference Books:

1. G. Srinivasan, Operations Research – Principles and Applications, PHI, 2007.

2. Gupta P.K, Hira D.S, Problem in Operations Research, S.Chand and Co, 2007.

3. William J Stevenson, Operations Management, Tata McGraw Hill, 9th Edition, 2009.

4. Kanishka Bedi, Production and Operations Management, Oxford University Press, 2004.

5. Chary S. N, Production and Operations Management, Tata McGraw Hill, Third Edition, 2008.

6. Aswathappa K and Shridhara Bhat K, Production and Operations Management, Himalaya Publishing House, Revised Second Edition, 2008.

7. Pannerselvam R, Production and Operations Management, Prentice Hall India, Second Edition, 2008

8. Lawerence G. Hrebiniak, Making strategy work, Pearson, 2005.

9. Gupta, Gollakota and Srinivasan, Business Policy and Strategic Management – Concepts and Application, Prentice Hall of India, 2005.

10. Dr.Dharma Bir Singh, Strategic Management & Business Policy, KoGent Learning Solutions Inc., Wiley, 2012.

Web Source:

https://d3bxy9euw4e147.cloudfront.net/oscms-prodcms/media/documents/PrinciplesofManagement-OP.pdf

SEMESTER – III

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML31	INTRODUCTION TO LOGISTICS	5	0	0	4

Course Objective:

- Able to understand the importance of distribution in international trade
- Able to thoroughly understand the use of the word 'inventory' in the context of 'the goods' and the importance of inventory management including the need to control inventory costs.

Syllabus:

UNIT – I INTERNATIONAL DISTRIBUTION AND PHYSICAL OPERATION 12

INTERNATIONAL DISTRIBUTION

Thoroughly understand the importance of distribution in international trade and how basic distribution structures meet international and national needs. Thoroughly understand the use of the word 'logistics' when applied to commercial distribution and understand the role of logistics in the provision of distribution services.

Be aware of the evolution of the global economy in the last quarter of the 20th century arising from unitisation and intermodal transport development. Thoroughly understand the supply-chain concept and how the different transport modes may be combined.

Understand the importance of modal interfaces and the basic function of ports, airports, inland depots, railheads etc. Be aware of the basic intermodal systems: road/rail/sea; sea/air; road/air; road/rail. Understand the importance of inventory control in operating systems.

PHYSICAL OPERATION

Thoroughly understand the characteristics of the main types of primary vehicles and equipment used: ships, trucks, trains and aircraft.

Understand the main variant types of special equipment and facilities used to enhance through transport including swap-bodies, double stacks, trailer types, container types.

Understand the structural needs and layout of modal interfaces and terminals: depots, warehouses and cargo-handling equipment.

UNIT – II TRADE ROUTES AND THE PRACTITIONERS 12

TRADE ROUTES

Thoroughly understand the relative importance of main trade routes including the main container shipping routes, railway routes and land bridges.

Understand the relationship between commodities, value and transit time and transport mode. Understand the economic, political and environmental factors arising in respect of road/rail/barge competition and the role of shortsea shipping.

Understand the role of airfreight and its advantages and limitations. Understand the role of road haulage and the difference between international, domestic trunk and local delivery. Thoroughly understand the way in which both the transport and logistics of the distribution of many specialist businesses are closely tailored to their needs.

Be aware of, and be able to give examples of, the arrangements made in some representative businesses, for example, hanging garments, bonded goods, perishables, cars, directories.

THE PRACTITIONERS

Thoroughly understand the various types of operator involved in multi-modal transportation and the types of service structure they offer, such as liner operators, NVOCs, freight contractors and forwarders, parcel/courier services, railways, international road haulage and airlines.

Be aware of the growing service overlap of, and competition among, the operators. Understand the advantages and disadvantages of public versus private sector ownership; single company versus networks; joint services versus alliances.

Understand the options of internal service provision or outsourcing, and the advantages and disadvantages**.**

UNIT – III THROUGH TRANSPORT PRICING & INVENTORY MANAGEMENT 12

THROUGH TRANSPORT PRICING

Thoroughly understand the nature of price competition between transport modes, namely sea versus road/rail versus air. Understand price measurements: tonne-kilometre, and cost-transit time benefit. Understand the relationship between price and demand.

Be aware of the importance of revenue and cash flow. Understand different pricing strategies, contribution or volume (market share) led.

Understand the calculation of through transport pricing, the component price/cost components and the concept of price transparency.

Understand how price discrimination is used. Understand the use of distribution and carrier service contracts.

INVENTORY MANAGEMENT

Thoroughly understand the use of the word 'inventory' in the context of 'the goods' and the importance of inventory management including the need to control inventory costs.

Understand the concepts of just-in-time delivery, and its advantages and disadvantages compared with warehoused stock.

Thoroughly understand the role of supply chain management in optimising inventory.

Understand the use of consolidation and distribution centres; central warehousing versus direct retail delivery.

Be aware of typical supply chain and distribution management systems. Understand how distribution networks are established and used.

UNIT – IV SALE CONTRACTS AND DOCUMENTATION 12

Understand methods of payment in the sale of goods. Thoroughly understand the impact of documentary credits and ICC Uniform Customs and Practice on transport documentation.

Understand the different types of contract in the sale of goods including Incoterms.

Thoroughly understand the paramount importance of bills of lading in through transport, their function and their role in international trade. Understand the effect of bills of lading legislation such as the UK Carriage of Goods by Sea Act 1992 or equivalent national legislation.

Understand the concept of 'clean' and 'dirty' bills of lading. Understand the use of letters of indemnity, their misuse and the avoidance of fraud. Thoroughly understand the different types of bills of lading including ocean, through, combined transport and understand the major and usual clauses including Clause Paramount, Himalaya, identity of carrier and protection clauses.

Understand the importance of endorsements on the back of bills of lading. Thoroughly understand the difference between bills of lading, waybills and consignment notes and the effect of these on the handover of cargo to receivers.

Understand other transport documentation including booking notes, shipping notes, manifests, dangerous cargo declarations.

UNIT – V SALES AND MARKETING 12

Thoroughly understand the difference between marketing and sales and the importance of both in the multi-modal transport field. Understand the use of market research and how this can be used in applying marketing techniques.

Be aware of different types of sales systems and understand the role of field sales and call centres. Understand how customer service levels can be measured and how this relates to the use of quality assurance.

Understand the role of quality management including quality assurance (ISO 9000). Be aware of the concept of total quality management (TQM) and the use of benchmarking.

Thoroughly understand the importance of the role of e-commerce in multi-modal transport and in meeting customers' perceived needs for supply chain information and transparency

Total: 60 Hrs

Course Outcome:

CO 01: Understand the supply-chain concept and how the different transport modes may be combined.

CO 02: Describe the structural needs and layout of modal interfaces and terminals: depots, warehouses and cargo-handling equipment

CO 03: Compute the relative importance of main trade routes including the main container shipping routes, railway routes and land bridges.

CO 04: Compute the relationship between commodities, value and transit time and transport mode.

CO 05: Determine the importance of revenue and cash flow.

Text Books:

1. Introduction to Logistics Systems Management (Wiley Essentials in Operations Research and Management Science) 2nd Edition, Kindle Edition. Published By Wiley

2. Introduction to Global Logistics: Delivering the Goods, Kogan Page

3. Logistics Management 2nd Edition, Satish C. Ailawadi, Rakesh P. Singh, PHI Learning Pvt. Ltd

Reference Books:

1. Global Logistics for Dummies, Sole – The International Society of Logistics

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML32	SHIP OPERATIONS & MANAGEMENT	5	0	0	4

Course Objective:

- To understand the Shipping company structure
- To understand the commercial operations related to Voyage
- To understand the concept of Crew Management

Syllabus:

UNIT – I SHIPPING COMPANY ARCHITECTURE 12

Shipping Company Structure: Organization of a shipping company – Roles of Commercial, Technical & Crewing departments – In house vs outsourcing of Ship Management functions – Ship Registries, National vs Open Registries – Ship Classification societies

UNIT – II COMMERCIAL OPERATIONS 12

Commercial Operations: Commercial operations related to voyage – Chartering – Voyage estimates – Time charter yield calculations – Bunkering operations – Factors affecting vessel performance – Post fixture Management – Lay time calculation – Demmurage, Despatch calculation

UNIT – III TECHNICAL MANAGEMENT 12

Technical Management : Technical Management – Ship acquisition methods – Induction of a vessel in the fleet – Planned maintenance & emergency repairs – Dry-docking and annual / special surveys – Management of ship spares.

UNIT – IV CREW MANAGEMENT 12

Crew Management : Crew Management – Manning regulations, international conventions viz. STCW, SOLAS – Crew management companies – Maritime training establishments – Maritime Training administration – Port State Control.

UNIT – V SHIP MANAGEMENT CONTRACTS 12

Ship Management Contracts : Standard Ship Management contracts (BIMCO Shipman) – International Safety Management (ISM) code – ISMA code of Ship Management Practice

Total: 60 Hrs

Course Outcome:

CO 01: Understand the different types of organization structure from all functions in-house, part contracted or fully contracted out.

CO 02: Elaborate the basics of ship design and construction and the suitability of specific ship types for different cargoes and trades.

CO 03: Describe the difference between annual, intermediate, special surveys and damage surveys.

CO 04: Understand the requirements for international safety convention certification including Safety of Life at Sea (SOLAS) and load line certification and appropriate surveys.

CO 05: Define the port disbursements and the role of port agents, including estimated disbursement accounts and advance funds.

Text Books:

1. Malcolm Willingale, "Ship Management (Business of Shipping)", LLP Professional Publications, 4th ,2005

Reference Books:

1. Panayides P, "Professional Ship Management", Ashgate Publications, 2001
2. R.Tallack , "Commercial Management in Shipping" , Nautical Institute, 2002

Web Source:

https://oiipdf.com/download/18302

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML31	MANAGEMENT INFORMATION SYSTEM	5	0	0	4

Course objective:

1. The module aims at creating interest and awareness about the proliferation of the Information Systems in today's organizations.
2. This would lead to understanding of categories of MIS: Operations Support System, Management Support System and Office automation system, Functional management system.

Syllabus:

UNIT – I **12**

Introduction: Definition of System – Information System – Information System Activities And Resources – Types of Information Systems – Managerial Challenges of Information Technology – Strategic Uses of Information Technology

UNIT – II **12**

Database and Information Management: Organizing Data in Traditional File Environment – The Database Management Approach – Data warehousing – Data Mining – Database Structures Telecommunication Networks: Business Use of the Internet – Role of Intranets and Extranets – Types of Telecommunication Networks

UNIT – III **12**

Developing Business/IT Solutions: Systems Development Life Cycle – Prototyping – Feasibility Studies - System Analysis – Systems Design – End user Development Functional Business Systems: Marketing Systems – Manufacturing Systems – Human Resource Systems – Accounting Systems – Financial Management Systems.

UNIT – IV **12**

Decision Support Systems: Decision Making Process - DSS Components – What-if Analysis – Sensitivity Analysis – Goal-seeking Analysis Artificial Intelligence Technologies in Business: Overview of Artificial Intelligence – Neural Networks – Fuzzy Logic Systems – Genetic Algorithms – Expert Systems – Virtual Reality

UNIT - V **12**

Security and Ethical Challenges: Information Systems Controls – Risks of Online Operations – Security Measures – Systems Controls and Audits – Ethical Responsibility of Business Professionals: Business Ethics and Technology Ethics – Ethical Guidelines

Total: 60 Hrs

Course outcome:

CO 01: It is expected that students are able to understand the usage of Information Systems in management.

CO 02: The students also would understand the activities that are undertaken in acquiring an Information System in an organization.

CO 03: Further the student would be aware of various Information System solutions like ERP, CRM, Data warehouses and the issues in successful implementation of these technology solutions in any organization.

CO 04: Students would be able to understand the usage of MIS in organizations and the constituents of the MIS

CO 05: The student would understand the classifications of MIS, understanding of functional MIS and the different functionalities of these MIS. This would be followed by case study on Knowledge management.

Text Books:

1. Azam, M., Management Information System, McGrawHill Education, 2012.
2. Kendall, K. and Kendall, J., Systems Analysis and Design, 7th Edition, PHI Learning, 2009.
3. Laudon, K., Laudon, J. and Dass, R., Management Information Systems – Managing the Digital Firm, 11th Edition, Pearson, 2010.
4. Mohapatra, S., Cases in Management Information Systems, PHI Learning, 2008.

Reference Books:

1. Murdick, R.G., Ross, J.E. and Claggett, J.R., Information Systems for Modern Management, 3rd Edition, PHI, 2011.

2. O'Brien, J.A., Morakas, G.M. and Behl, R., Management Information Systems, 9th Edition, Tata McGraw-Hill Education, 2009.

3. Saunders, C.S. and Pearson, K.E., Managing and Using Information Systems, 3rd Edition, Wiley India Pvt. Ltd., 2009. 8. Stair, R. and Reynolds, G., Information Systems, 10th Edition, Cengage Learning,

Web Source:

https://drive.uqu.edu.sa/_/fbshareef/files/principles%20of%20information%20systems%209th%20-stair,%20reynolds.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24SBML31	ENGLISH COMMUNICATION SKILL 1	5	0	0	4

Course Objective:

- Able to understand the communication network in an organization
- Able to understand the communication techniques to overcome the communication breakdown.

UNIT I **12**

Recap of Language Skills – Speech, Grammar, Vocabulary, Phrase, clause, sentence, Punctuation.Fluency building-What is fluency – Why is fluency important – Types of fluency – Oral fluency – Reading fluency-Writing fluency – Barriers of fluency – How to developfluency.

UNIT II **12**

Speaking Skills-Formal and Informal Conversation – Conversation in the work place – Interviews – Public Speech – Lectures-Listening Skill

UNIT III **12**

Comprehending – Retaining – Responding – Tactics – Barries to Listening – Overcoming listening barriers – Misconception about listening.Reading Skill-Acquiring reading – Reading Development – methods teaching – Reading difficulties.

UNIT IV **12**

Writingskill-Note-making – CV's – Report writing, copy writing, Agenda – Minutes – Circular – Essay writing on any current issues – paragraph – Essay writing, Writing Research papers – Dissertation

UNIT V **12**

Communication Skills for effective Business Presentation, perfecting oral skills-Non Verbal Communication: cultural codes for effective and business Presentations; Business Etiquettes.

TOTAL: 60Hrs

Course Outcome:

CO 01: Describe the communication network in an organization
CO 02: Analyze the communication techniques
CO 03: Enhance the speaking and writing skills.
CO 04: To understand the business etiquettes.
CO 05: To groom themselves to attend the interview.

Text Books:

1. **University Handout**

Code	Subject	Lecture	Tutorial	Practical	Credit
24SBML32	INVESTMENT ANALYSIS	5	0	0	4

Course Objective:

- To introduce the students to the investment and securities concepts.
- To explain the fundamental and technical analysis of portfolio

Syllabus:

UNIT – I INTRODUCTION **12**

Investment – Speculation – Gambling and investment – Investment objectives – Investment process, Investment alternatives – Negotiable securities – Non Negotiable securities – Mutual Funds

UNIT – II PRIMARY MARKET **12**

New Issues Market (Primary market) – Parties involved in the new issue – Placement of the issue – Pricing of New issues – History of stock exchanges in India – Functions of Stock Exchange – Regulatory frame work – Meaning – BSE, NSE, ISE, OTCEI and NSDL

UNIT – III SEBI AN OVERVIEW **12**

Objectives of SEBI – Functions of SEBI – Organisation of SEBI – SEBI'S Role in the primary Market – Secondary Market and SEBI – Critical Review of SEBI

UNIT – IV FUNDAMENTAL ANALYSIS **10**

Fundamental Analysis – Economic Analysis – Industry Analysis – Company Analysis, Technical Analysis – Assumption – Technical tools – Dow theory Major Trends – Odd Lot Trading.

UNIT – V PORTFOLIO CONSTRUCTION **14**

Portfolio Construction – Approaches in Portfolio construction – Determination of objectives – Selection of portfolio – Markowitz Model – The Sharpe Index Model – Capital Asset pricing mode (CAPM) – Portfolio Revision – Formula plans – Assumptions, Constant rupee value plan – Constant ratio plan and variable ratio plan.

Total: 60 Hrs

Course Outcome:

CO 01: Articulate the Gambling and Investment

CO 02: Define the Negotiable Securities and Non Negotiable Securities

CO 03: Understand the history of stock exchange in India

CO 04: Understand the functions of Stock Exchange

CO 05: Understand the functions of SEBI

Text Books:

1. Prasanna Chandra (2013): Investment Analysis and Portfolio Management, Second Edition, Tata cGraw Hil, New Delhi. (first 4 units)
2. Punithavathy Pandian, Security Analysis and Portfolio Management, Vikas Publication. (5th units)

Reference Books:

1. Preeti singh (2009):"Investment Management", Himalaya Publishing House
2. V.A. Avadhani (2011): "Investment Management", Himalaya Publication House, Mumbai.

Web Source:

http://ndl.ethernet.edu.et/bitstream/123456789/78319/1/Investment%20Analysis%20and%20Portfolio%20Management.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML31	INTRODUCTION TO WEB DESIGNING	5	0	0	4

Course Objective:

- Able to understand how to design a web sites using HTML, CSS
- Able to understand the Rich Internet Applications

Syllabus:

UNIT – I **12**

History of the Internet and World Wide Web – HTML 4 protocols – HTTP, SMTP, POP3, MIME, IMAP. World Wide Web Consortium (W3C). Introduction to Web 2.0 – Search, Content Network, UserGenerated Content, Blogging, Social Networking, Social Media, Tagging, Social Bookmarking, Rich Internet Applications (RIAs), Web Services, Mashups, Widgets and Gadgets, Location-Based Services, XML, RSS, Atom, JSON and VoIP, Web 2.0 Monetization Models, Web 2.0 Business Models

UNIT – II **12**

XHTML and CSS: Introduction to XHTML - Editing XHTML, W3C XHTML Validation Service, Headings, Linking, Images, Special Characters and Horizontal Rules, Lists, Tables, Forms, Internal Linking, meta Elements. Cascading Style Sheets™ (CSS) - Inline Styles, Embedded Style Sheets, Conflicting Styles, Linking External Style Sheets, Positioning Elements, Backgrounds, Element Dimensions, Box Model and Text Flow, Media Types, Building a CSS Drop-Down Menu, User Style Sheets, CSS-3

UNIT – III **12**

Javascript: Introduction to Javascript - Obtaining User Input with prompt Dialogs, Memory Concepts, Arithmetic, Decision Making, Control Statement – Control Structures, Assignment Operators, Increment and Decrement Operators, Counter-Controlled Repetition, Logical Operators. Functions - Modules in JavaScript, Programmer-Defined Functions, Scope Rules, JavaScript Global Functions, Recursion, Arrays – Objects - Math Object - String Object - Date Object, Boolean and Number Objects, document Object, window Object, Cookies. Events-Event Handlers, Event Bubbling

UNIT – IV **12**

XML and RSS: Introduction, XML Basics, Structuring Data, XML Namespaces, Document Type Definitions, W3C XML Schema Documents, XML Vocabularies, Extensible Stylesheet

Language and XSL Transformations, Document Object Model (DOM) - Modeling a Document: DOM Nodes and Trees, Traversing and Modifying a DOM Tree, DOM Collections, Dynamic Styles

UNIT – V **12**

Rich Internet Application: HTTP Transactions, Multi-tier Application Architecture, Client-Side Scripting versus Server-Side Scripting, Accessing Web Servers, Microsoft Internet Information Services (IIS), Apache HTTP Server, PHP - PHP Basics, String Processing and Regular Expressions, Form Processing and Business Logic, Connecting to a Database, Using Cookies, Dynamic Content, Operator Precedence Chart. Flash-CS3, Flex, Dreamweaver

Total: 60 Hrs

Course Outcome:

CO 01: Explore the History of the Internet and World Wide Web

CO 02: Articulate what is called Social Network

CO 03: Describe how to use CSS

CO 04: Enhance the knowledge of Inline Styles and Embedded Style Sheets

CO 05: Understand why to use JavaScript

Text Books:

1. Internet & World Wide Web How to Program, 4th Edition, H. M. Deitel and P. J. Deitel, 2008, Prentice Hall.

2. Beginning XML, 4th Edition, D. Hunter, J. Rafter, Joe Fawcett, Eric van der Vlist, Danny Ayers, Jon Duckett, Andrew Watt, Linda McKinnon: 2007, Wrox Publications.

3. JavaScript Programming, Harris, 2010, Prentice Hall

4. Web Technology: A Developer‟s Perspective, N.P. Gopalan and J. Akilandeswari, 2007, Prentice Hall of India

5. HTML, XHTML, and CSS for the Absolute Beginner, Jr. Jerry Lee Ford, 2010, Prentice Hall.

Web Source:

https://eloquentjavascript.net/Eloquent_JavaScript.pdf

SEMESTER – IV

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML41	**MARINE INSURANCE**	**5**	**0**	**0**	**4**

Course Objective:

- Able to understand the Ship Owners Operators & Managers
- Able to understand the principles of marine insurance

Syllabus:

UNIT – I SHIP OWNERS, OPERATORS & MANAGERS 12

Thoroughly understand the reasons for and application of marine insurance in shipping business. Thoroughly understand the division of the market between Lloyds, insurance companies and Protection & Indemnity associations (P&I) and their respective organisational structures.

Be aware of the concept of mutuality in P&I associations. Understand the role and function of an insurance broker.

Understand the different classes of risk covered by marine insurance:

- Hull & Machinery
- Freight & Hire
- War Risk
- Cargo Liability
- Employee Liability

Understand the role and need for professional indemnity insurance (errors and omissions) Third Party Cover for Transport Operators, Protection & Indemnity, Third Party (including collision, damage to other property, death and personal injury, pollution liability)

Risks and cover available to Professionals service providers [surveyors, brokers; contractual carriers / freight forwarders], Understand the role of the International Underwriting Association (IUA) and BRAEMAR (Incorporating the Salvage Association).

UNIT – II THE PRINCIPLE OF MARINE INSURANCE 12

Thoroughly understand the role and function of the UK Marine Insurance Act, 1906 (as amended). Be aware of the perils covered by the Act. Thoroughly understand the concept of insurable interest and utmost good faith.

Be aware of the practice of re-insurance. Understand how the rights and benefits under the contract can be assigned. Understand how insurable value is determined.

Understand the extent of liability to the insurer both in respect of total and partial loss and how apportionment is made. Thoroughly understand how the insurer becomes entitled to the insured property (subrogation)

Thoroughly understand the distinction between express and implied warranties and the effect of breach of warranty, and when warranty may be exceeded. Thoroughly understand the changes brought about by the Insurance Act 2015 to the principles of Marine Insurance.

Thoroughly understand the implied warranty of seaworthiness of the ship. Understand which losses are covered by the policy and the importance of establishing the proximate clause.

Understand those perils which are excluded from the policy (in particular—misconduct, delay and inherent vice).

UNIT – III THE PRACTICE OF MARINE INSURANCE 12

Understand the procedures and documentation involved in effecting marine insurance. Understand the way premiums are assessed and applied. Understand how insurance brokers are remunerated by commission.

Thoroughly understand the difference between time and voyage policies and use of open cover. Merger & Ademption of Loss [following the notice of abandonment]

Thoroughly understand the key the Institute (ILU) Clauses as listed:

- Institute Time Clauses Hulls
- Institute Time Clauses – Hulls Total Loss Only
- Institute War and Strikes Clauses Hulls – Time
- Institute Navigation Limits (old Institute Warranties)
- Institute Time Clauses Freight
- Institute Cargo Clauses (A)
- Institute Cargo Clauses (B)
- Institute Cargo Clauses (C)
- Institute Malicious Damage Clause
- Institute War Clauses (Cargo)
- Institute Strike Clauses (Cargo)
- Institute Classification Clause

- Institute P&I Clauses, Time 20/07/87

UNIT – IV CLAIMS 12

Thoroughly understand the concept of total loss, both actual and constructive. Thoroughly understand the definition of 'Particular Average' clearly distinguishing it from General Average. Understand the difference between 'Particular Average' and 'Particular Charges'

Understand the responsibility of the insured to make efforts to mitigate the loss (sue and labour). Thoroughly understand the principle of salvage and how salvage services are remunerated. Thoroughly understand the different ways in which liability may be limited in the case of third party claims against the insured.

Difference between Error and Omissions, and PI Cover, Claim Management: Role of Surveyors [collection of evidence, etc. - to be elaborated]; Role of Average & Loss Adjusters [Overview]

Thoroughly understand the impact of international pollution legislation on marine insurance and how pollution cover is provided.

UNIT – V GENERAL AVERAGE 12

Thoroughly understand the concept of General Average (GA). Understand the important role of GA within the marine adventure, Understand the role and function of the York-Antwerp Rules. Understand the differences between 1994 and 2016 edition of York-Antwerp Rules

Understand what is admissible in a GA settlement. Understand how GA contributions are covered under marine insurance policies.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the reasons for and application of marine insurance in shipping business
CO 02: Articulate the role of the International Underwriting Association (IUA) and BRAEMAR (Incorporating the Salvage Association).
CO 03: Describe the role and function of the UK Marine Insurance Act, 1906 (as amended).
CO 04: Define the perils covered by the Act
CO 05: Understand how insurance brokers are remunerated by commission.

Text Books:

1. Marine Insurance, 2015 Edition, Institute of Chartered Shipbrokers

Web Source:

https://nios.ac.in/media/documents/VocInsServices/m4-2f.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML42	SHIPPING FINANCE	5	0	0	4

Course Objective:

- Able to understand the nature of the shipping business
- Able to understand the current status of the ship finance market

Syllabus:

UNIT – I THE NATURE OF THE SHIPPING BUSINESS 12

THE NATURE OF THE SHIPPING BUSINESS

Thoroughly understand the objectives of lenders and borrowers in the shipping business, including the areas where agreement or consensus is usually achieved and potential areas where there is conflict.

Thoroughly understand the basic features of shipping cycles 'from boom through to bust', and the implications of this for the principal participants in the ship-financing decision.

Be aware of the historical context of ship finance (over the past four decades), and the significance of wider economic phenomena in the shipping finance business.

Thoroughly understand the principal sources of security to lenders to shipping companies. Understand, by reference to appropriate case studies, the consequences for both borrowers and lenders, of failing to take into account the phases of the shipping cycle in which the financing decision is made.

THE CURRENT STATUS OF THE SHIP FINANCE MARKET

THE LENDER'S PERSPECTIVE IN THE SHIP FINANCING DECISION

Thoroughly understand the basic principles of good lending, including the importance of proper evaluation of the asset to be financed, the cash flow to be generated, and the significance of 'name' or 'reputation'.

Thoroughly understand ship mortgages, and their importance as a source of bank security. Understand the legal rights of mortgagees in the event of default by the borrower.

Understand case studies in which mortgagee's rights have been asserted over assets.

Be aware of standard terms in a ship mortgage. Be aware of the purpose of ship mortgage indemnities. Understand the purpose and practice of assignment of insurances and earnings as sources of banker's security in a loan agreement

Understand the purpose and practice of charges or liens over shares, and guarantees from parent companies in respect of loans made to subsidiary companies.

Thoroughly understand the crucial importance of value maintenance clauses in ship finance loan agreements.

Understand standard terms in the documentation of a guarantee provided by a parent in respect of a loan made by a bank to its subsidiary.

Understand banks' and lenders' credit risk analysis of borrowers, for example the 6 'C' of credit risk analysis by Grammenos.

Be aware of the characteristics and structure of special purpose companies.

UNIT – II EQUITY AS A SOURCE OF FINANCE IN THE SHIPPING BUSINESS 12

Thoroughly understand the historical reasons why it has been difficult to attract external equity financing into the shipping business. Reasons include the volatility of the sector, the perceived secretiveness of shipowners, the single ship company nature of the business, and international jurisdictional issues, including the ultimate remedy of enforcing a court order for the arrest of a ship. Understand the traditional points of conflict between shipowners and external investors in their companies, and the mechanisms by which these may be resolved.

Be aware of the reasons why shipowners may decide to list their shares on more than one international stock exchange.

Understand the principal characteristics of the main international stock exchanges on which shipping equity is traditionally listed, including the New York Stock Exchange, the Oslo Bourse and NASDAQ. Thoroughly understand the implications of the US Sarbanes-Oxley Act 2002 for shipping companies looking to list on US stock exchanges.

Be aware of the different types of shares which may be issued by shipping companies, and their relative advantages and disadvantages for both issuers and investors, including ordinary shares, partly paid shares, rights issues, cumulative participating preference shares, convertible preferred stock, and participating preferred stock.

Be aware of the rationale of private placements, and the significance of timing.

Understand trends of private equity companies investing in the shipping market.

Understand the principles of public offerings and initial public offerings (IPO).

UNIT – III DEBT FINANCING AND THE BOND MARKETS 12

Thoroughly understand the differences between debt and equity financing in terms of payment of mandatory interest versus payment of discretionary dividends.

Be aware of some of the different forms bonds may take, and the significance of different payment schedules.

Be aware of the functions and characteristics of sinking funds.

Thoroughly understand the structure and purposes of convertible bonds.

Thoroughly understand the attractions and implications of conversion of convertible bonds from both the shipowner issuer's and investor's perspectives.

Understand the significance of phases of the shipping cycle for the timing of issuance of convertible bonds, and for predicting the likelihood or otherwise of the investor to convert from debt into equity. Be aware of the principal consequence of conversion of a convertible: the prohibition of reconversion from equity back into debt.

Understand the basic features of convertible bond issues in case studies provided. Understand the use of high yield bonds in shipping finance.

ALTERNATIVE SOURCES OF SHIP FINANCE

Understand the principles and characteristics of shipyard credit as a source of finance.
Understand the principles, structure and purpose of government subsidies.
Understand the role and importance of export credit agencies in ship finance.
Understand the principles, structure and use of leasing-finance and operating**.**

UNIT – IV TYPES OF LOANS USED IN SHIPPING BUSINESS 12

Understand the principal objectives of the participants to the loan decision: the shipowner and lender. Thoroughly understand the characteristics of the different types of loans used in shipping finance, including plain vanilla loans, moratorium loans, bullet repayment loans, balloon repayment loans, back/front-ended loans, and revolving credit facility loans.

Thoroughly understand the rationale for syndicating a loan, and the principal responsibilities of all parties to bond syndications.

Understand the structure and use of mezzanine finance, and its suitability in shipping-finance.

SECURITISATION

Understand the basic objective of securitisation: the bundling together of homogenous cash flows and their use as collateral for a bond issue.
Understand the basic structure of a securitisation, and the role of all participants.
Understand the procedural steps in a securitisation.
Be aware of the objectives of shipowners in securitisations described in the case studies provided.

KS AND KG SHIP FINANCING

Be aware of the German government policy rationale for KG ship-financing. Thoroughly understand a typical KG ship-financing structure.

Understand the principal advantages of KG finance.

Be aware of case studies in which KG financing has been utilised.
Understand the Norwegian KS system of ship finance.
Be aware of the similarities between KG and KS financing.
Thoroughly understand the structure of a typical KS financing. Be aware of new finance products such as baby bonds.

UNIT – V **12**

SIGNIFICANCE OF THE DEBT-EQUITY STRUCTURE FOR A SHIPPING COMPANY

Be aware of the history, purposes, and composition of the main international body concerned with the setting of capital adequacy ratios for banks: the Basel Committee.
Understand the effects of the Basel regulations on shipping finance including the significance of the capital adequacy ratio.
Understand the basic composition of the Basel capital adequacy ratio in terms of tiers and asset weighting.
Thoroughly understand that, in the context of shipping-finance, the debt-equity mix is not a static structure.

ISLAMIC FINANCE IN SHIPPING

Thoroughly understand the basic principles of Islamic finance. Understand the characteristics of the principal Shariah-compliant financial instruments found in shipping finance, including Mudharabah, Murabaha, Ijara, and Sukuk.

Be aware of the main components of structures found in the case studies provided.

LEGAL ISSUES IN SHIPPING FINANCE

Ship Registry, corporate veil and one-ship companies
Be aware of the shipownership and registry implications.

MORTGAGE PRIORITIES

Understand that, unlike other aspects of shipowning, mortgages are still covered under English law in many jurisdictions.

Be aware of the main legal issues arising under English mortgage law, namely the difference between a legal mortgage and an equitable mortgage, and understand the consequential difference between registered and unregistered mortgages.

Be aware of the international conventions of maritime liens and mortgages, namely, the International Convention for the Unification of Certain Rules Relating to Maritime Liens and Mortgages 1926, 1967 & 1993.

JURISDICTION

Thoroughly understand the rights of those courts dealing with shipping matters to entertain a claim against a ship or other maritime property.

Be aware of the application of awards of costs and how these may vary between jurisdictions.

SHIP LIENS AND SHIP ARREST

Understand the procedure to arrest in rem. Understand the application of the Brussels Arrest Convention 1952 including the types of liens.

Understand the use of freezing orders previously known as Mareva injunctions.

ARBITRATION

Be aware of the main locations for arbitration and the significant differences between their procedures.
Understand the acts and rules governing arbitration.
Be aware of the main terms of the English Arbitration Act (1996).
Be aware of the use of LMMA Terms in UK arbitration and SMAA in US arbitration.
Understand the structure of the English court system and their rules.

Total: 60 Hrs

Course Outcome:

CO 01: Explore the historical context of ship finance (over the past four decades), and the significance of wider economic phenomena in the shipping finance business

CO 02: Understand the legal rights of mortgagees in the event of default by the borrower.

CO 03: Aware of the rationale of private placements, and the significance of timing.

CO 04: Articulate the trends of private equity companies investing in the shipping market.

CO 05: Aware of the functions and characteristics of sinking funds.

Text Books:

1. SHIPPING FINANCE THIRD EDITION, STEPHENSON HARWOOD

Web Source:

http://old.mareforum.com/ISTANBUL_III_PRESENTATIONS/GORGELS.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML41	**EXIM DOCUMENTATION**	**5**	**0**	**0**	**4**

Course Objective:

- To enlighten the students about their major functions in export and import processes
- To provide expertise for solving issues related to requirements in exim management

Syllabus:

UNIT – I FUNDAMENTALS OF IMPORT AND EXPORT **12**

Role of Import and Export Trade in an Economy – Institutional Framework for Foreign Trade in India – Role of Director General of Foreign Trade and Commerce – Objectives of EXIM Policy – Global trade flows – Contract of International Sale of Goods – INCOTERMS 2020

UNIT – II OVERVIEW OF EXPORT AND IMPORT **12**

Marketing for Exports – Negotiation and Finalization of Export Contract – Export Documentation Procedures – Cargo Insurance – Export Promotion Councils and incentive schemes – Role of Logistics in Exports – Export Houses / Trading Houses

UNIT – III DOCUMENTATION FRAMEWORK **12**

Import for Industrial use / trading – Import Documentation and Customs Clearance procedures – Types of Imports – Import Licenses – Cargo Insurance – Role of Logistics in Import

UNIT – IV CREDIT AND PAYMENTS **12**

Payments methods in Foreign Trade – Documentary Credit / Letter of Credit – UCP 600 with respect of Shipping Documents and L/C Negotiation – Export / Import financing strategies – Managing Payment Risks

UNIT – V CUSTOMS CLEARANCE AND AGENCIES **12**

Roles of Service providers in EXIM transactions – Global Traders – Commodity Brokers – Custom House Agent – Transport Operators – Freight Forwarders – Warehousing and 3PL service providers – Liners/Ship Agencies – Container Freight Stations – Port – Inspection Agencies/Surveyors – Quarantine Agencies – Pest Control Agencies – Chamber of Commerce

Total: 60 Hrs

Course Outcome:

CO 01: Understand the role of import and export trade in an economy

CO 02: Explore the objectives of EXIM Policy

CO 03: Enhance knowledge on Export Documentation Procedures

CO 04: Understand the role of Logistics in Exports

CO 05: Discuss the Import for industrial use / trading

Text Books:

1. Justin Pauland Rajiv Aserkar, Export Import Management, Second Edition, Oxford University Press, 2013

2. Usha Kiran Rai, Export – Import and Logistics Management, Second Edition, PHI Learning, 2010

3. Director General of Foreign Trade, Foreign Trade Policy and Handbook of Procedures, 2015

Web Source:

http://www.danangtimes.vn/Portals/0/Docs/14784517-14_Export%20-%20Import%20procedures.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24DBML41	INTRODUCTION TO MARINE ENGINEERING	5	0	0	4

Course Objective:

- Able to understand the classification of Ships
- Able to understand the different machineries

Syllabus:

UNIT – I CLASSIFICATION OF SHIPS **12**

1. Propulsion System – Diesel Engine, Steam Turbine, Gas Turbine, Diesel Electric Propulsion, Nuclear Propulsion.
2. Cargo – Bulk Carrier, Container, Tankers – Oil, Gas, Chemical, Ro-Ro, Passenger Vessels.
3. Offshore & Survey Vessels

UNIT – II MACHINERIES **12**

Engine – Two Stroke / Four Stroke, Boilers, Compressor, Pumps, Purifier, Steering Gear, Cranes and its types.

UNIT – III LAYOUT OF MACHINERY SPACES **12**

Machinery Layout for Different Types of Ships – Container, Tanker, Ro-Ro, Passenger Vessel. Auxiliary Support Systems – Cooling, Lubrication Oil, Sewage, Steam, Ballast, Bilge, Air.

UNIT – IV OPERATIONS **12**

Bunkering, Engine Starting / Stopping Procedure, (ME & A/E). Shore Supply (Dry Dock), Blackout recovery procedure, Maneuvering, Watch Keeping, Emergency Response – Fire / Flooding in Engine Room.

UNIT – V SAFE WORKING PRACTICES **12**

Safety Procedures– Working Aloft, Working in Restricted Areas, Enclosed Spaces, Risk Assessment Permits Hot / Cold Work , Safe Isolation Procedure – Electrical Systems, Pollution Prevention Procedures OWS Operation.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the propulsion system

CO 02: Analyze the Offshore & Survey Vessels

CO 03: Enhance the knowledge on difference Engines

CO 04: Understand the different types of Cranes and its types

CO 05: Explore the machinery layout for different types of Ships

Text Books:

1. **D.A Taylor, Introduction to Marine Engineering, 2nd Edition**

Web Source:

http://host.bglot.com/Introduction_to_Marine_Engineering/TAYLOR,%20D.%20A.%20(1996).

Code	Subject	Lecture	Tutorial	Practical	Credit
24SBML41	ENGLISH COMMUNICATION SKILL 2	5	0	0	4

Course Objective:

- Able to understand the communication network in an organization
- Able to understand the communication techniques to overcome the communication breakdown.

UNIT – I **12**

Body Language – Kinesics, Proxemics, Para linguistic, Chronemics, Nuances of Speech Delivery. Personality Development: Building self-esteem.

UNIT – II **12**

Interviews – Types of Interviews, preparing for interviews, facing interviews, reviewing performance, participating in mock interviews.

UNIT – III **12**

Business Correspondence-Meaning of Business correspondence – Importance of Business Correspondence essential qualities of a business letters. Different types of business letters – cover letter, thank you letters, message through email and Fax, Acceptance letters, rejection letters, and withdrawal letters.

UNIT – IV **12**

A Stitch in Time Saves Nine: Concept and applications of time management; Recognizing the Importance of Time; Causes for Wastage of Time; Methods for Managing Time Efficiently.

UNIT – V **12**

Goal setting- long term and short term goal, Role Play, Adzap, Mock Interview, Group discussion, Aptitude test, current affairs, basic computer knowledge.

Total : 60Hrs

Course Outcome:

CO 01: Describe the communication network in an organization
CO 02: Classify the communication techniques
CO 03: Enhance the speaking and writing skills.
CO 04: Determine the business etiquettes.
CO 05: Groom themselves to attend the interview.

Text Books:

1. **University Handout**

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML41	TOTAL QUALITY MANAGEMENT	5	0	0	4

Course Objective:

- To facilitate the understanding of Quality Management principles and process.
- Better capture and conversion of the quality needs.

Syllabus:

UNIT – I INTRODUCTION **12**

Need for quality – Evolution of quality – Definitions of quality – Dimensions of product and service quality – Basic concepts of TQM – TQM framework – contributions of Deming, Juran and Crosby – Barriers to TQM – Quality statements – Customer focus – Customer orientation, Customer complaints, customer retention – costs of quality.

UNIT – II TQM PRINCIPLES **14**

Leadership – Strategic quality planning, Quality Councils – Employee involvement – Motivation, Empowerment, Team and Teamwork, Quality circles Recognition and Reward, Performance appraisal – Continuous process improvement – PDCA cycle, SS, Kaizen – Supplier partnership – Partnering, Supplier selection, Supplier Rating.

UNIT – III TQM TOOLS AND TECHNIQUES I **14**

The seven traditional tools of quality – New Management tools – Six sigma: Concepts, Methodology, applications to manufacturing, service sector including IT – Bench marking – Reason to bench mark, Bench marking process – FMEA – stages, Types.

UNIT – IV TQM TOOLS AND TECHNIQUES II **10**

Control Charts – Process capability – Concepts of Six Sigma – Quality Function Development (QFD) – Taguchi quality loss function – TPM – concepts, improvement needs – Performance measures.

UNIT – V QUALITY SYSTEMS **10**

Need for ISO 9000 – ISO 9001-2008 Quality System – Elements, Documentation, Quality Auditing – QS 9000 – ISO 14000 – Concepts, Requirements and Benefits – TQM Implementation in manufacturing and service sectors.

Total: 60 Hrs

Course Outcome:

CO 01: Explore about the basics of TQM.

CO 02: Ascertain the customer focus on TQM

CO 03: Understand the Principles of TQM

CO 04: Construct the improvement process in TQM

CO 05: Explain the Tools & Techniques

Text Books:

1. Dale H. Besterfiled, et at; "Total Quality Management", Pearson Education Asia, Third Edition, Indian Reprint 2006

Reference Books:

1. James R. Evans and William M. Lindsay, "The Management and Control of Quality", 8th Edition, First Indian Edition, Cengage Learning, 2012.

2. Suganthi.L and Anand Samuel, "Total Quality Management", Prentice Hall(India) Pvt. Ltd., 2006

3. Janakiraman.B and Gopal R.K., "Total Quality Management – Text and cases", Prentice Hall (India) Pvt. Ltd., 2006

Web Source:

http://www.velhightech.com/Documents/GE-6757-TOTAL-QUALITY-MANAGEMENMT.pdf

SEMESTER – V

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML51	**Port & Terminal Management**	**5**	**0**	**0**	**4**

Course Objective:

- To ensure a thorough knowledge and understanding of port and terminal management
- To develop relevant communication skills

Syllabus:

UNIT – I **12**

PORTS AND THEIR FUNCTIONS

Thoroughly understand the role of ports in international trade and transport and how ports can benefit or detract from the economic development of countries and their seaborne trade. Understand the effect of globalisation on port choice and how changes in logistics and distribution patterns influence the development or decline of ports.

Be aware of the location of major world ports in liner, dry bulk and liquid trades.

Understand the geographic reasons for port location and the extent to which this may depend on the nature of their hinterland and natural resources. Understand the different types of ports and access to ports (natural, man-made, river, estuary) and the diversity of specialist port operations.

Understand the enhanced role of ports in a through transport context – hub ports, feeder/transshipment ports, intermodal interfaces. Be aware of the role of national, regional and local government in port provision.

Understand the different forms of the ownership structure of ports and of port services; public/private, landlord only, full or part service provider, terminal facilities within ports. Be aware of the use of free port/free trade zones as an economic tool.

SHIPS AND CARGOES

Thoroughly understand the fundamental differences between dry bulk cargo ships, general-purpose ships, liners (container, break-bulk and ro-ro) and tankers, including ore/oil and ore/bulk/oil carriers. Students may be expected to produce sketches.

Understand that tankers subdivide into several categories including carriers for crude oil, petroleum products, chemicals, liquid gases, vegetable oils etc.

Be aware of size ranges of bulk carriers including Capesize, Panamax, handysize. Understand the purpose and basic design and construction features of decks, holds, hatches, derricks, winches, cranes and other cargo-handling gear.

Thoroughly understand the terminology of measuring ships including pseudo-tonnages – NT and GR. Actual tonnages – deadweight (dwat and dwcc) displacement (total and light). Capacities – bale cubic and grain cubic, teu. Understand what information is contained in stowage plans. Understand how particular ship types are required for the different cargoes and trade routes.

Thoroughly understand the basic characteristics of the main five commodities, namely coal, ore, grain, fertilisers and oil. Be aware of the different subdivisions within these categories. Understand the hazards associated with the transport of certain commodities. Understand the special requirements of unitised liner cargoes. Understand the main places of origin and appropriate trade routes of other important cargoes plus any seasonal variations. Have a working knowledge of distances and voyage times. A good grounding in maritime geography and access to an atlas is essential for this part of the syllabus.

UNIT - II **12**

PORT MANAGEMENT

Understand the basic rationale of port business. Thoroughly understand how ports structure the delivery of services and the relationship between infrastructure, conservancy, navigation and handling facilities.

Understand how the activities are organised to interface with one another and typical port organisational structure. Be aware of the importance of ports being managed as commercial enterprises irrespective of their ownership.

Thoroughly understand how port performance can be measured – vessel turnaround time, cargo volume, speed of cargo handling, damage and pilferage prevention. Be aware how quality management systems and benchmarking can improve performance. Understand the responsibility for, and nature of, marine operations – conservancy, dredging, navigation aids, navigation control etc.

Understand the management of cargo operations on board and ashore. Understand the prime importance of avoiding traffic and cargo congestion. Thoroughly understand the importance of safety management. Thoroughly understand the importance of security to prevent terrorism, illegal immigration, theft and smuggling.

Understand the role of trade unions and other labour organisations including ITF. Understand the role of statutory bodies – customs, immigration, port health, marine safety etc. Understand and meet the needs of port users – shipowners and operators, ship agents, forwarders, truckers, rail and barge operations.

Thoroughly understand the information flow requirements of the port, statutory bodies and port users. Understand how these are met by port community computer systems.

PORT COMPETITION AND MARKETING

Understand the nature of port competition, national and international.

Understand the need for market information including trade growth, vessel development, commercial needs and financial viability. Thoroughly understand the relevance of geographic location to both vessel transit time and port rotation.

Understand the role of shipowners/ship operators, shippers/receivers, freight contractors, forwarders and other transport interests (for example, railways, road hauliers).

Be aware of the various techniques of port promotion and how they assist with identification of potential users. Understand the impact of inland transportation and inland depot/handling facilities. Be aware of the scope for collaboration on through transport.

UNIT - III **12**

PORT PRICING

Thoroughly understand both the nature and types of port charges including those incorporating statutory navigational services, services to vessels, services to cargoes.

Understand the cost factors in pricing including for infrastructure, navigation services, equipment, staff and labour, marketing, security and safety, and for environmental services.

Understand pricing policy specifically 'not for profit', government influenced, fully commercial. Understand the effects of competition on pricing policy and how pricing is used as a tool to influence demand.

Understand the various factors used in establishing pricing structures including lengths of time included in base charge for vessels and cargo; units on which charges are based; simplicity of application and transparency; volume rebates.

Be aware of the various regulatory mechanisms including user appeals against charges.

Understand the integration of port charges with charges of other port operators and inland transport organisations and through transport charges.

LEGAL ASPECTS OF PORT MANAGEMENT

Be aware of the nature of port constitutions and the legal framework of ownership. Be aware of port laws and bylaws, national legislation**.**

Be aware of the development of port facilities; the financing of port development. Be aware of laws relating to port security, operator's liability and insurance.

Be aware of laws and regulations relating to the employment of dockworkers. Be aware of the freedom of port organisations to diversify their activities. Be aware of development,

ownership and control of free ports and free zones. Be aware of the impact of international conventions on ports.

UNIT - IV **12**

PORT PLANNING

Understand port development policy including the role of government, regional needs and competition

Thoroughly understand planning principles and project planning and the role of traffic forecasts, analysis of demand factors, implications for marketing, involvement of users.

Thoroughly understand capacity calculations and the relationship between berth occupancy, service time and waiting time, and also berth throughput.

Understand the principles behind port layout, physical constraints, terminal planning, specialised terminals, multipurpose terminals and support operations.

Understand the handling characteristics and requirements of break-bulk, neo-bulk, special cargoes, dry bulk and liquid bulk commodities.

Understand flow analysis of cargo in a terminal and environmental factors and constraints.

PORT FINANCE

Understand the importance of financial management in port operating, specifically budgets, capital and revenue expenditures and investment appraisal.

Be aware of the importance of financial and commercial objectives including the analysis and monitoring of costs and port cost accounting.

Understand the need for a corporate analysis of financial data and for budgetary planning and control. Be aware of project evaluation and review techniques and capital budgeting and also the financial and economic appraisal of port investment proposals and traffic forecasting.

Be aware of joint venture opportunities for financing or management and policies for both common and sole user terminals

UNIT – V **12**

PORT EQUIPMENT

Understand what is meant by port buildings, transit sheds, warehouses, maintenance workshops, amenity buildings, offices for port users etc.

Understand the different cargo-handling equipment, types, their costs and the need for maintenance management. Understand how future changes in vessel size and cargo-handling techniques will impact on procurement and materials management.

PORT OWNERSHIP

Be aware of the different types of ownership including national- or local government-owned and managed, other public sector-owned ports and port trusts and the trend towards deregulation of ports.

Be aware of the transfer of party from state to private ownership, methods of privatisation, sale of shares, management and employee buyouts.

Understand what is meant by private sector-owned ports including the different types of ownership, that is, outright, public sector ownership of port infrastructure combined with private sector provision, public ownership of port superstructure with private management and/or operation and the associated issues of lease contracts and joint ventures.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the role of ports in international trade and transport

CO 02: Determine the special requirements of unitized liner cargoes

CO 03: Explore the basic rationale of port business

CO 04: Indicate the prime importance of avoiding traffic and cargo congestion

CO 05: Compose the various regulatory mechanisms including user appeals against charges

Text Books:

1. Port and Terminal Management 2015 – Institute of Chartered Shipbrokers

2. Port and Terminal Management 2013 - Institute of Chartered Shipbrokers

Web Source:

http://www2.nkust.edu.tw/~hgyang/sle01.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML52	**Supply Chain Management**	**5**	**0**	**0**	**4**

Course Objective:

- This course will expose students to the challenges involved in managing supply chains
- Understand the complexity of inter-firm and intra-firm coordination.

Syllabus:

UNIT – I **12**

Applied Supply Chain Management - What is Supply Chain Management? - The importance of Supply Chain Management, Matching Supply Chain with products, Supply Chain Value Adds.

Views of Supply Chain Management - Ways to view Supply Chain Management, Interview: Integrated Supply Chain Management, What is a Process? Innovation, Theory of Constraints, Supply Chain Information Technology.

UNIT – II **12**

Customer Service and Channels - Customer Service, Customer Satisfaction, Channels of Distribution, Services

Business Models and Sourcing - Anticipatory to Response-Based Business Models, Purchasing Vs. Procurement, Procurement Strategies, Building Deep Supplier Relationships

UNIT – III **12**

Manufacturing and Integrated Planning - Manufacturing Strategy Part I, Manufacturing Part II, Flexibility, Total Integrated Planning, Sales and Operations Planning (S&OP) Part I, Sales and Operations Planning (S&OP) Part II.

UNIT – IV **12**

Forecasting and Woodmere Case - Forecasting, Collaborative Planning, Forecasting & Replenishment (CPFR), Woodmere Introduction, Woodmere Solution

UNIT – V **12**

Advanced Planning and Scheduling (APS) - APS: Concepts and Framework, ASP: Demonstration, APS: Challenges and Benefits, ASP: Demand and Supply Planning, APS: Using Software and Planning Charts, APS: Six Components

Supply Chain Globalization - Rationale and Key Strategies, Requirements and Challenges, Operational Differences, Potential Hidden Costs, Total Cost Strategy

Total: 60 Hrs

Course Outcome:

C0 01: Understand what is called Supply Chain Management

C0 02: Determine the importance of Supply Chain Management

C0 03: Define the customer services and channels

C0 04: Distinguish between Purchasing Vs. Procurement

C0 05: Articulate the Sales and Operations Planning (S&OP) Part I

Text Books:

1. Supply Chain Management 6 Edition (English, Paperback, Sunil Chopra, Peter Meindl, D.V.Kalra)

2. Operations and Supply Chain Management 14th Edition (English, Paperback, F. Robert Jacobs, Richard B. Chase, Ravi Shankar)

Reference Books:

1. Sourcing and Supply Chain management 5th Edition (English, Paperback, Robert M. Monczka)

Web Source:

https://base-logistique-services.com/storage/app/media/Chopra_Meindl_SCM.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML51	**Project Management**	**5**	**0**	**0**	**4**

Course Objective:

- To understand the concept and essential skill-set for various work fields and its applications.
- To understand your goals from the outset of your project..
- To understand the benefits from using project management skills and techniques.

Syllabus:

UNIT – I INTRODUCTION **10**

1. Introduction

a. Brief outline of Introduction of Project management Body of Knowledge

b. Brief history of project management

c. Foundational elements

d. Terminologies

e. The environment in which projects are operated

f. The standard for Project management.

2. The Role of the Project Manager

a. Definition of a Project Manager

b. The Project Manager's Sphere of Influence.

c. Project Manager's Competence

d. Performing Integration

UNIT – II PROJECT MANAGEMENT **14**

1. Project Planning Process

2. Project Scope Management

a. Project Scope Management Process

b. Define Scope

c. Create WBS.

3. Project Schedule Management

a. Plan Schedule Management

b. Define Activities.

4. Project Cost Management

a. Plan Cost Management

b. Determining Budgets.

UNIT – III PLANNING PROCESS **16**

1. Project Resource Management

a. Plan Resource Management

b. Acquiring, Managing, Developing & controlling the resources.

2. Project Communication Management

a. Plan Communication Management

b. Managing and Monitoring Communications.

3. Project Risk Management

a. Plan Risk Management

b. Identify, Perform, and Implement, Monitor Risks.

4. Importance of Planning in the Project management Process

a. Actions required by different security levels

b. Maintaining Security of the Ship / port interface

c. Brief outline and contents of Declaration of Security

d. Reporting Security incidents

e. Implementation of Security Procedures.

UNIT – IV PROFESSIONAL RESPONSIBILITIES AND ETHICS **10**

1. Ensuring Integrity and Professionalism
2. Enhancing individual competence
3. Interactions with Team members and other persons and officials
4. Tools and Techniques.

UNIT – V MONITORING, CONTROLLING AND CLOSING PROJECT **10**

1. Ensuring Project objective is a successful project.
2. Measuring the progress of the project
3. Understanding the concept of benefits of realization and who takes ownership.

Total: 60 Hrs

Course Outcome:

CO 1: Explore the principle of project management.

CO 2: Explore and apply the process and techniques of project management practice.

CO 3: Evaluate the procedure and key skills in attaining their goals.

CO 4: Compute the methodology for applying project management.

CO 5: Define the foundation elements necessary for working in and understanding the discipline of project management.

Text & Reference Books:

1. A Guide to the Project Management Body of Knowledge 6th edition.
2. PMI, 2017 , The Standard for Project Management
3. PMI 2017 , The Standard for Program Management
4. PMI 2014 , Implementing Organizational Project Management
5. ISO, 2015, Quality Management Systems – Fundamentals and Vocabulary.
6. PMI 2016, Requirements Management; A Practice Guide.

Web Source:

https://book.akij.net/eBooks/2018/March/5abcc35b666f7/a%20guide%20to%20the%20project%20management%20body%20of%20knowledge%206e.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24SBML51	**Brand Management**	**5**	**0**	**0**	**4**

Course Objective:

- To understand the fundamental of branding concepts such as brand equity, brand identity, brand positioning, and brand personality
- To Understand the brand portfolios and brand architecture, making informed decisions about brand extensions, co-branding, and multi-brand strategies

Syllabus:

UNIT – I INTRODUCTION **12**

Introduction: Definition of Brand - Importance of Brands – Branding Challenges and Opportunities – Brand Equity Concept – Brand Equity Models –– Brands vs. Products Constituents of a Brand: Brand Elements – Brand Identity - Image and Personality – Brand DNA, Kernel, Codes and Promises – Point of Distribution and Point of Purchase

UNIT – II BRAND POSITIONING **12**

Brand Positioning: Basic Concepts – Risks – Brands and Consumers – Competitive Advantage through Strategic Positioning of Brands – Points of Parity –Points of Difference – Brand Building: Designing Marketing Programmes to Build Brands – Role of Social Media in Brand Building – Managing and Sustaining Brands Long-Term.

UNIT – III BRAND IMAGE **12**

Brand Image: Image Dimensions, Brand Associations & Image, Brand Identity: Perspectives, Levels and Prisms. Managing Brand Image – Stages – Functional, Symbolic and Experiential Brands – Brand Audits – Brand Loyalty – Cult Brands

UNIT – IV BRAND VALUATION **12**

Brand Valuation: Methods of Valuation – Implications for Buying & Selling Brands. Leveraging Brands: Brand Extension – Brand Licensing – Co-branding – Brand Architecture and Portfolio Management

UNIT – V BRANDING IN PRACTICE **12**

Branding in Practice: Handling Name Changes and Brand Transfer – Brand Revitalisation and Rejuvenation – Global Branding Strategies – Building and Managing Brands Across Boundaries – Branding Industrial Products, Services and Retailers – Building Brands Online – Indianisation of Foreign Brands and Taking Indian Brands Global.

Total: 60 Hrs

Course Outcome:

CO 01: Demonstrate a comprehensive understanding of fundamental branding concepts such as brand equity, brand identity, brand positioning, and brand personality.

CO 02: Analyze and manage brand equity, utilizing metrics and models to assess and enhance a brand's value.

CO 03: Manage brand portfolios and brand architecture, making informed decisions about brand extensions, co-branding, and multi-brand strategies.

CO 04: Recognize and apply ethical principles and corporate social responsibility in brand management, understanding their impact on brand perception and consumer trust.

CO 05: Develop and implement effective brand crisis management strategies to protect and rehabilitate the brand's reputation during and after crises**.**

Text Books:

1. "Brand Management: Principles and Practices" by Kirti Dutta

2. "Brand Management: An Indian Perspective" by Y. L. R. Moorthi

3. "Strategic Brand Management" by Kevin Lane Keller

4. "Brand Management: Research, Theory and Practice" by Tilde Heding, Charlotte F. Knudtzen, and Mogens Bjerre

5. "Strategic Brand Management: Building, Measuring, and Managing Brand Equity" by Kevin Lane Keller, M.G. Parameswaran, and Isaac Jacob

Reference Books:

1. Aaker, D., Building Strong Brands, Simon & Schuster, 2010.

2. Chevalier, M. and Mazzalovo, G., Luxury Brand Management: A World of Privilege, 2nd Edition, John Wiley and Sons, 2012.

3. Dutta, K., Brand Management: Principles and Practices, Oxford University Press, 2012.

4. Gupta, N.R., The Seven Principles of Brand Management, Tata McGraw-Hill

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML51	**Strategic Management**	**5**	**0**	**0**	**4**

Course Objective:

- To understand the conceptual framework for strategic management
- To understand the Competitive Advantage and Strategies

Syllabus:

UNIT - I STRATEGY AND PROCESS **12**

Conceptual framework for strategic management, the Concept of Strategy and the Strategy, Formation Process – Stakeholders in business – Vision, Mission and Purpose – Business definition, Objectives and Goals - Corporate Governance and Social responsibility-case study.

UNIT – II COMPETITIVE ADVANTAGE **12**

External Environment - Porter's Five Forces Model-Strategic Groups Competitive Changes during Industry Evolution-Globalisation and Industry Structure - National Context and Competitive advantage Resources- Capabilities and competencies–core competencies-Low cost and differentiation Generic Building Blocks of Competitive Advantage- Distinctive Competencies- Resources and Capabilities durability of competitive Advantage- Avoiding failures and sustaining competitive advantage-Case study.

UNIT – III STRATEGIES **12**

The generic strategic alternatives – Stability, Expansion, Retrenchment and Combination strategies - Business level strategy- Strategy in the Global Environment-Corporate Strategy-Vertical Integration-Diversification and Strategic Alliances- Building and Restructuring the corporation- Strategic analysis and choice - Environmental Threat and Opportunity Profile (ETOP) - Organizational Capability Profile - Strategic Advantage Profile - Corporate Portfolio Analysis - SWOT Analysis - GAP Analysis - Mc Kinsey's 7s Framework - GE 9 Cell Model - Distinctive competitiveness - Selection of matrix - Balance Score Card-case study.

UNIT – IV STRATEGY IMPLEMENTATION & EVALUATION **12**

The implementation process, Resource allocation, Designing organisational structure-Designing Strategic Control Systems- Matching structure and control to strategy-Implementing Strategic change-Politics-Power and Conflict-Techniques of strategic evaluation & control-case study.

UNIT – V OTHER STRATEGIC ISSUES **12**

Managing Technology and Innovation-Strategic issues for Non Profit organizations. New Business Models and strategies for Internet Economy-case study

Total: 60 Hrs

Course Outcome:

CO 01: Analyze the concept of Strategy and the Strategy Formation Process

CO 02: Understand the Corporate Governance and Social Responsibility

CO 03: Discuss the Porter's Five Forces Model

CO 04: Construct the avoiding failures and sustaining competitive advantage

CO 05: Explore the Strategic analysis and choices

Text Books:

1. Strategic Management Text and Cases by Jacob Thomas, Pearson Publications

2. Strategic Management from Theory to Practice by Allen Amason, Routledge

Reference Books:

1. It strategy and Management by Dubey S.S by PHI Learning Private Ltd.

Web Source:

http://www.rjspm.com/PDF/Strategic-Management-Notes-PDF.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML52	**Introduction to Data Science**	**5**	**0**	**0**	**4**

Course Objective:

- To provide strong foundation for data science and application area related to it and understand the underlying core concepts and emerging technologies in data science.

Syllabus:

UNIT – I **14**

Introduction to core concepts and technologies: Introduction, Terminology, data science process, data science toolkit, Types of data, Example applications, Mathematical Foundations for Data Science: linear algebra; Analytical and numerical solutions of linear equations; Mathematical structures, concepts and notations used in discrete mathematics. Introduction to Statistical Methods: basic and some advanced concepts of probability and statistics; Concepts of statistics in solving problems arising in data science.

UNIT – II **10**

Data collection and management: Introduction, Sources of data, Data collection and APIs, Exploring and fixing data, Data storage and management, using multiple data sources

UNIT – III **12**

Data analysis: Introduction, Terminology and concepts, Introduction to statistics, Central tendencies and distributions, Variance, Distribution properties and arithmetic, Samples/CLT, Basic machine learning algorithms, Linear regression, SVM, Naive Bayes.

UNIT – IV **10**

Data visualization: Introduction, Types of data visualization, Data for visualization: Data types, Data encodings, Retinal variables, mapping variables to encodings, Visual encodings.

UNIT – V **14**

Computer science and engineering applications Data mining, Network protocols, analysis of Web traffic, Computer security, Software engineering, Computer architecture, operating systems, distributed systems, Bioinformatics, Machine learning, Applications of Data Science, Technologies for visualization, Bokeh (Python), recent trends in various data collection and analysis techniques, various visualization techniques, application development methods of used in data science.

Total: 60 Hrs

Course Outcome:

CO 01: Explore the fundamental concepts of data science

CO 02: Understand data analysis techniques for applications handling large data

CO 03: Understand various machine learning algorithms used in data science process

CO 04: Visualize and present the inference using various tools.

CO 05: Learn to think through the ethics surrounding privacy, data sharing and algorithmic decision-making

Text Book:

1. Cathy O'Neil, Rachel Schutt, Doing Data Science, Straight Talk from The Frontline. O'Reilly, 2013.

2. Introducing Data Science, Davy Cielen, Arno D. B. Meysman, Mohamed Ali, Manning Publications Co., 1st edition, 2016

3. An Introduction to Statistical Learning: with Applications in R, Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, Springer, 1st edition, 2013

Reference Book:

1. Jure Leskovek, Anand Rajaraman, Jeffrey Ullman, Mining of Massive Datasets. v2.1, Cambridge University Press, 2014.

2. Data Science from Scratch: First Principles with Python, Joel Grus, O'Reilly, 1st edition, 2015.

3. Doing Data Science, Straight Talk from the Frontline, Cathy O'Neil, Rachel Schutt, O' Reilly, 1st edition, 2013.

4. Mining of Massive Datasets, Jure Leskovec, Anand Rajaraman, Jeffrey David Ullman, Cambridge University Press, 2nd edition, 2014.

SEMESTER – VI

Code	Subject	Lesson	Tutorial	Practical	Credit
24RBML61	**PROJECT WORK**	**5**	**0**	**0**	**4**

Total: 60 Hrs

Code	Subject	Lecture	Tutorial	Practical	Credit
24CBML61	SHIP OPERATION TECHNOLOGY	5	0	0	4

Course Objective:

- Able to understand the various parts of a ships
- Able to understand the life saving and firefighting appliances

Syllabus:

UNIT – I GENERAL **12**

Names of various parts of a ship, Sea terms, Types of Merchant vessels, Safety apparels as per COSWP.

Preparing metal surfaces – De-scaling and de-rusting, Paints – types of paint used on ships and methods of application, Oils and lubricants, Greasing schedule on ships

Flags and Flag etiquettes – Types of flags, Positions of hoisting flags

Sounding and ullage – Description of Hand lead line, sounding rod and UTI tape.

Speed logs, Bridge / Engine room telegraph, Windlass, Cargo winches – Brief description and its operation.

Riggings – Stage, Bosun's chair, Pilot ladder, Jacob's ladder – Brief description and mode of use.

UNIT – II LIFE SAVING / FIRE FIGHTING APPLIANCES **12**

Lifeboat – Description - parts of a lifeboat, types of lifeboats, lifeboat equipment, rations,

Types of lifeboat davits and their operational procedure. Launching/boarding procedures.

Life raft – Description of inflatable life rafts, parts, equipment, rations, pyrotechnics, repair of leaks and punctures for inflatable life rafts, launching and boarding procedures.

SART / EPIRB / LTA - Description, features, tests and mode of use.

Personal Protective Equipments – Lifebuoy, Lifejacket, Immersion suit, Thermal protective Aid - Description, features, tests and mode of use.

Outline knowledge of SOLAS 74 and requirements as per SOLAS for LSA - Survival techniques in survival craft.

Causes and types of fire, the Fire Triangle, principle of firefighting.

Firefighting appliances – Fire hoses, hydrants, nozzles, ISC, portable fire extinguishers - Description, features, tests and mode of use.

Safety devices – Fireman's outfit – Personal appliances, breathing apparatus, life line - Description, features, tests and mode of use, checks and maintenance.

Outline knowledge of SOLAS 74 requirements for FFA

Procedures for fighting coal fires, paint fires.

UNIT – III **12**

ANCHORS AND ANCHORING PROCEDURES / MOORINGS / DRY DOCKING

Description of different types of anchors, parts of an anchor

Description of anchor cables, joining shackles, Markings of the anchor cables.

Forecastle deck arrangement – hawse pipe, Spurling pipe, chain locker, gypsy

Anchoring procedure – basic, running moor, standing moor, open moor.

Foul anchor / Foul hawse conditions Description and remedial measures.

Hanging off an anchor / slipping the cable – Procedures.

Different types of ropes used for mooring, Use of rat guards.

Securing ropes on bitts, Use of rope and chain stoppers.

Use of heaving line and messenger lines.

General preparation for dry – docking of a vessel.

Bottom cleaning and painting procedure in dry – dock. Modern systems for cleaning,

Blasting, water washing of hull bottom.

Re – floating procedure.

UNIT – IV **12**

ROPES & WIRES / DERRICKS AND CRANES / CARGO APPLIANCES

Fibre ropes – natural and synthetic fibres, types of lay and their advantages. Care and maintenance of fibre ropes.

Steel wire ropes - construction of wire ropes, explanation of wire core and fibre core, factors determining flexibility. Care and maintenance of wire ropes.

Size – Measuring size of various ropes, wires and chains, tools and methods used.

Blocks – types / parts / size of blocks, Relation between sheave diameter and rope diameter. Care and maintenance of blocks.

Tackles – names of types of tackles and purchases used on ships. Parts of a tackle, usage to advantage and disadvantage, Calculation of size of rope / wire to be used on a particular tackle for a given load.

Cargo appliances – Shackles, cargo hooks, turnbuckles, slings – types and usage.

Parts of a derrick, Types of rigging – Swinging derricks, Union purchase.

Heavy lift derricks – Jumbo, Stulcken derricks – Description and operation.

Description of parts of a crane. Description of various types of cranes.

Basic knowledge of loading and unloading on general cargo ships and tankers.

UNIT – V **12**

SHIP MANEUVERING / POLLUTION PREVENTION & DAMAGE CONTROL / RPSL

Motion of a vessel at sea – rolling, pitching, heaving, panting, pounding and Corkscrewing, Motion of a vessel at anchor or alongside a berth – heeling, listing, surging, yawing and heaving.

Effect of rudder – Turning circles, Effect of propeller – transverse thrust,

Crash stop distance. Shallow water effects.

Berthing and Unberthing operations. Williamson's turn and other maneuvers.

Planned Maintenance System

Contingency plans for response to emergencies - Actions to be taken on stranding, collision, grounding.

Preparation to be observed to prevent pollution in port and high seas.

Anti – pollution equipment – Deployment and characteristics on various ships, SOPEP – precautionary preventions, Oil record book.

Recruitment and placement rules 2005, Introduction & definitions - Purpose of the rule, Benefit to seafarers under the rule

Responsibilities of employer, Rights and responsibilities of the seafarer

SMCP. / Safety committee meetings.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the types of Merchant vessels

CO 02: Explore the types of paint used on ships

CO 03: Discuss the types of lifeboat davits and their operational procedure

CO 04: Determine the Outline knowledge of SOLAS 74 and requirements as per SOLAS

CO 05: Understand the description of different types of anchors, parts of an anchor

Text Books:

1. Seamanship Primer Capt. V.K.Bhandarkar
2. Seamanship notes Kemp and young

Reference Books:

1. Survival in life boat and life raft,Capt. S.K.Puri

2. Nicholl's seamanship and nautical knowledge, A.N.Cockcroft

3. Consolidated edition SOLAS, SOLAS

4. Theory and practice of seamanship, Graham Danton

5. Survival at sea, C.H.Wright

6. Cargo work , Kemp and young

Code	Subject	Lecture	Tutorial	Practical	Credit
24ABML61	MARITIME SAFETY AND SECURITY	5	0	0	4

Course Objective:

- To understand the concept of roles and responsibilities concerning maritime security for ship and port industries at the national and international level.
- To understand how to maintain the maritime security conditions set forth.
- To understand the principles of safe management and operation of ships.

Syllabus:

UNIT – I INTRODUCTION **10**

1. Introduction

- Brief outline of Introduction of ISPS code
- Security terminologies
- Security terms
- Current Security threats and Patterns
- Ship and port operations and conditions

2. Security Responsibilities

- Contracting Governments
- Recognized Security Organizations.
- Seafarers with designated security duties
- Port Facility personnel with designated security duties
- The Company
- The Ship
- The Port Facility
- Other personnel.

3. Maritime Security Policy

- Relevant International conventions, codes & recommendations
- Legal implications of action or non action by security personnel
- Handling sensitive security related information and communications.

UNIT – II SHIP SECUIRTY ASSESSMENT AND PLANS **11**

1. Ship Security Assessment

- Risk assessment methodology
- Assessment tools
- On-Scene security Survey
- Security assessment documentation

2. Ship Security Plan

- Purpose, content, Implementation and Maintenance & Modification of the Plan
- Handling confidential issues.

3. Threat Identification, Recognition & Response

- Recognition & detection of weapons, dangerous substances and devices.
- Methods of Physical search and non-intrusive inspections.
- Implementing and coordinating searches.
- Recognition on a non- discriminatory basis, of persons.
- Techniques used to circumvent security measures
- Crowd management and control Techniques.

4. Ship Security Actions

- **Actions required by different security levels**
- **Maintaining Security of the Ship / port interface**
- **Brief outline and contents of Declaration of Security**
- **Reporting Security incidents**
- **Implementation of Security Procedures.**

UNIT – III SECURITY EQUIPMENTS AND ANTI – PIRACY 14

1. Security Equipment's & systems

- Brief outline of the various types of security equipment's and system onboard.
- Security equipment and system that may use to prevent and suppress attacks by pirates and armed robbery.

2. Operational and limitations of equipment's

- Risks and benefits of the security equipment's onboard.
- Testing, calibration and maintenance of equipment and Systems.
- Piracy Awareness and Attack
- The Release Process
- Seafarer's Family

UNIT – IV 10

EMERGENCY PREPAREDNESS DRILLS & EXERCISE AND SECURITY ADMINISTRATION

1. Security Drills
2. Contingency Planning
3. Documents and Records
4. Monitoring and control
5. Security Audits and Inspections

6. Reporting Non-conformities

7. Training Requirements.

UNIT – V INTERNATIONAL SAFETY MANAGEMENT CODE 15

1. Introduction

- Brief outline of introduction and effect of ISM
- Outline on Company's Safety Management
- Regulatory bodies
- Content of ISM code
- Terminologies

2. Safety Management System.

- Safety Management System Format
- Functional requirements of a SMS
- Operational safety procedure
- Hazards Identification Techniques
- Drills and Exercises
- Emergency response plans
- Risk and Quality Management.
- Safety management and Safety Culture

3. Audits and Inspection

- Audit types
- Audit cycle
- Audit stages and Techniques
- System used in incident analysis
- Maintenance systems

Total: 60 Hrs

Course Outcome:

CO 01: Explore maritime security terms, including elements that may relate to piracy and armed robbery

CO 02: Compose how to maintain and supervising the implementation of the security plan.

CO 03: Identify the procedure for reporting the security incidents.

CO 04: Explore the methodology for security assessments to have in place plans and procedures to react to changing security levels.

CO 05: Understand the security-related contingency plans and the procedures for responding to security threats or breaches of security.

Text Books:

1. Best Management Practices for Protection against Pirates. International Chamber of Shipping (2003) Maritime Security: Guidance for Ship Operators on the IMO International Ship and Port Facility Security (ISPS) Code

2. ICS (2003) Model Ship Security Plan

3. ISM Code (2010)

4. SOLAS Chapter –XI -1

5. ILO – Maritime Labour Convention 2006

6. ILO – Seafarer's Identity Documents Convention

7. IMO – STCW Code 2010.

Web Source:

https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---normes/documents/normativeinstrument/wcms_090250.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML61	INTRODUCTION TO E- COMMERCE	5	0	0	4

Course Objective:

- Able to understand the concept of electronic commerce
- Able to understand how electronic commerce is affecting business enterprises.

Syllabus:

UNIT – I INTRODUCTION TO E-COMMERCE 12

Introduction to E-Commerce

Defining Commerce; Main Activities of Electronic Commerce; Benefits of E-Commerce; Broad Goals of Electronic Commerce; Main Components of E-Commerce; Functions of Electronic Commerce – Communication, Process Management, Service Management, Transaction Capabilities; Process of E-Commerce; Types of E-Commerce; Role of Internet and Web in E-Commerce; Technologies Used; E-Commerce Systems; Pre-requisites of E-Commerce; Scope of E-Commerce; E-Business Models**.**

E-COMMERCE ACTIVITIES

Various Activities of E-Commerce; Various Modes of Operation Associated with E-Commerce; Matrix of E-Commerce Types; Elements and Resources Impacting E-Commerce and Changes; Types of E-Commerce Providers and Vendors; Man Power Associated with E-Commerce Activities; Opportunity Development for E-Commerce Stages; Development of E-Commerce Business Case; Components and Factors for the Development of the Business Case; Steps to Design and Develop an E-Commerce Website.

UNIT – II INTERNET – THE BACKBONE FOR E-COMMERCE 12

INTERNET – THE BACKBONE FOR E-COMMERCE

Early Ages of Internet; Networking Categories; Characteristics of Internet; Components of Internet – Internet Services, Elements of Internet, Uniform Resource Locators, Internet Protocol; Shopping Cart, Cookies and E-Commerce; Web Site Communication; Strategic Capabilities of Internet.

ISP, WWW AND PORTALS

Internet Service Provider (ISP); World Wide Web (WWW); Portals – Steps to build homepage, Metadata; Advantages of Portal; Enterprise Information Portal (EIP).

UNIT – III OPEN SYSTEM INTERCONNECTION **12**

REFERENCE MODELS

Open Systems Interconnection (OSI) Model – Physical layer, Data link layer, Network layer, Transport layer, Session layer, Presentation layer, Application layer; Transmission Control Protocol (TCP) / Internet Protocol (IP) Model; Protocol – Internet Protocol (IP), User Datagram Protocol (UDP), Transmission Control Protocol (TCP), Dynamic Host Configuration Protocol (DHCP), Hyper Text Transfer Protocol (HTTP), File Transfer Protocol (FTP), Telnet, Post Office Protocol (POP), Simple Mail Transfer Protocol (SMTP).

XML AND DATA WAREHOUSING

Definition of eXtensible Markup Language (XML); XML Development Goals; Comparison between HTML and XML; Business importance in using XML Based Technology; Advantages, Disadvantages and Applications of XML; Structure of an XML Document; XHTML and X/Secure; Data Warehousing; Data Marts and Operational Data Stores.

UNIT – IV E-MARKETING & E-SECURITY **12**

E-MARKETING

Traditional Marketing; E-Marketing; Identifying Web Presence Goals – Achieving web presence goals, Uniqueness of the web, Meeting the needs of website visitors, Site Adhesion: Content, format and access; Maintaining a Website; Metrics Defining Internet Units of Measurement; Online Marketing; Advantages of Online Marketing.

E-SECURITY

Security on the Internet; Network and Website Security Risks – Denial-of-Service attacks, Viruses, Unauthorized access to a computer network; Vulnerability of Internet Sites; Network and Website Security – Transaction security and data protection, Security audits and penetration testing; E-Business Risk Management Issues; Firewall – Network policy, Advanced authentication mechanism, Packet filtering, Application gateways; Defining Enterprise Wide Security Framework.

UNIT – V **12**

E-PAYMENT SYSTEM & E-CUSTOMER RELATIONSHIP MANAGEMENT

E-PAYMENT SYSTEMS

Electronic Funds Transfer; Digital Token Based E-Payment Systems; Modern Payment Systems; Steps for Electronic Payment; Payment Security; Net Banking.

E-CUSTOMER RELATIONSHIP MANAGEMENT

Customer Relationship Management (CRM) – Marketing automation, Enterprise customer management; Customer Relationship Management Areas; CRM Processes; Architectural Components of a CRM Solution – Customer's information repository, Campaign management, Event triggers, business logic and rules repository, Decision support tools, Higher level statistical analysis, Forecasting and planning tools, True channel management, Workflow management, Collateral management; Electronic Customer Relationship Management; Need, Architecture and Applications of Electronic CRM.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the main activities of Electronic Commerce

C0 02: Analyze the functions of Electronic of Electronic Commerce

C0 03: Explore the knowledge on characteristics of Internet

CO 04: Enhance the knowledge on Internet Service Provider

CO 05: Understand the data warehousing

Text Books:

1. Introduction to e-Commerce (McGraw-Hill/Irwin Series in Marketing)
2. Introduction to e-Commerce & ERP, by Adesh K. Pandey. Published By Katson

Reference Books:

1. Concept of e-Commerce, by Adesh K Pandey. Published By Katson

Web Source:

https://www.vssut.ac.in/lecture_notes/lecture1428551057.pdf

Code	Subject	Lecture	Tutorial	Practical	Credit
24GBML62	DIGITAL MARKETING	5	0	0	4

Course Objective:

- Digital Marketing is a Great Platform to acquire Trending Skills.
- The primary intention of digital marketing is increasing the traffic, building brand awareness, reaching the targeted audience, and improving the sales via different online channels. Businesses leverage digital channels such as Google search, social media, email, and their websites to connect with their current and prospective customers.

Syllabus:

UNIT – I **12**

Digital marketing fundamentals- marketing vs sales- Marketing Mix and 4ps- Inbound vs outbound marketing- content marketing- Understanding leads- Strategic flow for marketing activities.

UNIT – II **14**

Website planning and structure- face book marketing fundamentals- Google ad words- Google analytics- audience reports – Traffic Reports -YouTube marketing fundamentals- Mobile marketing – Video Marketing - Email Marketing- Instagram marketing- marketing automation – online reputation management.

UNIT – III **10**

E - commerce business- An overview of electronic commerce - Electronic commerce framework- Planning E commerce -website- Product Placement – product grouping- promoting e-commerce website- Re marketing.

UNIT – IV **12**

Digital marketing- Digital marketing plan- Digital marketing mix strategy- Digital Marketing Mix Decision-Methods and techniques of Digital marketing- Situational analysis- Budget allocation- Electronic payment system- Electronic cash- smart cards- Electronic data interchange(EDI).

UNIT – V **12**

E- Metrics- Customer oriented business- Consumer demographics- online catalogue- E-customer relationship management- E-CRM and community building- E-CRM and customer lifecycle- E- CRM versus E- Loyalty- Legal and Ethical Issues in Digital marketing- Issue in digital marketing- Digital property.

Total: 60 Hrs

Course Outcome:

CO 01: Understand the fundamentals of digital marketing.

CO 02: Evaluate the strategic flow for marketing activities.

CO 03: Classify the types of digital marketing.

CO 04: Acquire knowledge in strategies in digital marketing.

CO 05: Understand the concept of E- commerce.

Text Books:

1. The Art of Digital Marketing by Ian Dodson
2. Marketing By Philip Kotler
3. Customer Relationship Management by Subhasish Das
4. Customer Behaviour by G. Schiffman Leon and Kumar S. Ramesh
5. Legal Aspects of Marketing and Sales by Don Mayer

Reference Books:

1. E-Marketing: The Essential Guide to Online Marketing, v. 1.0 by Rob Stokes and the Minds of Quirk.
2. Marketing Management. 12th ed. by Kotler, Philip, and Kevin Lane.
3. The Handbook of Marketing Research: Uses, Misuses, and Future Advances by Grover, Rajiv, and Marco Vriens.

Web Source:

https://www.digitalmarketer.com/digital-marketing/assets/pdf/ultimate-guide-to-digital-marketing.pdf