Bangladesh Maritime University

Outcome Based Education (OBE)

Curriculum of

BBA in Port Management and Logistics Program

Department of Port and Shipping Management

Faculty of Shipping Administration

Effective from the Session: 2025 -26 Onwards

AUTHORITY OF PUBLICATION

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Part A: Introduction

1. Title of the Academic Program:

BBA in Port Management and Logistics Program

2. Name of the University:

Bangladesh Maritime University

3. Vision of the University:

To promote and create a learning environment for higher maritime education with excellence, through state-of-the-art facilities and gadgets, competent faculty and staff, expanded frontier of research-based knowledge, and international standards supportive of the new horizons in diverse fields.

4. Mission of the University:

i. To produce skilled human resources in the maritime sector;
ii. Ensure higher education and research of global standards; and
iii. Contribute to the national economic development through the innovation of modern and up-to-date technology.

5. Name of the Program Offering Entity (Department/Faculty/Institute):

Department of Port and Shipping Management / Faculty of Shipping Administration / Bangladesh Maritime University.

6. Vision of the Program Offering Entity:

To be a globally recognized center of excellence in maritime education, producing graduates who will be educated and contribute to the development of the port and shipping industry.

7. Mission of the Program Offering Entity:

M1: Our mission is to empower future leaders in the maritime industry with knowledge, skills and values that promote excellence in port and shipping management.

M2: We are committed to providing a comprehensive education that fosters innovation and sustainability in maritime research.

M3: Through Outcome-Based Education (OBE), we aim to equip our students with practical and theoretical insights, ensuring they become adept at addressing complex challenges in the maritime sector.

8. Objectives of the Program Offering Entity:

i. Plan, organize and control the port, terminal, depots/CFS etc;
ii. Manage port operation and shipping;
iii. Execute strategic port and shipping decision;
iv. Design transportation routes and logistics;
v. Manage supply chain and logistics activities in different industry.

9. Name of the Degree:

BBA in Port Management and Logistics

10. Description of the Program:

BBA in Port Management and Logistics program is a 4-year full-time regular undergraduate program divided into 8 semesters and run by the Department of Port and Shipping Management under the Faculty of Shipping Administration (FSA). This program offers a total of 126 credit hours, including 12 credit hours for the internship/thesis. In addition to regular courses, workshops, seminars, guest lectures, and certificate courses on contemporary issues are arranged frequently for the students. The program incorporates structured study tours at the end of the first three academic years to provide students with experiential learning opportunities. These tours are designed to expose students to real-world operations in ports, shipping companies, logistics facilities, and related industries.

11. Graduate Attributes:

Graduates from this program will be skilled in port management, executives in shipping companies, logistics management, supply chain executives, planning and management in different terminals, freight forwarding companies, stevedoring companies, and different govt. maritime organizations etc.

i. **Communication:** Project management Leadership Analytical ability Critical decision-making Business problem analysis.
ii. **Comprehensive Understanding:** Graduates will possess a deep understanding of port management principles, logistics operations, and supply chain dynamics.

iii. **Analytical Skills:** Graduates will be able to analyze complex logistical challenges, identify inefficiencies, and develop effective solutions.

iv. **Strategic Thinking:** Graduates will demonstrate the ability to develop and implement strategic plans to optimize port operations and enhance logistical performance.

v. **Communication Proficiency:** Graduates will be proficient communicators, capable of effectively conveying ideas and information to diverse stakeholders within the logistics industry.

vi. **Leadership and Teamwork:** Graduates will demonstrate strong leadership skills and the ability to work collaboratively within multidisciplinary teams to achieve common goals.

vii. **Technological Proficiency:** Graduates will be adept at leveraging advanced technologies and digital tools to streamline port operations, track shipments, and improve supply chain visibility.

viii. **Ethical Awareness:** Graduates will exhibit ethical awareness and integrity in decision-making, ensuring compliance with industry regulations and standards.

ix. **Adaptability and Innovation:** Graduates will demonstrate adaptability and a willingness to embrace innovation, enabling them to respond effectively to evolving trends and challenges in the logistics sector.

12. Program Educational Objectives (PEOs):

PEO 1: Graduates will identify the drivers of the Maritime Industry and International Trade.

PEO 2: Skillfully formulate effective solutions to Business problems related to international supply chain port operation and logistics through applying modern technologies and skills.

PEO 3: Graduates will communicate effectively in a team and work collaboratively, maintaining high level of Moral and professional values, contributing in society.

PEO 4: Graduates will drive for leadership positions in the Maritime industry and relevant sector and be involved in business technology innovation to meet national and international demand.

PEO 5: Graduates will evolve and gain as efficient professionals through engagement in the Maritime Industry, Government and other relevant areas of increasing demand for Business professionals and will successfully pursue higher studies.

13. Program Learning Outcomes (PLO):

PLO-1: Maritime Logistics knowledge

PLO-2: Business problem analysis

PLO-3: Critical decision making

PLO-4: Logistics and the society

PLO-5: Analytical ability

PLO-6: Leadership

PLO-7: Environment Sustainability and Governance

PLO-8: Ethics and morality

PLO-9: Individual work and teamwork

PLO-10: Project management and finance

PLO-11: Communication

PLO-12: Adaptability to change

14. Mapping Mission of the University with PEOs

Mission / PEOs	**Mission 1**: to produce skilled human resources in the maritime sector	**Mission 2:** ensure higher education and research of global standards	**Mission 3:** contribute to the national economic development through the innovation of modern and up-to-date technology
PEO 1: Graduates will identify the drivers of Maritime Industry and International Trade.	✓		✓
PEO 2: Skillfully formulate the effective solutions to the Business problems related to Maritime Supply Chain through applying modern technologies and skills.		✓	
PEO 3: Graduates will communicate effectively in a team and work collaboratively maintaining high level of Moral and professional values contributing in society.		✓	✓
PEO 4: Graduates will drive for leadership positions in the Maritime industry and relevant sector and involve in business technology innovation to national and international demand.	✓		✓
PEO 5: Graduates will evolve and gain as efficient professionals through engagement in Maritime	✓	✓	

Industry, Government and other relevant areas of increasing demand of Business professionals and will successfully pursue for higher studies.			

15. Mapping PLOs with PEOs

PEOs / PLOs	**PEO 1:** Graduates will identify the drivers of Maritime Industry and International Trade.	**PEO 2:** Skillfully formulate the effective solutions to the Business problems related to Maritime Supply Chain through applying modern technologies and skills.	**PEO 3:** Graduates will communicate effectively in a team and work collaboratively maintaining high level of Moral and professional values contributing in society.	**PEO 4:** Graduates will drive for leadership positions in the Maritime industry and relevant sector and involve in business technology innovation to national and international demand.	**PEO 5:** Graduates will evolve and gain as efficient professionals through engagement in Maritime Industry, Government and other relevant areas of increasing demand of Business professionals and will successfully pursue for higher studies.
PLO-1: Maritime Logistics knowledge	✓				
PLO-2: Business problem analysis		✓			
PLO-3: Critical decision making					✓
PLO-4: Logistics and the society	✓				
PLO-5: Analytical ability		✓			
PLO-6: Leadership				✓	
PLO-7: Environment Sustainability & Governance					
PLO-8: Ethics and morality					✓
PLO-9: Individual work and teamwork			✓		
PLO-10: Project management and finance					✓
PLO-11: Communication			✓		
PLO-12: Adaptability to change				✓	

16. Mapping courses with the PLOs

PLO / Courses	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
PML 1101 Introduction to Maritime Industry	✓			✓								
PML 1103 Introduction to Business		✓							✓			✓
PML 1105 Micro Economics											✓	
PML 1107 Maritime History and Geography							✓					✓
PML 1109 Functional English											✓	
PML 1102 Functional English Lab											✓	
PML 1201 Principles of Management						✓		✓	✓		✓	
PML 1203 Macro Economics											✓	
PML 1205 Principles of Marketing	✓		✓									
PML 1207 Business Mathematics			✓		✓							
PML 1209 Introduction to Port and Shipping												
PML 1211 Study Tour 1									✓			

PLO / **Courses**	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
PML 1202 Computer Application in Business Lab		✓	✓		✓				✓			
PML 2101 Principles of Accounting						✓		✓	✓		✓	
PML 2105 Human Resource Management						✓		✓	✓		✓	✓
PML 2103 Principles of Statistics		✓	✓		✓							
PML 2107 Marine Pollution and Environmental Protection							✓					
PML 2109 Business Communication		✓	✓								✓	
PML 2111 Bulk Terminal Management	✓		✓				✓				✓	
BUS 2201 Principles of Finance		✓	✓		✓					✓		
PML 2205 Applied Statistics		✓	✓		✓							
PML 2203 International Trade & Commercial Law	✓			✓								
PML 2207 Organizational Behavior			✓			✓						✓
PML 2209 Container Terminal Management	✓			✓								
PML 2211 Study Tour 2									✓			

PLO / Courses	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
PML 3101 Supply Chain Management	✓			✓								✓
PML 3103 Research Methodology			✓		✓			✓	✓			
PML 3105 Port and Transport Safety and Security	✓			✓			✓					
PML 3107 Integrated Transport Management	✓			✓			✓					✓
PML 3109 Air Freight Management	✓			✓	✓							
PML 3111 Maritime Law and Conventions	✓			✓			✓					
PML3201 Fleet Management	✓			✓								
PML 3203 Ship Brokering and Chartering	✓		✓		✓						✓	
PML 3205 Psychology								✓				
PML 3207 Operations Research			✓		✓			✓				
PML 3209 Case Study							✓					
PML 3111 Entrepreneurship						✓		✓	✓		✓	✓
PML 3213 Study Tour 3									✓			
PML 4101 Marine Insurance and Claim	✓		✓	✓								
PML 4103 Strategic Management		✓	✓									✓

PLO / Courses	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
PML 4105 Project Management									✓	✓		
PML 4107 Total Quality Management								✓	✓			
PML 4109 Smart Port Management	✓		✓									
PML 4201 Thesis					✓			✓	✓			
PML 4203 Internship					✓					✓		

Part B

Part B: Structure

17. Structure of Curriculum

a. Duration of the program: Years: 4 Semesters: 8

b. Admission Requirements:

Admission Criteria

Eligibility for admission in PML program is as follows:

i. Applicants who have passed HSC or equivalent examination in the current or previous year are eligible to apply.

ii. Applicants must have passed HSC/equivalent examination and SSC/equivalent examination from any group with total GPA 7.5 (HSC and SSC) but not less than 3.5 in any examination. Applicants with GCE must have passed minimum five subjects in O-Level including Mathematics and minimum two subjects in A-Level. However, an applicant having more than two 'C' grades in O-Level and/or more than one 'C' grade in A-Level will not be eligible for admission.

Admission Procedure

Procedures for admission in BBA in PML program is as follows:

i. **Admission Circular:** BMU will invite applications from interested candidates for

admission in BBA in PML program by publishing advertisements in the national dailies and BMU website.

ii. **Written Admission Test:** An eligible candidate will have to sit for a written admission test on English, Basic Mathematics, Analytical Ability and General Knowledge on Maritime Affairs.

iii. **Final Selection:** Candidates will be selected finally on the basis of their combined marks obtained in the written admission test, HSC/equivalent examination and SSC/equivalent examination. Weightage will be written test 50%, HSC/equivalent examination result 30% and SSC/equivalent examination result 20%. The final merit list along with waiting list will be published on BMU notice board as well as on BMU website.

c. Total minimum credit requirement to complete the program: 126 Credits

Degree requirements are as follows:

To attain a Bachelor's degree, a student must fulfil the following requirements:

i. A student must complete a minimum of 126 credits (or as prescribed by the respective department/institute/affiliated institution) within a maximum of 06 (six) academic years.

ii. The student must pass the final examination of all courses as per the syllabus requirements.

iii. Upon fulfilling all necessary conditions, a student must submit a thesis paper/project report and make an oral presentation as determined by the prescribed panel.

iv. The student must achieve a minimum CGPA of 2.2.

d. Total class weeks in a Year/semester: Each semester is distributed as follows,

Classes	15 weeks
Mid Term Examinations	02 weeks
Preparatory Leave	02 weeks
Final Examination	03 weeks
Recess	04 weeks
Total	26 weeks

e. Minimum CGPA requirements for graduation: Scoring a CGPA 2.25 or above.

f. Maximum academic years of completion*:* 6 years.

g. Category of Courses:

- **General Education Courses**

PML 1109: Functional English

PML 1102: Functional English Lab

PML 3103: Research Methodology

- **Core Courses**

PML 1103: Introduction to Business

PML 1105: Micro Economics

PML 1107: Maritime History and Geography

PML 1201: Principles of Management

PML 1203: Macro Economics

PML 1205: Principles of Marketing

PML 1209: Introduction to Port and Shipping

PML 2111: Bulk Terminal Management

PML 2101: Principles of Accounting

PML 2201: Principles of Finance

PML 2103: Principles of Statistics

PML 2107: Marine Pollution and Environmental Protection

PML 2203: International Trade and Commercial Law

PML 2205: Applied Statistics

PML 2207: Organizational Behavior

PML 2209: Container Terminal Management

PML 3105: Port and Transport Safety and Security

PML 3107: Integrated Transport Management.

PML 3109: Air Freight Management

PML 3111: Maritime Law and Conventions

PML 3203: Ship Brokering and Chartering

PML 3207: Operations Research

PML 3201: Fleet Management

PML 4101: Marine Insurance and Claim

PML 4109: Smart Port Management

- **Allied Courses**

PML 1202: Computer Application in Business Lab

PML 2105: Human Resource Management

PML 1207: Business Mathematics

PML 2109: Business Communication

PML 3101: Supply Chain Management

PML 3205: Psychology

PML 3211: Entrepreneurship

PML 4103: Strategic Management

PML 4105: Project Management

PML 4107: Total Quality Management

- **Capstone Course/ Internship / Thesis / Projects / Portfolio**

PML 1211: Study Tour 1

PML 2211: Study Tour 2

PML 3209: Case Study

PML 3213: Study Tour 3

PML 4201: Thesis

PML 4203: Internship

18. Year/ Level/Semester/Term wise distribution of courses:

a. First Year/ Level/ Semester/ Term courses					
Year-1: Semester-1			**Year-1: Semester-2**		
Code	**Course Name**	**Credit**	**Code**	**Course Name**	**Credit**
Theoretical			**Theoretical**		
PML 1101	Introduction to Maritime Industry	3	PML 1201	Principles of Management	3
PML 1103	Introduction to Business	3	PML 1203	Macro Economics	3
PML 1105	Micro Economics	3	PML 1205	Principles of Marketing	3
PML 1107	Maritime History and Geography	2	PML 1207	Business Mathematics	3
PML 1109	Functional English	3	PML 1209	Introduction to Port and Shipping	3
			PML 1211	Study Tour 1	1.5
Practical			**Practical**		
PML 1102	Functional English Lab	1.5	PML 1202	Computer Application in Business Lab	2
Total		**15.5**	**Total**		**18.5**

b. Second Year/ Level/ Semester/ Term courses					
Year-2: Semester-1			**Year-2: Semester-2**		
Code	**Course Name**	**Credit**	**Code**	**Course Name**	**Credit**
Theoretical			**Theoretical**		
PML 2101	Principles of Accounting	3	PML 2201	Principles of Finance	3
PML 2103	Principles of Statistics	3	PML 2203	International Trade and Commercial Law	3
PML 2105	Human Resource Management	3	PML 2205	Applied Statistics	3
PML 2107	Marine Pollution and Environmental Protection	3	PML 2207	Organizational Behavior	3
PML 2109	Business Communication	3	PML 2209	Container Terminal Management	3
PML 2111	Bulk Terminal Management	3	PML 2211	Study Tour 2	1.5
Total		**18**	**Total**		**16.5**

c. Third Year/ Level/ Semester/ Term courses

Year-3: Semester-1			**Year-3: Semester-2**		
Code	**Course Name**	**Credit**	**Code**	**Course Name**	**Credit**
Theoretical			**Theoretical**		
PML 3101	Supply Chain Management	3	PML 3201	Fleet Management	3
PML 3103	Research Methodology	3	PML 3203	Ship Brokering and Chartering	3
PML 3105	Port and Transport Safety and Security	3	PML 3205	Psychology	3
PML 3107	Integrated Transport Management	3	PML 3207	Operations Research	3
PML 3109	Air Freight Management	3	PML 3209	Case Study	2
PML 3111	Maritime Law and Conventions	3	PML 3211	Entrepreneurship	3
			PML 3213	Study Tour 3	1.5
Total		**18**	**Total**		**18.5**

d. Fourth Year/ Level/ Semester/ Term courses

Year-4: Semester-1			**Year-4: Semester-2**		
Code	**Course Name**	**Credit**	**Code**	**Course Name**	**Credit**
Theoretical					
PML 4101	Marine Insurance and Claim	3	PML 4201 / PML 4203 (Any One)	Thesis / Internship	6
PML 4103	Strategic Management	3			
PML 4105	Project Management	3			
PML 4107	Total Quality Management	3			
PML 4109	Smart Port Management	3			
Total		**15**	**Total**		**6**

15.5+18.5+18+16.5+18+18.5+15+6=126

Total Credit: 126

Part C: Description of All Courses

19. Description of all courses of the program

First Year First Semester

PML 1101: Introduction to Maritime Industry

Part A

1. Course Code: PML 1101

2. Course Title: Introduction to Maritime Industry

3. Course Type: Core

4. Year/Level/Semester/term: 1st Year, 1st Semester

5. Academic Session:

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: The rationale of the Introduction to Maritime Industry course is to provide students with fundamental knowledge of the structure, functions, and importance of the maritime industry in global trade and economic development. It helps learners understand shipping operations, ports, maritime transport systems, and key stakeholders, preparing them for professional careers in shipping, logistics, port management, and other maritime-related sectors.

12. Course Objectives: The objective of the Introduction to Maritime Industry course is to provide students with fundamental knowledge of the structure, functions, and significance of the maritime industry in global trade and transportation. It aims to help students understand shipping operations, port functions, types of ships and cargo, and the roles of maritime organizations and stakeholders, while also creating awareness of maritime safety, security, and environmental protection. The course prepares students for advanced maritime studies and professional careers in shipping, logistics, port management, and related maritime sectors.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: Explain the basic structure and importance of the maritime industry.

CLO 2: Identify different types of ships and their roles in maritime transport.

CLO 3: Describe the functions and operations of ports and shipping services.

CLO 4: Understand the role of maritime transport in international trade and logistics.

CLO 5: Recognize key maritime stakeholders and their contributions to the industry.

Course Learning Outcomes (CLO)s	PLO 01 Maritime Logistics Knowledge	PLO 02 Business Problem Analysis	PLO 03 Critical Decision Making	PLO 04 Logistics and the Society	PLO 05 Analytical Ability	PLO 06 Leadership	PLO 07 Environment and Sustainability	PLO 08 Ethics and Morality	PLO 09 Individual Work and Team Work	PLO 10 Project Management and Finance	PLO 11 Communication	PLO 12 Adaptability to Change
CLO 1	✓			✓								
CLO 2	✓			✓								
CLO 3	✓											
CLO 4		✓										
CLO 5				✓								✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Introduction to Maritime Industry**			
Week 01&02	• Definition and scope of Maritime industry • Importance of maritime transport • Maritime industry and	Presentation Lecture Effective class Discussion	Discussion	CLO1

	global economy • Key sectors of the maritime industry: shipping, ports, shipbuilding, maritime logistics, maritime services; interaction among maritime stakeholders.			
Content 02	**Global Shipping System and Ship Types**			
Week 03 & 04	• Definition of shipping • Types of ships (container, bulk carrier, tanker, LNG/LPG, passenger vessels etc.) • Functions and characteristics of different ship types.	Lecture Effective class discussion	Quiz	CLO 2
Content 03	**Global Maritime Routes**			
Week 05	• Major international shipping routes; strategic maritime chokepoints; • Factors influencing global maritime trade routes.	Presentation Lecture Group Work	Assignment	CLO 3
Content 04	**Maritime Logistics and Supply Chains**			
Week 06	• Role of maritime transport in global supply chains; • Integration with inland transport systems; multimodal and intermodal transport concepts.	Lecture Effective class discussion	Class Test	CLO 2
Content 05	**Documentation**			
Week 07	• Overview of commercial and transport documentation used in maritime trade; importance of documentation in international shipping and logistics.	Presentation Case based learning Lecture Marketing problem solving	Class Test	CLO 4

Content 06	**Maritime Agencies and Supporting Services**			
Week 08 & 09	• Types of maritime service providers (agents, brokers, freight forwarders, classification societies, marine insurers); roles and responsibilities.	Lecture Effective class discussion		CLO 5
Content 07	**Global Maritime Governance**			
Week 10 & 11	• The roles and functions of United Nations and other International Organizations (IMO, ILO, UNCTAD) in the maritime context. • International conventions and national regulations: responsibilities of ship-owners and crews; reports, declaration and certification requirements.	Lecture Presentation Group Based learning	Quiz	CLO 5
Content 08	**Overview of Bangladeshi maritime sector**			
Week 12	• Overview of Bangladesh maritime sector • Importance of maritime transport to Bangladesh economy • Key national maritime institutions (Ministry of Shipping, Bangladesh Shipping Corporation Department of Shipping, Different Port Authorities, BIWTA, BIWTC etc.		Assignment	CLO 5
Content 09	**Ship Building and Recycling**			
Week 13	• Introduction: Importance and types of ships • Ship Construction: Design, materials, and building process • Ship Recycling: Methods, environmental & safety	Lecture Presentation Group work	Group Task	CLO 1

	considerations • Regulations & Sustainability: Hong Kong Convention, green ship technologies			
Content 10	**Maritime Policies and Industry Trends**			
Week 14	• National and international shipping policies; industry governance; emerging trends (digital shipping, green shipping, sustainability).	Lecture Group Based learning Case based learning	Quiz	CLO 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

A. Recommended Readings:

i. ***Introduction to Maritime Industry Trainee Guide (1st Edition)by NCCER***

ii. ***Introduction to Maritime Logistics by Dong-Woo k Song and Photis M Panayi(Book Chapter)***

iii. ***Maritime Economics*** *– Martin Stopford (key text on shipping markets, freight cycles, and industry economics)*

iv. ***Maritime Logistics: A Guide to Contemporary Shipping and Port Management*** *– Dong-Wook Song & Photis M. Panayides (shipping, logistics, and port management)*

PML 1103: Introduction to Business

Part A

14. Course Code: PML 1103

15. Course Title: Maritime Business

16. Course Type: Core

17. Year/Level/Semester/term: 1st Year, 1st Semester

18. Academic Session: 2025-2026

19. Course Teacher/Instructor: To be nominated

20. Pre- requisite (if any): N/A

21. Credit Value: 03

22. Contract Hours: 42

23. Total Marks: 100

24. Rationale of the course: The students will be familiar to a foundational understanding of how businesses operate, covering core functions like management, marketing, finance, and HR, while developing essential skills in critical thinking, ethics, and communication, helping students explore career paths, build financial literacy, and understand the role of business in the economy and society.

25. Course Objectives: This course will provide a foundational overview of the business

world, covering key functions like management, marketing, finance, and accounting, alongside crucial concepts such as ethics, social responsibility, globalization, entrepreneurship, and business environments, preparing students for further study or careers by building a broad understanding of how businesses operate and interact with society.

26. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO1: Demonstrate Business knowledge by understanding core concept, theories.

CLO2: Exercise different software for problem solving of the business world.

CLO3: Understand functional areas of business.

CLO4: Analyze evolving business world as well as connect to the maritime business.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1		✓		✓					✓			✓
CLO 2		✓	✓		✓						✓	
CLO 3		✓				✓			✓	✓		
CLO 4	✓	✓									✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Business Fundamentals**			
Week 01	Role of business, economic systems, global markets, legal/social environments, profits, and risks.	Presentation Lecture Effective class Discussion	Discussion	CLO1
Content 02	**Business Structure**			

Week 02	Forms of ownership (sole proprietorship, partnership, corporation) and business formation.	Lecture Effective class discussion Case based Learning	Quiz	CLO3
Content 03	**Management**			
Week 03 & 04	Planning, organizing, leading (motivation, leadership, teamwork), controlling, decision-making, and managing change.	Presentation Lecture	Assignment	CLO4
Week 05	Management and Organization: Fundamentals of Management.	Lecture Case based learning Effective class discussion	Class Test	CLO4
Content 04	**Marketing, Finance & Accounting**			
Week 06	The marketing function, marketing mix (4 Ps), customer value, and promotion.	Presentation Case based learning Lecture	Presentation	CLO1
Week 07	Basic accounting principles, business finance, capital markets, and funding.	Lecture Presentation		CLO1
Content 05	**Human Resources (HR)**			
Week 08	Managing employees, recruitment, and workplace dynamics.	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3
Content 06	**Entrepreneurship**			
Week 09	Identifying opportunities, developing business plans, and starting new ventures.	Lecture Presentation Case studies	Test	CLO4
Content 07	**Ethics & Social Responsibility**			

Week 10	Corporate social responsibility (CSR) and ethical decision-making	Lecture Presentation Group work	Group Task	CLO4
Content 08	**Operations & Technology**			
Week 11	Managing processes, production, and information technology.	Lecture Group Based learning Case based learning	Quiz	CLO4
Content 09	**Skills Development**			
Week 12	Communication, interpersonal skills, and problem-solving.	Lecture Presentation	Assignment	CLO3

Part C

15. Assessment and Evaluation

1) **Assessment Strategy:** The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

c. Continuous Assessment: 40

d. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will

get chance for make-up.

Part D

16. Learning Materials

B. Recommended Readings:

i. Robert T. Kiyosaki, The Business of 21st Century

ii. Introduction to Business by Mc-Graw Hill Education

PML 1105: Micro Economics

Part A

1. Course Code: PML 1105

2. Course Title: Micro Economics

3. Course Type: Core

4. Year/Level/Semester/term: 1st Year, 1st Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: A microeconomics course is fundamental to understanding how individual economic units—consumers, households, and firms—make decisions regarding the allocation of limited resources. The rationale for studying this subject spans practical, theoretical, and policy-oriented reasons, acting as a "bottom-up" approach to understanding market dynamics and human behavior.

12. Course Objectives: This course teaches how individuals, households, and firms make decisions about scarce resources, focusing on specific markets, supply and demand, pricing, and production, using models to understand behavior and market outcomes, contrasting with macroeconomics' focus on the whole economy.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO1: Demonstrate Microeconomics knowledge by understanding core concept, theories

CLO2: Exercise different tools for problem solving of the Microeconomics

CLO3: Understand functional areas of Microeconomics

CLO4: Analyze evolving Economic fields as well as connect to the business

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1		✓		✓					✓			✓
CLO 2		✓	✓		✓						✓	
CLO 3		✓				✓			✓	✓		
CLO 4	✓	✓									✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Supply and Demand**			
Week 01	How these forces interact to set prices and quantities in markets (e.g., oil, coffee).	Presentation Lecture Effective class Discussion	Discussion	CLO1
Content 02	**Consumer Theory**			
Week 02	Understanding consumer choices, utility, marginal utility, and demand.	Lecture Effective class discussion Case based Learning	Quiz	CLO3
Content 03	**Production Theory & Costs**			
Week 03 & 04	How firms produce goods and services, and the costs involved.	Presentation Lecture	Assignment	CLO4
Content 04	**Market Structures**			
Week 06	Analyzing different market types, from perfect competition to monopolies, and oligopolies.	Presentation Case based learning	Presentation	CLO1

		Lecture		
Content 05	**Labor Economics**			
Week 08	Wages, employment, and the interaction between workers and employers.	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3
Content 06	**Elasticity**			
Week 09	How sensitive supply and demand are to price changes.	Lecture Presentation Case studies	Test	CLO4
Content 07	**Game Theory:**			
Week 10	Strategic interactions between individuals and firms.	Lecture Presentation Group work	Group Task	CLO4
Content 08	**Market Failures**			
Week 11	Situations where free markets don't allocate resources efficiently (e.g., public goods, externalities).	Lecture Group Based learning Case based learning	Quiz	CLO4
Content 09	**Factor Markets (Labor Economics)**			
Week 12	Studying the markets for labor, capital, and land, including wage determination.	Lecture Presentation	Assignment	CLO3
Week 13	Analyzing cases where markets fail to allocate resources efficiently, such as externalities (pollution) and public goods.			

Part C

15. Assessment and Evaluation

1) **Assessment Strategy:** The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the

evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

C. Recommended Readings:

iii. Principle of Macroeconomics by N. Gregory Mankiw

iv. Macroeconomics: Theory & Applications by D.N. Dwivedi

PML 1107: Maritime History and Geography

Part A

1. Course Code: PML 1107

2. Course Title: Maritime History and Geography

3. Course Type: Core

4. Year/Level/Semester/term: 1st Year, 1st Semester

5. Academic Session: 2025-26

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course:

The course *Maritime History and Geography* provides students with an integrated understanding of how maritime activities have shaped human civilization and how geographical factors influence maritime affairs. It examines the historical development of seafaring, trade routes, ports, naval power, and maritime nations, alongside the physical and human geography of oceans, seas, coastlines, and strategic waterways. By linking historical events with geographical realities, the course builds a strong foundation for understanding modern maritime issues such as global trade, maritime security, environmental protection, and sustainable use of marine resources, and is essential for students pursuing careers in maritime, shipping, logistics, and related fields.

12. Course Objectives: The objective of the Maritime History and Geography course is to develop students' understanding of the historical evolution of maritime activities and the geographical factors that influence sea transport, trade routes, ports, and coastal regions. The course aims to explain how oceans, seas, and waterways have shaped civilizations, economic development, naval power, and global trade patterns. It also seeks to build awareness of the strategic, environmental, and economic importance of maritime spaces, enabling students to analyze contemporary maritime issues using historical and geographical perspectives.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO1: To understand the historical development of maritime activities and seafaring nations

CLO2: To examine the geographical factors influencing maritime trade and navigation

CLO3: To analyze the evolution of shipping routes, ports, and maritime power

CLO4 To develop awareness of the strategic importance of seas and oceans in global affairs.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓			✓								

CLO 2	✓			✓							✓	
CLO 3	✓										✓	
CLO 4							✓					✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Introduction to Maritime History and Geography**			
Week 01	□ Definition and scope of maritime history □ Relationship between maritime history and geography □ Importance of seas and oceans in human civilization □ Overview of global maritime activities	Presentation Lecture Effective class Discussion	Discussion	CLO1
Content 02	**Early Maritime Civilizations**			
Week 02	□ Maritime activities of ancient civilizations: • Mesopotamia • Indus Valley • Egyptian civilization • Phoenicians and early navigation □ Early shipbuilding techniques Ancient maritime trade routes	Lecture Effective class discussion	Quiz	CLO3
Content 03	**Classical Maritime Expansion**			
Week 03	□ Greek and Roman maritime	Presentation	Assignment	CLO2

	expansion □ Development of early ports and harbors □ Maritime infrastructure in the classical era □ Trade patterns and regional connectivity	Lecture Group Work		
Content 04	**Medieval Seafaring and Global Linkages**			
Week 04	□ Viking exploration and maritime dominance □ Arab and Chinese maritime trade □ Silk Route and Maritime Silk Road □ Medieval ship types and navigation methods	Presentation Case based learning Lecture	Presentation	CLO1
Content 05	**Age of Discovery and Exploration**			
Week 05	□ Causes and consequences of the Age of Discovery □ Contributions of Portugal, Spain, Netherlands, and England □ Major explorers and significant voyages □ Impact on global trade and colonization	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3
Content 06	**Industrial Revolution and the Rise of Modern Shipping**			
Week 06	□ Industrial Revolution and transformation of shipping □ Evolution from sail to steamships □ Growth of global maritime trade □ Emergence of modern shipping routes	Lecture Presentation Group work	Group Task	CLO2

Content 07	**Maritime Geography – Physical and Navigational Foundations**			
Week 07 & 08	□ Earth, oceans, and seas □ Maritime zones (EEZ, continental shelf) □ Latitude, longitude, heat zones, and time calculation □ Oceanographic and climatic influences on navigation	Lecture Group Based learning Case based learning	Quiz	CLO2
Content 08	**Maritime Transportation and Spatial Structure**			
Week 09	□ Geography of shipping flows □ Network structures in maritime transport □ Influence of geography on routes, logistics, and costs □ Major commodities and global trade patterns	Lecture Presentation	Assignment	CLO3
Content 09	**Interoceanic Passages and Strategic Chokepoints**			
Week 10	□ Major ocean routes □ Important canals and straits □ Significance for world trade □ Geopolitical importance of maritime chokepoints	Group work Lecture	Group presentation	CLO3
Content 10	**Port Geography and Distribution Networks**			
Week 11	□ Major ports of the world □ Factors influencing port location □ Hinterland connectivity and coastal morphology □ Port functions, hierarchies, and port-city relationships □ Ports as logistics and industrial clusters	Lecture	Discussion	CLO3,4

Content 11	**Containerization and the Changing Geography of Seaports**			
Week 12	□ Evolution of containerization □ Larger vessels and specialized terminals □ Automation and information technology in ports □ Hub-and-spoke networks and global connectivity	Lecture Presentation Group work	Group Task	CLO3
Content 12	**Geography of Bulk Shipping Network**			
Week 13	□ Dry bulk and liquid bulk shipping networks □ Major global trade routes (Trans-Pacific, Europe–Asia, Atlantic–Asia) □ Geography of cruise shipping and major markets □ Resource distribution, infrastructure, and geopolitics	Lecture Group Based learning Case based learning	Quiz	CLO3
Content 13	**Geography of Cruise Shipping Network**			
Week 14	The geography of cruise shipping, major markets like the Caribbean and Mediterranean, alongside seasonal markets such as Alaska and Northeast Asia .	Lecture Presentation	Assignment	CLO3, 4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

A. Recommended Readings:

i. ***The Geography of Transport Systems*** by Jean-Paul Rodrigue

ii. ***The Geography of Sea Transport*** by Alastair Couper (1972/2015 Edition)

iii. ***Marine Geography: Ocean Space and Sense of Place*** edited by Bärbel G. Bischof.

PML 1109: Functional English

Part A

1. Course Code: PML 1109
2. Course Title: Functional English
3. Course Type: General Education
4. Year/Level/Semester/term: First Year, First Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100

11. Rationale of the course: Focusing essentially on the communication skills in English,

Functional English comprises of the study of how this language is used practically in terms of speaking, writing, listening and reading. It analyses how English is used in real-life situations and further helps learners gain interactional competencies and fluency skills in English.

12. Course Objectives:

The course will develop students' writing skills necessary for their academic and professional success. It will also help the students to learn and follow the conventions of standard written English in sentence structure, punctuation, grammar usage and spelling.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: Be able to improve academic writing in English

CLO 2: Be able to enhance students' reading skills and understanding of short passages

CLO 3: Be able to enrich students' vocabulary and develop grammatical accuracy

CLO 4: Be able to write coherent, well-organized and argumentative essays

Course Learning Outcomes (CLO)	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓								✓			
CLO 2			✓		✓					✓		
CLO 3											✓	
CLO 4						✓			✓		✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	Reading			
Week	Reading and thinking	Lecture Style,	Class Test	CLO

01	critically, Reading Comprehension, and answering questions	PowerPoint Presentation, Discussions		2
Week 02	Reading short stories and poems; Learning different reading strategies (skimming, scanning, predicting, guessing, etc)	Reading short stories and poems; Learning different reading strategies (skimming, scanning, predicting, guessing, etc)	Reading short stories and poems; Learning different reading strategies (skimming, scanning, predicting, guessing, etc)	CLO 2
Week 03	Active reading (highlighting, getting information from texts quickly, following main arguments, interacting with the text and summarizing)	Team work, Discussions	-	CLO 2
Week 04	Reading to improve linguistic skills and expand vocabulary.	Team work	Team work	CLO 3
Content 02	Writing			
Week 05	Paragraph Writing; Organizing a paragraph: topic sentence, detailed sentences, logical orders and conclusions;	Lecture, PowerPoint Presentation,	Assignment	CLO 4
Week 06	Writing different types of essays: narrative/descriptive, argumentative, cause effect; Paraphrase and summary writing;	Self-directed learning Discussions	Assignment	CLO 4

Week 07	Writing strategies: free-writing, brainstorming, mind mapping/clustering, narrowing the focus etc.;	Discussions, Team Work, Self-directed learning	-	CLO 5
Week 08	Reading to write: reading critical essays, obtaining information and note taking; Mechanics of writing: grammar, punctuation and spelling.	PowerPoint Presentation, Kinesthetic learning,	Class test	CLO 1 & 2
Content 03	Advanced Grammar			
Week 09	Common mistakes in English; Use of tenses;	PowerPoint Presentation, Discussions	Quiz	CLO 3
Week 10	Problem Verbs; Appropriate preposition; Subject verb agreement; Error corrections;	Lecture Style, Discussions	MCQ	CLO 3
Week 11	Affirmative and Negative Agreement; Conditional Sentences; Comparisons of Adjectives	Lecture Style, Discussions	Quiz	CLO 3
Week 12	Right forms of verbs; Causative Verbs; Subjunctive; Redundancy; Parallel Structure;	Lecture Style, PowerPoint Presentation	Quiz	CLO 3
Week 13	Learning when to use passive voice; Commonly Misused Words;	Lecture Style, Team work	Quiz	CLO 3
Week 14	Confusingly Related Words; Use of Prepositions; Use of	PowerPoint Presentation,	Class Test	CLO 3

	Linkers.	Discussions		

Part C

15. Assessment and Evaluation

1**) Assessment Strategy:** The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1) Recommended Readings:

i. Functional English by Vaman Deshmukh,

ii. Handbook Of Functional English by Shakil Chaudhary,

iii. Basic English Grammar: For English Language Learners by Anne Seaton & Y. H. Mew.

iv. Highschool Grammar by Wren and Martin

v. Communicative Grammar by Svartvik and Leech.

2) Supplementary Readings

Authentic materials, Newspaper articles, Headway Series.

PML 1102: Functional English Lab

Part A

1. Course Code: PML 1102
2. Course Title: Functional English Lab
3. Course Type: GEd Course
4. Year/Level/Semester/term: First Year, First Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): Functional English
8. Credit Value: 1.5
9. Contract Hours: 14
10. Total Marks: 100
11. **Rationale of the course:** Being a practical-oriented course, it helps students build confidence in speaking English efficiently. It enhances their ability to understand English texts, documents, and instructions, especially those containing technical or professional jargon. This, in turn, boosts their productivity and workplace readiness. The course also strengthens communication skills, which are essential for influencing clients, participating in discussions, and effectively expressing ideas in academic and professional environments.
12. **Course Objectives:** This course will help students to enhance their communication skills through interactive participation in the class. It will also enable them to speak fluently for academic as well as professional purposes.
13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO 1: Be able to improve critical thinking skills, especially those of analysis and argument

CLO 2: Be able to develop fluency in delivering speech

CLO 3: Be able to speak more accurately and confidently

CLO 4: Be able to develop listening skills.

Course Learning Outcomes (CLO)	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓		✓									
CLO 2									✓		✓	
CLO 3						✓					✓	
CLO 4											✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	Speaking			
Week 01	Guided conversations (greetings, requesting, apologizing)	Guided Discussions, Role Play	Discussions	CLO 2 & 3
Content 01				
Week 02	Two- minute impromptu talks	Student Centered Learning	Individual Presentation	CLO 2 & 3
Content 01				
Week 03	Role- plays and simulations	Team Work and Discussions	Group Work	CLO 2 & 3
Content 01				
Week 04	Preparing and presenting talks on a given theme	Presentation	Presentation	CLO 1, 2 & 3
Content 01				
Week 05	Informal debates and group discussion	Team Work and Discussions	Debate	CLO 1, 2

				& 3
Content 01				
Week 06	Public Speaking	Presentation	Speech	CLO 2 & 3
Content 01				
Week 07	Oral presentation	Presentation	Speech	CLO 2 & 3
Content 01				
Week 08	Responding to audio/video clips.	Student Centered Learning	Class Test	CLO 2 & 4
Content 02	Listening			
Week 09	Listening for main ideas/key information	Self-directed learning	Group Task	CLO 4
Content 02				
Week 10	Listening for specific details	Self-directed learning		CLO 4
Content 02				
Week 11	Listening and responding to texts (i.e., following instructions, answering questions, reacting to texts, etc.)	Discussions	Class test	CLO 2 & 4
Content 02				
Week 12	Listening and note-taking	Self-directed learning	Class Work	CLO 4
Content 02				
Week 13	Listening to news, broadcasts and songs	Self-directed learning	-	CLO 4
Content 02				
Week 14	Listening and watching short video clips.	Self-directed learning	-	CLO 4

Part C

15. Assessment and Evaluation

The distribution of marks for Lab courses is given below:

Lab test	40%
Assignment / Report	20%
Viva/Presentation	10%
Quiz	10%
Attendance	10%
Class Performance / Observation	10%
Total =	**100%**

Part D

16. Learning Materials

1) Recommended Readings:

i. Functional English by Vaman Deshmukh,
ii. Handbook Of Functional English by Shakil Chaudhary,
iii. Basic English Grammar: For English Language Learners by Anne Seaton & Y. H. Mew.
iv. Highschool Grammar by Wren and Martin
v. Communicative Grammar by Svartvik and Leech.

2) Supplementary Readings

Authentic materials, Newspaper articles, Headway Series.

First Year Second Semester

PML 1201: Principles of Management

Part A

1. Course Code: PML 1201
2. Course Title: Principles of Management
3. Course Type: Core
4. Year/Level/Semester/term: 1st Year, 2nd Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:**

    The rationale of the Principles of Management course is to provide students with a systematic understanding of fundamental management concepts, functions, and practices essential for effective organizational performance. The course explains how planning, organizing, staffing, directing, and controlling are applied in different types of organizations to achieve goals efficiently and effectively. It also aims to develop analytical, decision-making, and leadership skills, enabling students to understand managerial roles, adapt to changing business environments, and apply management principles to real-world organizational and managerial problems**.**

12. **Course Objectives:** The objectives of the *Principles of Management* course are to provide students with a clear understanding of fundamental management concepts and functions such as planning, organizing, staffing, directing, and controlling. The course aims to develop analytical and decision-making skills needed to solve managerial problems, enhance leadership and communication abilities, and promote effective coordination of human and material resources. It also seeks to familiarize learners with modern management practices, ethical considerations, and the role of management in achieving organizational goals efficiently and effectively in a dynamic business environment.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: Explain the basic concepts, principles, and functions of management.

CLO 2: Apply management functions to practical organizational situations.

CLO 3: Analyze managerial roles, leadership, and decision-making processes.

CLO 4: Demonstrate essential managerial and communication skills for effective management

Course Learning Outcomes (CLO)s	PLO 01 Maritime Logistics Knowledge	PLO 02 Business Problem Analysis	PLO 03 Critical Decision Making	PLO 04 Logistics and the Society	PLO 05 Analytical Ability	PLO 06 Leadership	PLO 07 Environment Sustainability and Governance	PLO 08 Ethics and Morality	PLO 09 Individual Work and Team Work	PLO 10 Project Management and Finance	PLO 11 Communication	PLO 12 Adaptability to Change
CLO 1	✓			✓								
CLO 2	✓			✓							✓	
CLO 3	✓										✓	
CLO 4							✓					✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Introduction to Management**			
Week 01	• Meaning and definition of management • Nature and scope of	Presentation Lecture Effective class	Discussion	CLO1

	management • Management as an art, science, and profession • Levels of management (top, middle, lower) • Roles and skills of managers • Efficiency & Effectiveness	Discussion		
Content 02	**Approaches to Management**			

Week 02	• Classical approach
	  ○ Scientific Management (F. W. Taylor)
	  ○ Administrative Management (Henri Fayol)
	  ○ Bureaucratic Model (Max Weber)
	• Neo-classical approach
	  ○ Human Relations Movement (Elton Mayo)
	• Modern approach
	  ○ Systems approach
	  ○ Contingency approach
		Lecture
		Effective class discussion
			Quiz	CLO3

Content 03	**Planning & Decision Making**			
Week 03 & 04	• Meaning and importance of planning • Objectives, policies, procedures, and programs • Types of plans • Planning process • Decision making and forecasting	Presentation Lecture Group Work	Assignment	CLO2

Content 04	**Organizing**			
Week 05	• Meaning and principles of organizing • Organizational structure • Authority, responsibility, and accountability • Centralization vs. decentralization • Span of control and delegation	Presentation Case based learning Lecture	Presentation	CLO1
Content 05	**Staffing**			
Week 06	• Meaning and importance of staffing • Recruitment and selection • Training and development • Performance appraisal • Motivation and compensation	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3
Content 06	**Directing**			
Week 07&8	• Meaning and elements of directing • Leadership: styles and theories • Motivation: theories (Maslow, Herzberg, McGregor) • Communication: process and barriers • Supervision	Lecture Presentation Group work	Group Task	CLO2
Content 07	**Controlling**			
Week 09	• Meaning and importance of control • Control process	Lecture Group Based	Quiz	CLO2

	• Types of control (feedforward, concurrent, feedback) • Budgetary and non-budgetary control • Management by Objectives (MBO	learning Case based learning		
Content 08	**Coordination**			
Week 10	• Meaning and importance of coordination • Principles and techniques of coordination • Coordination as the essence of management.	Lecture Presentation	Assignment	CLO3
Content 09	**Leadership and Motivation**			
Week 11 &12	**Leadership** • Definition and meaning of leadership • Importance of leadership in management • Types of leadership: o Autocratic o Democratic o Laissez-Faire o Transformational o Transactional **Motivation** • Definition and importance of motivation in management • Types of motivation: o Intrinsic o Extrinsic • Major theories of motivation: o Maslow's	Group work Lecture	Group presentation	CLO4

	Hierarchy of Needs o Herzberg's Two-Factor Theory o McGregor's Theory X and Theory Y **Interrelation of Leadership and Motivation** • How leadership influences motivation • Role of motivated employees in organizational success • Adapting leadership style to meet motivational need			
Content 10	**Contemporary Issues in Management**			
Week 13 &14	• Corporate social responsibility (CSR) • Business ethics and values • Globalization and management • Management in the digital age • Sustainable management practices	Lecture	Discussion	CLO4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

B. Recommended Readings:

i. Principles of Management – *Henri Fayol*

ii. **Management** – *Stephen P. Robbins & Mary Coulter*

iii. **Principles of Management** – *Koontz, O'Donnell & Weihrich*

iv. **Management: A Global Perspective** – *Harold Koontz & Heinz Weihrich*.

PML 1203: Macro Economics

Part A

1. Course Code: PML 1203

2. Course Title: Macro Economics

3. Course Type: Core

4. Year/Level/Semester/term: 1st Year, 2nd Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: The students will be able to know a "bird's-eye view" of the economy, enabling students to understand, analyze, and predict the behavior of aggregate economic variables such as GDP, inflation, and unemployment. It helps in understanding the factors driving long-term economic growth and short-term business cycles, and how government policies (fiscal and monetary) are used to achieve stability.

12. Course Objectives: This course studies the economy as a whole, focusing on broad indicators like GDP, inflation, unemployment, and economic growth, analyzing national income, government policies (fiscal/monetary), and international trade to understand national and global economic performance and improve living standards

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO1: Demonstrate Macroeconomics knowledge by understanding core concept, theories.

CLO2: Exercise different tools for problem solving of the Macroeconomics.

CLO3: Understand functional areas of Macroeconomics.

CLO4: Analyze evolving Economic world as well as connect to the business.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1		✓		✓					✓			✓
CLO 2		✓	✓		✓						✓	
CLO 3		✓				✓			✓	✓		
CLO 4	✓	✓									✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Introduction to Macroeconomics**			
Week 01	Scarcity, choice, and opportunity cost. The difference between microeconomics and macroeconomics. The Production Possibilities Frontier (PPF) and economic growth.	Presentation Lecture Effective class Discussion	Discussion	CLO1
Content 02	**Measuring Economic Performance (GDP)**			
Week 02	Definition and calculation of Gross Domestic Product (GDP): Expenditure and Income approaches. Real vs. Nominal GDP, GDP deflator, and limitations of GDP. The business cycle: expansion, peak, recession, trough.	Lecture Effective class discussion Case based Learning	Quiz	CLO3
Content 03	**Unemployment and Labor Force**			
Week 03 & 04	Defining the labor force, unemployment rate, and labor force participation rate. Types of unemployment: Structural, frictional, and cyclical.	Presentation Lecture	Assignment	CLO4

Week 05	The natural rate of unemployment.	Lecture Case based learning Effective class discussion	Class Test	CLO4
Content 04	**Inflation and Price Indices**			
Week 06	Defining inflation, deflation, and stagflation. Consumer Price Index (CPI) and Producer Price Index (PPI).	Presentation Case based learning Lecture	Presentation	CLO1
Week 07	Calculating inflation and nominal vs. real values (Fisher equation).	Lecture Presentation		CLO1
Content 05	**Aggregate Demand and Aggregate Supply (AD-AS) Model**			
Week 08	Components of Aggregate Demand (C+I+G+Xn). Short-run vs. Long-run Aggregate Supply (SRAS/LRAS). Equilibrium, demand shocks, and supply shocks.	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3
Content 06	**Keynesian and Neoclassical Economics**			
Week 09	Keynesian analysis: Expenditure multiplier and marginal propensity to consume. Neoclassical perspective: Flexible prices and long-run adjustment. Comparing the perspectives on economic stability.	Lecture Presentation Case studies	Test	CLO4
Content 07	**Fiscal Policy and Public Finance**			

Week 10	Government spending, taxation, and automatic stabilizers. Expansionary vs. contractionary fiscal policy. Budget deficits, national debt, and crowding out.	Lecture Presentation Group work	Group Task	CLO4
Content 08	**Money, Banking, and Financial Markets**			
Week 11	Functions of money, M1 and M2 definitions. Fractional reserve banking and the money multiplier. The role of commercial banks and financial intermediaries.	Lecture Group Based learning Case based learning	Quiz	CLO4
Content 09	**Central Banking and Monetary Policy, International Trade and Finance**			
Week 12	Role of the Federal Reserve (or central banks). Tools of monetary policy: Open market operations, discount rate, reserve requirements. Monetary policy impacts on interest rates and Aggregate Demand	Lecture Presentation	Assignment	CLO3
Week 13	Balance of payments: Current account and capital/financial account. Exchange rates: Foreign exchange markets (demand and supply). Trade barriers: Protectionism, tariffs, and quotas			

Part C

15. Assessment and Evaluation

1) **Assessment Strategy:** The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the

evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

C. Recommended Readings:

i. Principle of Macroeconomics by Dr. S. Sachdeva

ii. Macroeconomics by Peter Dorman

iii. Mankiw NG (2015). Principles of Economics, 7th edition. Cengage Learning.

PML 1205: Principles of Marketing

Part A

1. Course Code: PML 1205

2. Course Title: **Principles of Marketing**

3. Course Type: Core

4. Year/Level/Semester/term: 1st Year, 2nd Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** This course provides a foundation for understanding how organizations identify customer needs, create value, and build strong relationships through effective marketing strategies. It equips students with essential knowledge of market analysis, consumer behavior, product planning, pricing, promotion, and distribution, enabling them to understand how marketing supports organizational goals and competitiveness in a dynamic global marketplace.
12. **Course Objectives:** The **Principles of Marketing** course aims to provide students with a comprehensive understanding of marketing concepts and practices. Its objectives are to introduce the fundamental principles and significance of marketing, help students analyze consumer behavior and market segmentation, and explain the effective application of the marketing mix—product, price, place, and promotion. Additionally, the course seeks to develop students' analytical and decision-making skills, enabling them to design and implement marketing strategies that support organizational goals and competitiveness in dynamic business environments.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO1: To introduce the basic concepts, scope, and importance of marketing in modern business.

CLO2: To understand consumer behavior and market segmentation for effective targeting.

CLO 3: To explain the marketing mix—product, price, place, and promotion—and its application.

CLO 4: To develop analytical and decision-making skills for formulating effective marketing strategies.

Course Learning Outcomes (CLO)s	PLO 01 Maritime Logistics Knowledge	PLO 02 Business Problem Analysis	PLO 03 Critical Decision Making	PLO 04 Logistics and the Society	PLO 05 Analytical Ability	PLO 06 Leadership	PLO 07 Environment Sustainability and Governance	PLO 08 Ethics and Morality	PLO 09 Individual Work and Team Work	PLO 10 Project Management and Finance	PLO 11 Communication	PLO 12 Adaptability to Change
CLO 1	✓			✓								
CLO 2	✓			✓							✓	
CLO 3	✓										✓	
CLO 4							✓					✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Introduction to Marketing**			
Week 01	□ Meaning, nature, and scope of marketing □ Evolution of marketing concepts • Production concept • Product concept • Selling concept • Marketing concept • Societal marketing concept □ Importance of marketing in business and society □ Marketing vs. selling	Presentation Lecture Effective class Discussion	Discussion	CLO1

	□ Functions of marketing			
Content 02	**Marketing Environment**			
Week 02	□ Meaning and importance of marketing environment □ Micro environment • Customers • Competitors • Suppliers • Intermediaries • Publics □ Macro environment • Demographic factors • Economic factors • Social and cultural factors • Technological factors • Political and legal factors Environmental scanning and analysis	Lecture Effective class discussion	Quiz	CLO3
Content 03	**Consumer Behavior**			
Week 03 & 04	□ Meaning and importance of consumer behavior □ Factors influencing consumer behavior • Cultural factors • Social factors • Personal factors • Psychological factors □ Buying decision process □ Organizational (industrial) buying behavior	Presentation Lecture Group Work	Assignment	CLO2
Content 04	**Market Segmentation, Targeting, and Positioning (STP)**			

Week 05	□ Meaning and bases of market segmentation • Geographic • Demographic • Psychographic • Behavioral □ Target market selection strategies □ Market positioning □Developing positioning strategies	Presentation Case based learning Lecture	Presentation	CLO1
Content 05	**Marketing Channel**			
Week 06	□ I**ntroduction to Marketing Channels** – Meaning, definition, and importance □ **Types of Marketing Channels** – Direct and indirect channels □ **Channel Levels** – Zero-level, one-level, two-level, and multi-level channels □ **Functions of Marketing Channels** – Transactional, logistical, and facilitating functions □ **Channel Members** – Producers, wholesalers, retailers, agents, and brokers □ **Channel Design and Management** – Factors affecting channel selection □ **Channel Conflicts** – Types and resolution strategies □ **Role of Marketing Channels** – Enhancing market coverage and customer	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3

	satisfaction □ **Trends in Marketing Channels** – E-commerce and digital distribution channels			
Content 06	**Marketing Mix**			
Week 07&8	□ Concept of marketing mix □ **Product** • Product levels • Product life cycle • Branding and packaging • New product development □ **Price** • Pricing objectives • Pricing methods • Pricing strategies □ **Place (Distribution)** • Channels of distribution • Role of intermediaries • Physical distribution □ **Promotion** • Promotion mix • Advertising • Sales promotion • Personal selling • Public relations • Others	Lecture Presentation Group work	Group Task	CLO2
Content 07	**Marketing Planning and Control**			
Week 09	□ Relationship marketing □ Digital and online marketing □ Social media marketing	Lecture Group Based learning Case based learning	Quiz	CLO2

	□ Green marketing □ Services marketing □ International marketing (basic concepts)			
Content 08	**Ethics and Social Responsibility in Marketing**			
Week 10	□ Marketing ethics □ Consumer protection □ Social responsibility of marketers □ Sustainable marketing practices .	Lecture Presentation	Assignment	CLO3
Content 09	**Market Pricing Strategy**			
Week 11 &12	□ Introduction to pricing strategies □ Meaning and concept of market price strategy □ Objectives of market-based pricing □ Types of market price strategies □ Factors influencing market price decisions □ Role of competition and customer demand in pricing □ Advantages and limitations of market price strategy □ Practical applications and examples of market price strategy	Group work Lecture	Group presentation	CLO4
Content 10	**Marketing Information Systems**			
Week	□ Introduction to Marketing	Lecture	Discussion	CLO4

13 &14	Information System □ Meaning and definition of MIS □ Objectives and importance of MIS □ Components of Marketing Information System □ Internal records system □ Marketing intelligence system □ Marketing research system □ Marketing decision support system □ Role of MIS in marketing decision-making □ Advantages and limitations of MIS			

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%

Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

D. Recommended Readings:

i. **Principles of Marketing** – *Philip Kotler & Gary Armstrong*

ii. **Marketing Management** – *Philip Kotler & Kevin Keller*

iii. **Essentials of Marketing** – *William D. Perreault, Joseph P. Cannon & E. Jerome McCarthy*

iv. **Marketing: An Introduction** – *Gary Armstrong & Philip Kotler*.

PML 1207: Business Mathematics

Part A

1. Course Code: PML 1207

2. Course Title: Business Mathematics

3. Course Type: Allied

4. Year/Level/Semester/term: 1st Year, 2nd Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be assigned.

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course:

The purpose of studying business math is to provide students with the necessary skills to

solve problems in the business world. Business math is important because it helps students and practitioners understand and use mathematical concepts in real-world situations

12. Course Objectives:

The course is supposed to develop our students' analytic and creative thinking. It will help to learn concepts and methods that are essential to analyze and understand random processes in economy banking so that they can apply this knowledge in their respective field.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: Be able to use the basic principles of algebra and apply mathematical skills to finance decisions.

CLO 2: Be able to summarize and analyze data diagrams, distributions and index numbers.

CLO 3: Be able to demonstrate how to apply mathematics to solve business problems.

(CLO)s	**PLO 01**	**PLO 02**	**PLO 03**	**PLO 04**	**PLO 05**	**PLO 06**	**PLO 07**	**PLO 08**	**PLO 09**	**PLO 10**	**PLO 11**	**PLO 12**
CLO 1					✓							
CLO 2										✓		
CLO 3		✓										

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	Algebra			
Week 01, 02, &	Inequalities, Theory of Equations: relations between roots and Co-	Lecture, Presentation,	Diagnostic, Interim	CLO 1

03	efficient; Sums of the power of the roots; Descartes' rule of signs; increasing or decreasing all roots of the equation by the same number, Determinants: Determinants up to the third order; Elementary properties., Matrices: Different kind of matrices; elementary properties; solution of systems of equations. Summation of series.	Effective Class Discussions		
Content 02	Combinatories			
Week 04 & 05	Permutation, Combination etc	Lecture, Presentation, Effective Class Discussions	Formative	CLO 1
Content 03	Introduction and Concept of Derivatives			
Week 06 & 07	Derivatives of constant function, logarithmic functions, polynomial and exponential function. Rules of derivatives: addition, multiplication, quotient.	Lecture, Presentation, Effective Class Discussions	Diagnostic, Formative	CLO 3
Content 04	Application of Derivatives			
Week 08 & 09	Maxima, Minima, Average Cost and Marginal Cost. Total revenue, Marginal revenue, Average revenue. Average and Marginal profit. Price elasticity of demand.	Presentation	Interim	CLO 3
Content	Integral Calculus			

05				
Week 10, 11, & 12	Integrals of standard functions, exponential functions, definite integrals and Application to Business	Lecture, Presentation, Effective Class Discussions	Diagnostic, Summative	CLO 3
Content 06	Numerical Analysis [Interpolation]			
Week 13 & 14	Introduction and concept: Finite differences, forward difference operator, Newton's forward difference formula with simple examples Backward Difference Operator. Newton's backward interpolation formula with simple examples.	Effective Class Discussions, Case Based learning	Diagnostic, Summative	CLO 2

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%

Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

Recommended Readings

1. Mathematics for Economics and Finance, Martin Anthony, Norman Biggs, Cambridge lowprice editions, 2000.
2. Business Mathematics, D.C. Sancheti, V.K. Kapoor, Sultan Chand & Sons Publications,2006.
3. Business Mathematics, J.K. Singh, 2009,Himalaya PublishingHouse.
4. Mathematics for Business and Economics, J.D. Gupta, P.K. Gupta, Man Mohan, Tata McGrawHill Publishing CompanyLtd
5. Business Mathematics by Dr. Amarnath Dikshit & Dr. Jinendra KumarJain.
6. Mathematics for Economics and Business, RS Bhardwaj, 2010, Excel Books.

PML 1209: Introduction to Port and Shipping

Part A

1. Course Code: PML 1209

2. Course Title: Introduction to Port and Shipping

3. Course Type: Core Course

4. Year/Level/Semester/term: 1st Year, 2nd Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be mentioned

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contact Hours: 42

10. Total Marks: 100

11. Rationale of the course:

The course provides foundational knowledge of the port and shipping industries, both in the domestic and international environment. Students will gain insight into the structure, functions, and operations of ports and shipping systems, including the roles of various stakeholders.

12. Course Objectives:

The objective of this course is to introduce students to the core concepts, structures, and operational frameworks of the port and shipping industries. The course aims to build a comprehensive understanding of how ports and shipping companies function within national and international contexts, covering key regulatory bodies, operational practices, and the interrelationships among stakeholders in global maritime transport.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

Upon successful completion of this course, students will be able to:

CLO 1: Describe the structure and economic role of ports and terminals in maritime trade.

CLO 2: Explain the organizational structure and operational functions of shipping companies.

CLO 3: Evaluate ship registration systems, flagging practices, and classification societies.

CLO 4: Discuss the roles of international maritime organizations including the conventions and regulations they administer.

CLO 5: Apply key principles of port and shipping operations, including management systems and legal instruments.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓			✓	✓							
CLO 2	✓	✓			✓							
CLO 3	✓	✓					✓					
CLO 4			✓	✓			✓					
CLO 5	✓				✓					✓	✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Ports & Terminals**			
Week 01 & 02	• Definition of port and terminals • Port development and Evolution • Location Characteristics of Ports • Different Port Infrastructure and Superstructure • Port Services • Economic Impact of Ports on Regional Economy • Factors Affecting the Future of Ports and Terminals	Lecture, Presentation	In-class discussion	CLO 1
Content 02	**Port Ownership & Management**			
Week 03	• Different Port Management Model • Its advantages and disadvantages	Effective Class Discussions, Lecture, Presentation	Debate, Quiz	CLO 1, 4
Content 03	**Shipping Company Structure**			
Week 04,05	• Organization of a Shipping Company • Roles of different Departments: Commercial, Technical & Crewing	Lecture, Org Chart Analysis, Case Study	Assignment, Quiz, Presentation	CLO 2, 5

	• In-House vs Outsourced Ship Management Functions • Ship Registries: National vs Open Registries • Ship Classification Societies			
Content 04	**Ship Employment & Vessel Types**			
Week 06	• Ship Employment Sectors • Associated Ship Types	Lecture	Diagram Matching, Quiz, Assignment	CLO 2, 3
Content 05	**Shipping Agents and Ship Operations**			
Week 07	• Types of shipping agents; responsibilities of port agents; relationship between agent and principal.	Presentation	Role Play	CLO 2, 5
Content 06	**Port Operations Management**			
Week 08, 09	• Managing Port Operations • Vessel Traffic Systems (VTS) and Harbour Authority • Services Rendered by Ports • Port Performance Indicators • Terminal Operations • Factors Affecting Terminal Productivity • Cargo Handling Equipment	Lecture, Presentation	Class test	CLO 1, 5
Content 07	Ship Chartering Basics			
Week 10,11	• Introduction to chartering; types of chartering (voyage, time, bareboat); • charter party concept; • contract of affreightment (COA).	Lecture, UN/IMO Website Analysis, Case Study	MCQ/Quiz	CLO 3,4,5

Content 08	**Flagging Policies and Decisions**			
Week 12, 13,14	• Flagging Policies and Decision Making • Flag State Control and Ship Registration Practices • National vs Open Registries Revisited • ship classification societies; role of classification societies in ship safety. • Use of BIMCO Contracts: SHIPMAN & CREWMAN • Design & Development of Safety Management Systems • Implementation of ISM Code in Maritime Organizations	Effective Class Discussions	Class Test	CLO 3, 4, 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%

Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get a chance for make-up.

Part D

16. Learning Materials

A. Recommended Readings

a. Port Management and Operations, -Patric Alderton
b. Port Management and Operations, - Burns, Maria G
c. Port Economics, Management and Policy, - Theo Notteboom, Athanasios Pallis and Jean- Paul Rodrigue
d. H. Ligteringen , H. Velsink, Ports and Terminals (Book)
e. Downard, J. (1987), Managing Ships, London: Fairplay Publications Ltd.
f. Shipping Law Handbook – Bundock, 1997 Ed. (LLP)

PML 1211: Study Tour 1

Part A

1. Course Code: PML 1211
2. Course Title: Study Tour 1
3. Course Type: Capstone
4. Year/Semester: 1st year, 2nd Semester
5. Prerequisite (if any): None
6. Credit value: 1.5
7. Total Marks: 100

8. Rationale of the Course:

The course shall offer students hands-on learning experiences, promoting an extensive understanding of port facilities, operations and the dynamics of maritime industry.

9. Course Objectives:

This course will help the students relate theoretical knowledge to practical fields and industry standards.

10. Course Learning Outcomes (CLOs):

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

CLO 1: Demonstrate an understanding of the maritime industries of Bangladesh
CLO 2: Understanding the importance of sea port facility developments in Bangladesh
CLO 3: Understanding sea port operation procedures and logistical challenges in Bangladesh
CLO 4: Understanding regulatory frameworks governing maritime activities in Bangladesh and analyze their influence on industry standards as well as international compliance

Part B

11. Contents and guidelines

Study tour to various ports, container terminals, inland depots, multimodal transport nodes and maritime regulatory organizations for a duration of 2-3 business days. Tours to be planned by the respective course coordinator in consultation with the program coordinator to suitable locations in advance considering the practical demonstrations of the relevant theory courses which are already taught during the ongoing and past semesters. Designated officers/representatives from the host ports and maritime organizations shall act as a demonstrator to describe various activities of their individual organizations, challenges and organizational framework as per the prior request of the tour coordinator taking into account the CLOs.

Part C

13. Assessment and Evaluation

The distribution of marks for the performance evaluation of each student on the study tour

is given below:

a. Tour Attendance: 20%

b. Participation: 20%

c. Report Submission: 30%

d. Presentation: 30

PML 1202: Computer Application in Business Lab

Part A

1. Course Code: PML 1202
2. Course Title: COMPUTER APPLICATION IN BUSINESS LAB
3. Course Type: Allied
4. Year/Level/Semester/term: First Year, Second Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be Nominated
7. Pre-requisite (if any): Not Required
8. Credit Value: 2
9. Contract Hours: 42
10. Total Marks: 100

11. Rationale of the course:

The lab component of the "Computer Application in Business course provides students with practical, hands-on experience that extends beyond basic software skills. During these sessions, students will participate in activities such as advanced research paper writing using formatting and citation tools, data analysis with spreadsheets and specialized software, and the creation of dynamic business analysis reports with graphical representations, including pivotal works. They will also gain experience in creating business-related documents, and mastering tools for drafting, editing, and finalizing professional documents.

The lab sessions will also familiarize students with operating systems, offering insights into their functionality and business applications. Students will also learn to create compelling presentations that effectively convey business ideas, incorporating multimedia elements and advanced design techniques. Through these exercises, students will develop critical technical skills necessary for modern business roles, ensuring they are well-prepared for the technology-driven demands of today's business environment.

12. Course Objectives:

The course aims to develop students' proficiency in creating professional business documents using advanced formatting and citation tools. It trains students to perform data analysis and generate insightful business reports with graphical representations. Emphasis is placed on designing effective, visually engaging presentations and understanding operating systems for efficient business operations. Students will apply technology-driven solutions to real-world business challenges, enhancing their innovation and problem-solving skills. Overall, the course ensures students gain both theoretical understanding and practical competence in using IT tools essential for modern business environments.

1. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)**

CLO 1: Demonstrate proficiency in word processing software (e.g., Microsoft Word, Google Docs) to create, format, and edit professional business documents, including research papers and reports.

CLO 2: Write and format research papers according to academic and professional standards, demonstrating the ability to structure arguments, cite sources, and present findings using appropriate word processing software.

CLO 3: Utilize advanced spreadsheet software (e.g., Microsoft Excel, Google Sheets) to perform complex data analysis, including the use of pivot tables, graphs, and dynamic dashboards, to support business decision-making.

CLO 4: Conduct business analysis and interpret data trends using spreadsheet software, making informed recommendations based on quantitative insights.

CLO 5: Develop and implement automation tools in spreadsheet software (e.g., pivot tables, visual charts, Macros, Alerts, scripts etc.) to streamline business processes and enhance operational efficiency.

CLO 6: Integrate documents and spreadsheets across various software platforms, ensuring consistent and accurate data transfer in business reports and presentations.

CLO 7: Design and deliver effective business presentations using presentation software (e.g., Microsoft PowerPoint, Google Slides), incorporating advanced features such as animations, multimedia, and data visualization.

CLO 8: Manage and troubleshoot tasks within the Windows operating system and similar platforms, ensuring efficient and effective use of technology in business operations.

CLO 9: Collaborate effectively using cloud-based productivity tools (e.g., Google Workspace, Microsoft office), focusing on real-time collaboration, document sharing, and cloud storage management.

CLO 10: Apply principles of netiquette in professional online communication, ensuring respectful and effective interactions in digital business environments.

CLO 11: Demonstrate ethical use of technology in business, including considerations of data privacy, security, and responsible digital resource management.

SL	Course Learning Outcomes (CLO)	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
1.	CLO 1				✓	✓				✓		✓	✓
2.	CLO 2			✓	✓	✓			✓	✓	✓		✓
3.	CLO 3		✓	✓	✓	✓	✓		✓	✓	✓		✓
4.	CLO 4		✓	✓		✓		✓		✓	✓		
5.	CLO 5	✓	✓			✓			✓	✓	✓		✓
6.	CLO 6	✓	✓	✓	✓		✓		✓			✓	✓
7.	CLO 7				✓					✓		✓	
8.	CLO 8	✓						✓				✓	✓
9.	CLO 9												

SL	Course Learning Outcomes (CLO)	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓
10.	CLO 10					✓		✓	✓			✓	
11.	CLO 11	✓	✓	✓	✓	✓	✓		✓			✓	✓

Part B

2. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Basic Concepts and Characteristics of Word Processing**			
Week 01 & 02	Indicative Structure: Online and offline applications of Work Processing Programs; Opening an existing document/creating a new document; Saving, Editing text, Finding and replacing text, Formatting text, Paragraph Formatting; Line and Paragraph Spacing, Alignment, Bullets and numbering, Sorting, Change Case, Watermark, Page Color, Page border, Page Setup, Orientation, Margins, Columns, Bullets and	Lecture Discussion Word Processing Lab	Class test Midterm	CLO 1

	numbering, Inserting Tables, Images, Shapes, Text box, SmartArt, Icon, Symbols, 3D models, Chart, Screenshot, Sound & Video from files and online, Cover page, Blank Page, Comments, Header-Footer, Page number, Auto Formatting; Mailing; Mail Merge; Automatic insertion of Table of Contents, Table of Figures, Captions, Citation, Bibliography, Table of authors; View and Basic troubleshooting.			
Content 02	**Application of Word Processing software**			
Week 03 & 04	Indicative Structure: CV Preparation, Research/ Journal/Conference Paper preparation with standard formats, Bibliography, captions (Table, Image), Document customization using Tables, Images, Shapes, Icons, Symbols, 3D models, charts, SmartArt, text box, auto insert Table of contents, Table of Figures, Index etc. View and Basic troubleshooting.	Lecture Discussions Word Processing Lab Self-directed learning	Class test Midterm	CLO 02 & 09
Content 03	**Basic Concepts and Characteristics of Spreadsheet and Analysis Tools**			

Week 05, 06 & 07	Indicative Structure: Use of online and offline Spreadsheet and their Business Applications; Spreadsheet concepts; Creating, saving and editing a workbook; inserting, editing and deleting worksheets; entering data, formula writing, Copying and moving data from selected cells and handling operators in the formula; Inserting- Tables, Pivot Table, Images, Shapes, Text box, SmartArt, Icon, Symbols, 3D models, Charts-(LINE, PIE, BAR-2D,3D, Waterfall, Funnel, Surface, Stock, Rader, Histogram, Combo) Map, Pivot Chart, Line, Column, Slicer, Timeline, Link, Screenshot, Sound & Video from files and online, Cover page, Blank Page, Comments, Header-Footer, Page number etc. Data sort, filter, range; work with the view menu – workbook view, zoom, freeze panes, split, hide, Marcos etc.; Text Functions- TRIM, EXACT, CONCAT, TEXTJOIN, TEXT, UPPER, LOWER, PROPER, LEFT, RIGHT,	Lecture Discussions Case Based Learning Effective Lab Class	Class test Midterm	CLO 03, 04, 05 & 06

	MID, LEN, REPT, Mathematical Functions- ROUND ALL, SUM, SUMIF, SUMIFS; Statistical – AVERAGE, MAX, MIN, COUNT, COUNTIF, COUNTIFS, STDEV, FREQUENCY, INTERCEPT, SLOPE, Use of data analysis tools; Financial - PMT, PPMT, IPMT; Logical - IF, AND, OR, TRUE; DATE, DAY, DAYS, TIME, YEAR ETC.			
Content 04	**Application of Spreadsheet and Analysis Tools**			
Week 08, 09 & 10	Indicative Structure: Ratio Analysis, Graphical representation of data, Payroll statements, Result processing, Dynamic Dashboard preparation using Pivot table, charts, Slicer, Timeline etc. Cumulative and calculation of Means, Mode and Median; Regression. View and Basic troubleshooting.	Discussions Case Based Learning Effective Lab Class	Midterm Assignment Presentation	CLO 04, 05, 06 & 09
Content 05	**Basic Concepts and Characteristics of Presentation Software and Tools**			
Week 11	Indicative Structure: Use of online and offline presentation programs and their Business Applications: Create presentations from scratch or a template, add text,	Lecture Effective Lab Class Discussions Case Based Learning	Midterm Assignment Presentation	CLO 7

	images, art, and videos; Select a professional design, add transitions, animations and motion; Save to OneDrive, to get to your presentations from your computer, tablet, or phone.			
Content 06	**Application of Presentation Software and Tools**			
Week 12	Indicative Structure: Creating professional-looking electronic slides. Present data and information by using text, diagrams with animation, images, and transitional effects in the form of slides. View and Basic troubleshooting.	Effective Lab Class Discussions Case Based Learning	Assignment Presentation	CLO 7 & 09
Content 07	**Application of Operating Systems, Internet and other essential Business Tools**			
Week 13	Indicative Structure: ● Manage and troubleshoot tasks within the Windows operating system and similar platforms, ensuring efficient and effective use of technology in business operations. ● Collaborate effectively using cloud-based productivity tools (e.g., Google Workspace, Microsoft office),	Effective Lab Class Discussions Case Based Learning	Class test Midterm Presentation	CLO 08, 09, 10 & 11

	focusing on real-time collaboration, document sharing, and cloud storage management. ● Apply principles of netiquette in professional online communication, ensuring respectful and effective interactions in digital business environments. ● Demonstrate ethical use of technology in business, including considerations of data privacy, security, and responsible digital resource management.			
Week 14	**Makeup Class**			

15. Assessment and Evaluation

The distribution of marks for Lab courses is given below:

a. Attendance	10%
b. Class Performance / Observation	10%
c. Assignment / Report	20%
d. Viva/Presentation	20%
e. Quiz	40%

Part D

16.Learning Materials

Recommended Readings

1) *"Microsoft Excel 2019 Bible" by Michael Alexander, Richard Kusleika, John Walkenbach.*
2) *"Microsoft Word Step by Step" by Joan Lambert.*
3) *"PowerPoint for Dummies" by Doug Lowe.*
4) *"The Fourth Industrial Revolution" by Klaus Schwab (for understanding trends and practical use cases).*
5) *"SEO 2021: Learn Search Engine Optimization with Smart Internet Marketing Strategies" by Adam Clarke.*
6) *"Cybersecurity Essentials" by Charles J. Brooks, Christopher Grow.*
7) **"Digital Business and E-Commerce Management"** *by Dave Chaffey*

Second Year First Semester

PML1201: Principles of Accounting

Part A

1. Course Code: PML 2101
2. Course Title: Principles of Accounting
3. Course Type: Core Course
4. Year/Level/Semester/Term: 2nd Year, 1st Semester
5. Academic Session**:** 2025-26
6. Course Teacher/Instructor**:** To be mentioned
7. Pre-requisite: N/A
8. Credit Value: 03
9. Contact Hours: 42
10. Total Marks: 100
11. **Rationale of the Course**

The course provides foundational knowledge of accounting principles, concepts, and practices in both business and organizational contexts. Students will gain insight into the accounting cycle, preparation of financial statements, and interpretation of financial information for decision-making purposes. The course builds the basis for advanced accounting and finance studies.

12. Course Objectives

The objective of this course is to introduce students to the fundamental principles, concepts, and procedures of accounting. The course aims to build a comprehensive understanding of

recording, classifying, summarizing, and reporting financial transactions, and to develop the analytical skills required for financial decision-making in business environments.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

Upon successful completion of this course, students will be able to:

- **CLO 1:** Explain fundamental accounting concepts, principles, and the accounting equation.
- **CLO 2:** Record business transactions using the double-entry accounting system.
- **CLO 3:** Prepare trial balance and basic financial statements (Income Statement, Statement of Financial Position, Cash Flow Statement).
- **CLO 4:** Analyze and interpret financial information for decision-making.
- **CLO 5:** Apply ethical principles and internal control concepts in accounting practices.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓				✓					✓		
CLO 2	✓	✓			✓					✓		
CLO 3	✓	✓	✓		✓					✓	✓	
CLO 4	✓	✓	✓		✓					✓	✓	
CLO 5				✓				✓	✓			✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**

Content 01	**Introduction to Accounting**			
Week 01 & 02	• Definition and Objectives of Accounting • Users of Accounting Information • Branches of Accounting • Accounting Principles and Concepts • Accounting Equation • Types of Business Transactions	Lecture, Presentation, Class Discussion	In-class discussion, Quiz	CLO 1
Content 02	**Accounting Process & Double Entry System**			
Week 03 & 04	• Source Documents • Journal Entries • Ledger Posting • Chart of Accounts • Trial Balance Preparation	Lecture, Practical Exercises, Problem Solving	Assignment, Quiz	CLO 2
Content 03	**Adjusting Entries & Financial Statements**			
Week 05 & 06	• Accruals and Prepayments • Depreciation • Adjusting Journal Entries • Preparation of Income Statement • Statement of Financial Position • Cash Flow Statement (Basic Concept)	Lecture, Numerical Practice, Case Study	Assignment, Class Test	CLO 3

Content 04	**Accounting for Special Transactions**			
Week 07	• Accounting for Inventory • Bank Reconciliation Statement • Accounting Errors and Rectification	Lecture, Problem Solving	Quiz	CLO 2, 3
Content 05	**Accounting for Different Business Forms**			
Week 08 & 09	• Sole Proprietorship • Partnership (Basic Concepts) • Introduction to Corporate Accounting	Lecture, Group Work	Mid-Term Examination	CLO 1,2,3
Content 06	**Financial Statement Analysis**			
Week 10 & 11	• Ratio Analysis (Liquidity, Profitability, Solvency Ratios) • Interpretation of Financial Statements • Decision Making Based on Financial Data	Lecture, Case Study, Ratio Computation Practice	Assignment, Presentation	CLO 4
Content 07	**Internal Control & Ethics in Accounting**			
Week 12	• Internal Control Systems • Fraud Prevention • Ethical Principles in Accounting • Role of Professional Accountants	Lecture, Case Discussion	Quiz	CLO 5

Content 08	Accounting Standards & Regulatory Framework			
Week 13 & 14	• Introduction to Accounting Standards • Conceptual Framework • National & International Accounting Standards • Role of Regulatory Bodies	Lecture, Case Analysis	Class Test	CLO 4, 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy

The continuous assessment shall include class attendance and participation, quizzes/class tests, term paper/assignments/case study, and midterm examination (written test).

The number of quizzes/class tests of a theoretical course will be n+1, where n is the number of credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures

If a student misses the Mid-term Examination (with valid reasons) only once, he/she will get a chance for a make-up examination.

Part D

16. Learning Materials

A. Recommended Readings

a. Financial Accounting – Robert Libby, Patricia Libby, Frank Hodge

b. Accounting Principles – Jerry J. Weygandt, Paul D. Kimmel, Donald E. Kieso

c. Financial Accounting – Walter T. Harrison Jr., Charles T. Horngren

d. Introduction to Financial Accounting – Charles T. Horngren

e. Accounting Made Simple – Mike Piper

B. Supplementary Readings

(Recent journal articles, lecture notes, and instructor-provided materials)

C. Others

Accounting standards, professional guidelines, and regulatory publications relevant to the discipline.

PML 2103: Principles of Statistics

Part A

1. Course Code: PML 2103
2. Course Title: Principles of Statistics
3. Course Type: Core course
4. Year/Level/Semester/term: Year-2, Semester-1
5. Academic Session: 2025-26
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100

11. **Rationale of the course:** This course provides a foundational understanding of statistical concepts and methods used in business contexts. It equips students with the ability to analyze data and draw informed conclusions, fostering a scientific approach to decision-making and preparing them for advanced statistical study.

Course Objectives: The course aims to help students:

i. Understand fundamental statistical concepts and their business applications
ii. Learn methods of data collection, classification, and presentation
iii. Apply numerical descriptive measures to summarize datasets
iv. Develop knowledge of probability and probability distributions
v. Understand discrete and continuous random variables
vi. Build a foundation in sampling and statistical inference
vii. Learn the basic concepts of estimation and hypothesis testing
viii. Interpret statistical results for managerial decision-making

12. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

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

CLO 1: Apply fundamental statistical concepts to summarize, visualize, and interpret maritime logistics and business data.

CLO 2: Analyze business and logistics problems using probability and statistical methods.

CLO 3: Demonstrate analytical ability through sampling, estimation, and basic statistical inference for decision-making.

CLO 4: Evaluate how data collection methods, variability, and uncertainty influence managerial decisions, ethics, and societal outcomes.

CLO 5: Communicate statistical findings effectively through graphs, reports, and teamwork-based activities.

PLOs / CLOs	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓	✓			✓							
CLO 2	✓	✓	✓		✓				✓	✓		✓
CLO 3	✓	✓	✓		✓				✓	✓		✓
CLO 4		✓	✓		✓	✓				✓		✓
CLO 5		✓			✓	✓			✓			✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Introduction to Statistics**			
Week 01	□ Definition, scope, and importance of statistics □ Role of statistics in business, ports, and logistics □ Descriptive vs inferential statistics □ Statistical thinking in decision-making □ Types of data: • Qualitative vs quantitative • Cross-sectional vs time-series • Structured vs unstructured data	Presentation; Lecture	Class Participation	CLO 1 & 4
Content 02	**Data Collection: Population and Sample**			
Week 02	□ Population vs sample □ Census vs sampling □ Primary and secondary data sources □ Methods of data collection: • Surveys • Observation • Experiments • Administrative databases □ Questionnaire design basics □ Sampling bias and non-sampling	Presentation; Lecture	Quiz	CLO1 & 5

	errors □ Ethics in data collection			
Content 03	**Organizing and Graphing Data**			
Week 03 & 04	• Frequency distributions • Class intervals and boundaries • Grouped vs ungrouped data • Relative and cumulative frequencies **Graphical Presentation:** • Bar charts • Pie charts • Histograms • Frequency polygons • Ogives • Choosing appropriate charts for business reports	Demonstration using Excel/SPSS	In-class problem solving	CLO1 & 5
Content 04	**Numerical Descriptive Measures**			
Week 06 & 07	**Measures of Central Tendency** • Arithmetic mean (simple and weighted) • Median • Mode • Geometric mean (basic idea) • When to use each measure **Measures of Dispersion** • Range • Interquartile range • Variance • Standard deviation • Coefficient of variation **Shape of Distribution**	Guided numerical practice;	Assignment	CLO 1, 2

	• Skewness • Kurtosis (introductory idea) **Applications:** cargo volume variation, freight rate analysis, transit-time variability.			
Content 05	**Probability Concepts**			
Week 08	• Basic probability rules • Sample space and events • Addition and multiplication rules • Conditional probability • Independence • Bayes' theorem (conceptual understanding)	Problem solving Case based learning Lecture	Class Test	CLO2
Content 06	**Discrete Random Variables and Probability Distributions**			
Week 09	• Concept of random variables • Expected value • Variance of a random variable **Key Distributions:** • Binomial distribution • Poisson distribution	Lecture Presentation	Application-based assignments	CLO 2, 3
Content 07	**Continuous Distributions**			
Week 10 & 11	• Continuous random variables • Normal distribution • Properties of the normal curve • Standard normal	Visual teaching using graphs; Simulation demonstrations	Group Discussion	CLO 3

	distribution (Z-score) • Finding probabilities using tables/software **Central Limit Theorem** • Concept and importance • Why it matters in business decision-making			
Content 08	**Sampling and Sampling Distributions**			
Week 12	• Sampling techniques: • Simple random • Stratified • Systematic • Cluster • Sampling distribution of the mean • Standard error • Factors affecting sample size	Lecture Presentation Problem solving	Quiz; presentation	CLO 3, 4 & 5
Content 09	**Estimation and Introduction to Statistical Inference**			
Week 13 & 14	**Point Estimation** • Estimating population mean and proportion **Confidence Intervals** • Meaning and interpretation • Confidence level • Margin of error **Fundamental Concept of Hypothesis Testing** • Null vs alternative hypothesis • Level of significance • Type I and Type II errors • Concept of p-value (basic idea)	Decision-based learning; Business case interpretation	Class Test	CLO 2, 3 & 4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1) Recommended Readings:

i. Prem S. Mann (2012). Introductory Statistics 9th Edition, John Wiley & Sons, Inc. 1118473981

ii. Anderson, Sweeney, Williams, Camm & Cochran — Statistics for Business and Economics.

PML 2105: Human Resource Management

Part A

1. Course Code: PML 2105
2. Course Title: Human Resource Management
3. Course Type: Allied Course
4. Year/Level/Semester/term: Second Year, First Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** Human Resource Management (HRM) views employees as valuable organizational assets and internal customers, focusing on enhancing job satisfaction, efficiency, and effectiveness. By concentrating on internal sources of competitive advantage, HRM recognizes people as the most important asset of an organization. The Human Resources (HR) department communicates with employees and adapts the organization's culture and structure to meet their needs, such as negotiating with unions or re-engineering processes. HR also manages the entire employment life cycle, from attracting and hiring the right employees to facilitating performance reviews and processing terminations.
12. **Course Objectives:** To manage and guide a company's workforce effectively. To include work culture, team integration, training & development, employee motivation, work force empowerment and retention.
13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO 1: Explain the importance of human resources and their effective management in organizations

CLO 2: Demonstrate a basic understanding of different tools used in forecasting and planning human resource needs

CLO 3: Describe the meanings of terminology and tools used in managing employees effectively

CLO 4: Record governmental regulations affecting employees and employers

CLO 5: Analyze the key issues related to administering the human elements such as motivation, compensation, appraisal, career planning, diversity, ethics, and training

(CLO) s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1						✓					✓	
CLO 2												✓
CLO 3						✓						✓
CLO 4												
CLO 5											✓	✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01				
Week 01	Introduction: The development of HRM, The concept of HRM, HRM at work, The changing environment of HRM, The changing role of HRM, HR manager's proficiencies, HRM as a profession.	Lecture, Presentation, Discussions	Assignment	CLO 1
Content				

02				
Week 02	Organizational considerations in managing human resources: Organization structures, the HR department in an organization, line and staff aspects of HRM, line manager's human related duties.	Lecture, Presentation	Written examination (short questions), class test/quiz, Assignment	CLO 2
Content 03				
Week 03 & 04	Strategic HRM: The strategic management process, human resource management's role in creating competitive advantage, HRM's strategic roles creating the strategic HRM system.	Lecture, Presentation,	Written examination, class test/quiz, Assignment, Presentation	CLO 1
Content 04				
Week 05 & 06	Job Analysis: Methods for collecting information relating to job analysis, preparing job descriptions, methods and implications of job specifications.	Presentation, Team-Based Learning	Written examination, class test/quiz, Assignment, Presentation	CLO 4
Week 07 & 08	HR planning and recruitment: The recruitment and selection process, planning and forecasting, effective recruiting, internal sources of candidates, and external sources of candidates, developing and using application forms.	Lecture, Presentation, Team Work	Written examination, class test/quiz, Assignment, Presentation	CLO 4
Content 05				
Week 09	The steps in recruitment and selection process, interviewing candidates, features of interviewing, factors undermining interview's	Effective Class Discussions, Case Based learning	Quiz	CLO 4

	usefulness.			
Content 06				
Week 10	Job Evaluation: The reasons for job evaluation schemes, problem areas, procedure, techniques, non-analytical methods, analytical methods and other methods.	Effective Class Discussions, Case Based learning	Case Analysis	CLO 4
Content 07				
Week 11 & 12	Training and Development: Orientation of new employees, the purpose of training, the identification of need of training, types of training, the training process, management development, evaluating the training effort and training methods.	Presentation, Lecture, Team work	Classroom exercise	CLO 5
Week 13 & 14	Performance Evaluation: Objectives of performance evaluation programs, performance evaluation methods, feedback on evaluation and improving performance.	Lecture Effective Class Discussions,	Written examination, Assignment	CLO 3
Content 08				
Week 15 & 16	Career development: Phases of career development, career development programs for special groups, personal career development, succession planning and management.	Lecture Effective Class Discussions,	Written examination, Assignment	CLO 3&4
Week 17 & 18	Compensations: Pay plans, pay for performance, financial incentives, Benefits and services.	Lecture Effective Class Discussions,	Written examination, Assignment	CLO 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16.Learning Materials

1) Recommended Readings:

i. Organizational Behaviour, 9th Ed. - Stephen Robbins

ii. Human Relations & Organizational Behaviour - R.S.Dwivedi

iii. Principles & Practices of Management – Saxena

iv. Management Concepts & Practices – Hannagan

PML 2107: Marine Pollution and Environmental Protection

Part A

1. Course Code: PML 2107
2. Course Title: Marine Pollution and Environmental Protection
3. Course Type: Core Course
4. Year/Level/Semester/term: Second Year, First Semester
5. Academic Session: 2025-26
6. Course Teacher/Instructor: As Nominated
7. Pre- requisite: N/A
8. Credit Value: 03
9. Contact Hours: 42 hours
10. Total Marks: 100

11. **Rationale of the course:** Fundamental knowledge on marine pollution and its effect on environment will add value and ability to perform in any shipping industry or in the pollution prevention operation and managing pollution

12. **Course Objectives:**

a. Understand the different types and sources of marine pollution. Explore the ecological, economic, and human health impacts of marine pollution.
b. Analyze case studies to comprehend real-world examples of marine pollution incidents.
c. Evaluate current challenges, and technologies for monitoring, preventing, and managing marine pollution
d. Develop critical thinking and problem-solving skill in case of pollution.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO 1 -Be able to understand and communicate complex concepts related to marine pollution, including its causes, impacts, and solutions.

CLO 2 - Be able to recognize and categorize different sources of marine pollution, including point and non-point sources, as well as various pollutants such as plastics, chemicals, oil.

CLO 3 - Be able to assess the ecological consequences of marine pollution, including its effects on marine biodiversity, habitats, and ecosystem functioning, through case studies and

theoretical analyses.

CLO 4 - Be able to demonstrate an understanding of key international conventions and national regulations governing marine pollution, and apply this knowledge to assess regulatory compliance and effectiveness in addressing pollution incidents.

Course Learning Outcomes (CLO)	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12
CLO 1	✓	✓			✓							
CLO 2						✓	✓					
CLO 3		✓	✓		✓							
CLO 4			✓		✓						✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Introduction Marine Pollution**			
Week 01	• Importance of marine ecosystems • Relationship between maritime trade and environmental sustainability • Sources and Pathways of Marine Pollution • Economic and social consequences of marine pollution	Lecture and presentation	Class participation.	CLO 1
Content 02	**Regulatory Frameworks and International Conventions**			

Week 02 & 03	• Role of the International Maritime Organization • Overview of MARPOL • Protection obligations under United Nations Convention on the Law of the Sea • London Convention on marine dumping • Flag State, Port State, and Coastal State responsibilities	Lecturers and presentation Interactive discussion Case studies.	Class participation. Quizzes/ Class Test. Individual and Group assignment	CLO 1
Content 03	**MARPOL Annex I: Oil Pollution Prevention**			
Week 04	• Causes and impacts of oil pollution • Oil discharge regulations and special areas • Oil Record Book and reporting requirements • Shipboard Oil Pollution Emergency Plan (conceptual overview) • Role of ports in spill preparedness	Lecture and presentation Interactive discussion Case studies. Group discussion	Class participation. Quizzes/ Class Test. Individual and Group assignment	CLO1
Content 04	**MARPOL Annex II: Control of Chemical and Hazardous Cargo Pollution**			
Week 05	• Overview of noxious liquid substances • Regulatory requirements for chemical cargo handling • Cargo documentation and compliance • Risk management in	Lecture and presentation Interactive discussion Case studies. Group discussion	Class participation.	CLO 3

	chemical transportation • Case studies on chemical spills and contamination incidents.			
Content 05	**MARPOL Annex III: Packaged Dangerous Goods**			
Week 06	• Pollution risks from containerized cargo • Labeling, documentation, and stowage principles • Compliance strategies for logistics operators • Case studies on hazardous cargo incidents	Lecture and presentation Interactive discussion Case studies. Group discussion	Quizzes/ Class Test.	CLO 1
Content 06	**MARPOL Annex IV: Sewage and Wastewater Management**			
Week 07	• Environmental impacts of sewage discharge • Regulatory discharge standards • Reception facilities in ports • Best practices for sanitation management	Lecture and presentation Interactive discussion Case studies. Group discussion	Formative	CLO 1 & 2
Content 07	**Garbage Pollution and Waste Management**			
Week 08	• Types of ship-generated waste • Garbage management planning • Recycling and circular economy approaches • Port waste reception	Lecturers and presentation Interactive discussion Case studies. Group discussion	Quizzes/ Class Test.	CLO 2 &3

	strategies			
Content 08	**Air Pollution from Ships**			
Week 09	• Major air pollutants from ships • Emission Control Areas (conceptual overview) • Fuel quality regulations • Decarbonization trends in maritime transport	Lecturers and presentation Interactive discussion Group discussion	assignment	CLO 3
Content 09	**Ballast Water Management and Invasive Species**			
Week 10 & 11	• Key Definitions-Ballast Water, Ballast Water Management, Sediments; • Environmental risks of ballast water • Application and Compliance Documents-International Ballast Water Management Certificate, • Ballast Water Management Plan (BWMP), Ballast Water Record Book (BWRB); • Management Standards (D-1 and D-2); Ballast Water Exchange (Regulation B-4); • Implications for port operations	Lecturers and presentation Interactive discussion Case studies. Group discussion	Quizzes/ Class Test.	CLO 3
Content 10	**MARPOL Compliance and Enforcement**			
Week 12	• Mechanisms for MARPOL compliance monitoring and enforcement. • Role of port state control	Lecturers and presentation Interactive discussion Group discussion		CLO 4

	inspections and flag state responsibilities. • Case studies on MARPOL violations and enforcement actions.			
Content 11	**Emerging Issues and Future Challenges**			
Week 13	• Emerging threats and challenges related to ship-generated pollution. • Regulatory developments and amendments to address emerging concerns. • Strategies for enhancing MARPOL effectiveness in the face of future challenges.	Lecturers and presentation Interactive discussion Group discussion	Quizzes/ Class Test.	CLO 4
Content 12	**Review and Course Wrap-Up**			
Week 14	• Review of key concepts, regulations, and compliance strategies covered throughout the course. • Discussion of future directions and opportunities for further research and action in marine pollution prevention and MARPOL compliance.	Review and Discussion	Class Test	

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1. Recommended Readings

i) MARPOL: Articles, Protocols, Annexes, Unified Interpretations of the International Convention for the Prevention of Pollution from Ships, 1973, as Modified by the Protocol of 1978 Relating Thereto" by International Maritime Organization (IMO).

ii) "Ship Pollution: Law and Policy" by Richard Barnes.

iii) Scientific articles, reports, and guidance documents from organizations such as the IMO,

International Chamber of Shipping (ICS), and environmental NGOs.

PML 2109: Business Communication

Part A

1. Course Code: PML 2109

2. Course Title: Business Communication

3. Course Type: Allied Course

4. Year/Level/Semester/term: 2nd Year, 1st Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course:

This course is designed to give students a comprehensive view of communication, its scope and importance in business, and the role of communication in establishing a favorable outside the firm environment, as well as an effective internal communications program. The various types of business communication media are covered. This course also develops an awareness of the importance of succinct written expression to modern business communication. Many of the assignments are to be keyboarded.

12. Course Objectives:

a. Compose professional business documents including letters, newsletters, memos, reports, email, and resumes.
b. Apply principles of effective writing to practical applications in business communication, including correct spelling and punctuation and appropriate content, style, and form.
c. Formulate logical, well-supported positions in a research report for a nonprofit organization or business.
d. Adapt the tone of business documents to the needs of particular audiences, including

professional, cross-cultural contexts, by identifying appropriate context.

e. Compose professionally written messages including positive, negative, and persuasive messages, to internal and external stakeholders.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: Use critical thinking to create positive, negative, and persuasive business correspondence, business letters, reports, emails, memos and documents.

CLO 2: Apply and explain the communication process and its purpose in building effective employees and changing workplace environments.

CLO 3: Apply and explain leadership and collaboration skills to work effectively in workplace teams.

CLO 4: Acquire self-development skills for job search strategies, write up a job application letter, preparing resume and CV to obtain employment.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1			✓		✓				✓			
CLO 2	✓	✓			✓							✓
CLO 3					✓				✓	✓		
CLO 4		✓			✓			✓			✓	

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	Communication in the Workplace			
Week 01 & 02	Importance of business communication skills, Categories of business communication, communication network, Model of business communication, Business communication process, Constraints of Business communication.	Lecture Presentation Face to face learning	Discussion	CLO 1
Content 02	Fundamentals of Business Writing			
Week 02 & 03	Importance of adaptation, Suggestions for selecting words, Suggestions for nondiscriminatory writing.	Effective Class Discussions Self-directed learning	MCQ	CLO 1 & 2
Content 03	Construction of Clear Sentences and Paragraphs			
Week 04	Importance of adaptation, Care in sentence design, Care in paragraph design.	Effective Class Discussions Self-directed learning	Class test	CLO 1 & 2
Content 04	The Writing Process and an Introduction to Business Message			
Week 05 & 06	Process of writing, Readable formats, Letters, Memorandums, Email, Text messaging, Instant messaging.	Effective Class Discussions Team-Based Learning Group work	Assignment	CLO 2
Content 05	Preparing Business Letters and Mails			
Week 07 & 08	Sales letter, Order letter, Inquiry letter, Confirmation letter, Complain letter, Letter of	Lecture Presentation	Class Work	CLO 2

	acknowledgement, Follow-up letter, Adjustment letter.			
Content 05	Preparing Business Letters and Mails			
Week 09 & 10	Referral email, Cart abandonment email, Promotional email, Welcome email, Newsletter email.	Team-Based Learning Case Based Learning Group Work Lecture	Class Test	CLO 1 & 2
Content 06	Basics of Report Writing:			
Week 11	Report, Report purpose, Determining the factors, Interpreting the findings.	Effective Class Discussions	Assignment	CLO 2 & 3
Week 12	Organizing the report information, writing report, Collaborative report writing.	Effective Class Discussions	Class Test	CLO 3
Content 07	Work on Research & Business Report			
Week 13	Formatting questionnaire, Data collection, Data analysis and discussion.		Quiz	CLO 3
Content 08	Communicating Effectively in Meetings and Conversations			
Week 14	The prevalence of oral communication on the job, Informal workplace talking, Conducting and participating in meetings, Using the phone, Listening, the reinforce role of nonverbal communication.	Discussions Group work	Group Task	CLO 3 & 4

Part C

15. Assessment and Evaluation

1**) Assessment Strategy:** The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination

(written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

A. Recommended Readings:

1. Lesikar, Marie E. Flately and Rentz, Basic Business Communication, McGraw-Hill, US
2. Business Communication for Success, University of Minnesota Libraries Publishing

PML 2111: Bulk Terminal Management

PART A

1. Course Code: PML 2111
2. Course Title: Bulk Terminal Management
3. Course Type: Core
4. Year/Level/Semester/Term: 2nd Year, 1st Semester
5. Academic Session: 2025-26
6. Course Teacher/Instructor: To be nominated
7. Prerequisite (if any): None
8. Credit value: 3
9. Contact Hours: 42
10. Total Marks: 100

11. Rationale of the Course:

Bulk terminals are critical components in the global supply chain, enabling the efficient handling and transfer of bulk cargo such as coal, grain, ores etc. The increasing demand for bulk commodities and the diversity of cargo types require specialized management skills to optimize terminal operations, ensure safety, and maintain environmental compliance. For Bangladesh, enhancing bulk terminal efficiency is key to supporting economic growth and international trade. This course equips students with the knowledge and skills to manage bulk terminal operations effectively, addressing operational challenges and adopting modern technologies in line with international standards.

12. Course Objectives

- Introduce students to the principles, infrastructure, and functions of bulk terminals within global and national logistics networks.
- Develop understanding of bulk terminal operations including ship-to-shore handling, stockyard management, blending, and vessel scheduling.

- Provide knowledge on handling hazardous and bulk cargo safely under international regulations.
- Familiarize students with bulk terminal automation systems, environmental management, and performance measurement.
- Enable students to analyze operational challenges and propose solutions to improve efficiency, safety, and sustainability in bulk terminal management.

13. Course Learning Objectives (CLOs):

By the end of this course, students will be able to:	
CLO 1	Explain the principles, infrastructure, and workflow of bulk terminals, including their role in the global supply chain.
CLO 2	Analyze and evaluate operational processes such as ship-to-shore handling, stockyard management, and vessel scheduling for efficiency.
CLO 3	Apply international standards and regulatory frameworks (e.g., MARPOL, SOLAS, IMSBC Code) to ensure safe handling of bulk and hazardous cargo.
CLO 4	Use terminal performance indicators and automation technologies to propose improvements in operational efficiency, safety, and sustainability.

14. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

CLOs	PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8	PLO-9	PLO-10	PLO-11	PLO-12
CLO 1	✓			✓					✓			
CLO 2	✓	✓		✓	✓				✓			
CLO 3	✓		✓				✓	✓				
CLO 4	✓	✓	✓		✓	✓	✓			✓		✓

PART B

15. Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning

Week	Topic	Teaching-learning Strategy	Assessment Strategy	Corresponding CLOs
Content 1: Introduction to Bulk Terminals				
Week 1	Overview of bulk cargo types, characteristics, and classification. Role of bulk terminals in global trade and logistics.	Lecture, PP Presentation, Face-to-face	–	CLO 1
Week 2	Bulk terminal layout, berth design, stockyard types (open, covered, silos). Overview of handling equipment (grab cranes, conveyor belts, ship loaders/unloaders).	Lecture, Equipment images/videos, Face-to-face	Short quiz	CLO 1
Content 2: Bulk Terminal Operations				
Week 3	Ship-to-shore handling: unloading techniques, dust and spillage control, safety measures.	Lecture, Video demonstration, Face-to-face	Assignment	CLO 2
Week 4	Stockyard management: stacking, blending, reclaiming methods, inventory control.	Lecture, Simulation demo, Practical exercises	Assignment	CLO 2

Week 5	Vessel scheduling, berth allocation, turnaround time optimization.	Lecture, PP Presentation, Planning exercises	Quiz	CLO 2
Content 3: Handling Hazardous and Bulk Cargo Safety				
Week 6 & 7	Safety regulations for bulk cargo handling (IMSBC Code, MARPOL, SOLAS). Risk assessments, emergency preparedness, and case studies (e.g., coal dust explosions).	Lecture, PP Presentation, Safety posters	Midterm	CLO 3
Content 4: Bulk Terminal Documentation and Procedures				
Week 8	Bulk cargo documentation: bills of lading, cargo manifests, customs clearance procedures.	Lecture, Sample document review, Face-to-face	Assignment	CLO 3
Content 5: Terminal Automation and Performance Management				
Week 9	Bulk terminal automation technologies: stockyard automation, conveyor control systems, real-time monitoring.	Lecture, Video demo, Practical simulation	Quiz	CLO 4
Week 10	Performance indicators: throughput rates, berth productivity, equipment utilization, environmental impact metrics. Benchmarking with	Lecture, KPI calculation exercises	Assignment	CLO 4

	international standards.			
Week 11	Environmental management: dust control, noise, waste handling, and sustainability initiatives.	Lecture, Case study, Group discussion	Assignment	CLO 4
Content 6: Challenges and Future Trends in Bulk Terminal Management				
Week 12	Operational challenges: weather, maintenance, labor issues, and capacity constraints.	Lecture, Group discussion, Problem-solving exercise	Quiz	CLO 4
Week 13 & 14	Future trends: digitalization, green terminals, alternative energy use, and supply chain integration.	Lecture, PP Presentation, Student presentations	Final project/assignment	CLO 4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%

Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

PART D

16. Learning Materials

Text:

a. Patrick M. Alderton, Port Management and Operations

b. Maria G. Burns, Port Management and Operations

c. Theo Notteboom, Athanasios Pallis, and Jean-Paul Rodrigue, Port Economics, Management and Policy

d. Alan E. Branch and Michael Robarts (2014), Elements of Shipping, Routledge, Taylor & Francis Group, London and New York

e. Additional reading: IMO IMSBC Code (International Maritime Solid Bulk Cargoes Code)

Second Year, Second Semester

PML 2201: Principles of Finance

Part A

1. Course Code: PML 2201
2. Course Title: Principles of Finance
3. Course Type: Core Course

4. Year/Level/Semester/Term: 2nd Year, 2nd Semester

5. Academic Session: 2025-26

6. Course Teacher/Instructor: To be mentioned

7. Pre-requisite (if any): N/A

8. Credit Value: 03

9. Contact Hours: 42 Hours

10. Total Marks: 100

11. **Rationale of the Course**

This course provides foundational knowledge of financial principles, financial markets, and corporate finance decision-making. Students will gain understanding of financial management concepts including time value of money, risk and return, capital budgeting, financing decisions, and financial analysis. The course prepares students for advanced studies in finance, investment, banking, and corporate financial management.

12. Course Objectives

The objectives of this course are to:

- Introduce fundamental financial concepts and the role of finance in business.
- Develop understanding of financial statements and financial analysis.
- Explain time value of money and its applications.
- Introduce risk-return concepts and investment evaluation techniques.
- Provide knowledge of financing decisions and capital structure basics.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

Upon successful completion of this course, students will be able to:

CLO 1: Explain the scope and functions of finance and financial management.

CLO 2: Analyze financial statements using ratio analysis techniques.

CLO 3: Apply time value of money concepts to financial decision-making.

CLO 4: Evaluate investment projects using capital budgeting techniques.

CLO 5: Discuss risk, return, and basic financing decisions in corporate finance.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓				✓					✓		
CLO 2	✓	✓			✓					✓	✓	
CLO 3	✓	✓	✓		✓					✓		
CLO 4	✓	✓	✓		✓					✓		
CLO 5	✓	✓	✓	✓	✓			✓		✓		✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Introduction to Finance**			
Week 01 & 02	• Meaning and scope of finance • Functions of financial management • Goals of financial management (Profit vs Wealth Maximization) • Agency problem • Financial markets and institutions	Lecture, Presentation, Class discussion	Quiz, In-class discussion	CLO 1
Content	**Financial Statements & Analysis**			

02				
Week 03 & 04	• Review of financial statements • Ratio analysis (Liquidity, Profitability, Efficiency, Solvency) • Interpretation of financial performance	Lecture, Numerical exercises, Case study	Assignment, Quiz	CLO 2
Content 03	**Time Value of Money (TVM)**			
Week 05 & 06	• Concept of time value of money • Future value and present value • Annuities and perpetuities • Compounding and discounting • Applications in financial decisions	Lecture, Problem solving, Practice exercises	Class test	CLO 3
Content 04	**Risk and Return**			
Week 07	• Concept of risk and return • Measurement of return • Risk measurement (variance & standard deviation – basic concept) • Introduction to portfolio diversification	Lecture, Numerical practice	Quiz	CLO 5
Content 05	**Capital Budgeting Decisions**			
Week 08 & 09	• Investment decision process • Payback Period • Net Present Value (NPV) • Internal Rate of Return (IRR)	Lecture, Case study, Numerical problems	Mid-Term Examination	CLO 3,4

	• Profitability Index			
Content 06	**Cost of Capital**			
Week 10 & 11	• Cost of debt • Cost of equity • Weighted Average Cost of Capital (WACC) • Importance in financial decision-making	Lecture, Problem solving	Assignment	CLO 4,5
Content 07	**Capital Structure & Financing Decisions**			
Week 12	• Sources of long-term finance • Debt vs Equity financing • Capital structure basics • Dividend policy (Introduction)	Lecture, Case discussion	Quiz	CLO 5
Content 08	**Working Capital Management**			
Week 13 & 14	• Concept of working capital • Cash management • Inventory management • Receivables management	Lecture, Case analysis	Class Test	CLO 2, 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy

The continuous assessment shall include class attendance and participation, quizzes/class tests, term paper/assignments/case study, and midterm examination (written test).

The number of quizzes/class tests of a theoretical course will be n+1, where n is the number of credit hours of the course. All class test scores will be included in the evaluation, and the final

mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures

If a student misses the Mid-term Examination (with valid reasons) only once, he/she will get a chance for a make-up examination.

Part D

16. Learning Materials

A. Recommended Readings

i. Brigham & Houston – *Fundamentals of Financial Management*
ii. Ross, Westerfield & Jordan – *Fundamentals of Corporate Finance*
iii. Gitman & Zutter – *Principles of Managerial Finance*
iv. Berk & DeMarzo – *Corporate Finance*
v. Pandey, I.M. – *Financial Management*

B. Supplementary Readings

i. Instructor-provided lecture notes
ii. Relevant journal articles
iii. Financial reports and case studies

PML 2203: International Trade and Commercial Law

Part A

1. Course Code: PML 2203
2. Course Title: International Trade and Commercial Law
3. Course Type: Core
4. Year/Level/Semester/term: Year 2, Semester 2
5. Academic Session: 2025-26
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite: N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** The modern international trade regime is based on four main principles. These principles are, in no particular order of importance, Most-Favored-Nation Treatment (MFN), National Treatment (NT), tariff binding, and the general prohibition of quantitative restrictions. International trade law includes the appropriate rules and customs for handling trade between countries.
12. **Course Objectives:** The objective of the course is to introduce the conceptual background of the subject along with existing and ongoing developments in the area of International Trade and World Trade Organisation's (WTO) Agreements.
13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO 1: Be able to the understand conceptual background of the International Trade

CLO 2: Be able to familiar with the existing and ongoing developments in the area of International Trade and World Trade Organization's (WTO) Agreements

CLO 3: Be able to understand the legal framework for the settlement of International trade dispute.

(CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓											

CLO 2	✓						✓					
CLO 3					✓					✓		

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01				
Week 01	Basic Idea on International Trade; Origin and Development of International Trade Law; Nature and Scope; International Trading System – liberalization of trade and Commerce;	Lecture, Presentation, Effective Class Discussions		CLO 1
Content 02				
Week 02	The globalization of the world economic, political and financial system; the role of international trade in the global development and international trade;	Lecture, Presentation	MCQ	CLO 1

Content 03				
Week 03 & 04	The international trade and human rights; International legal framework for the International trade; Different principles, terms and issues;	Lecture, Presentation, Effective Class Discussions, Team Work	Quiz, Presentation/ Assignment	CLO 2
Content 04				
Week 05 & 06	Sources of International Trade Law, Principle of MFN and corresponding legal regime of Trade; Discriminatory regimes in International Trade;	Presentation, Team-Based Learning	Classroom exercise	CLO 2
Week 07 & 08	GATT/WTO and the principles of free trade; Tariffs, trade measures, export/import duties in International Trade;	Lecture, Presentation, Effective Class Discussions, Team Work		CLO 2
Content 05				
Week 09	Dispute Resolution in International Trade & Arbitration; Legal peculiarities of an International Commercial contract;	Effective Class Discussions, Case Based learning	Quiz	CLO 3
Content 06				
Week 10	International contracts of the sale of goods; Principles of International Commercial	Effective Class Discussions, Case Based	Case Analysis	CLO 3

	Contracts. INCOTERMS	learning		
Content 07				
Week 11 & 12	Carriage of Goods by Sea, The different documents of trade, Shipping documents, UPC,	Presentation, Lecture, Team work	Classroom exercise	CLO 3
Week 13 & 14	Letter of Credit, types, how documentary credit works	Lecture Effective Class Discussions,		CLO 3

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%

Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16.Learning Materials

1) Recommended Readings:

i. International Commercial Law, 7th Edition by Ping XiongHuman Relations & Organizational Behaviour - R.S.Dwivedi

ii. Modern Law of International Trade: Comparative Export Trade and International Harmonization by Ajendra Srivastava.

PML 2205: Applied Statistics

Part A

1. Course Code: PML 2205

2. Course Title: Applied Statistics

3. Course Type: Core course

4. Year/Level/Semester/term: Year-2, Semester 2

5. Academic Session: 2025-26

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): Principles of Statistics

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: Modern logistics and maritime operations rely heavily on data-driven decision-making. Advanced statistical tools enable managers to test assumptions, forecast demand, evaluate operational performance, and optimize resource allocation. This course builds on foundational statistical knowledge and develops students' ability to apply hypothesis

testing, regression modeling, forecasting techniques, and statistical software to solve real-world business and logistics problems. Emphasis is placed on analytical thinking, predictive modeling, and evidence-based decision-making aligned with contemporary industry practices.

12. Course Objectives:

Students will be able to:

i. Formulate and test hypotheses using parametric and non-parametric methods
ii. Develop regression and correlation models and interpret their results
iii. Conduct goodness-of-fit tests and ANOVA
iv. Generate forecasts using time series techniques
v. Apply statistical software for data analysis
vi. Support managerial decisions using statistical evidence

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

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

CLO 1: Apply hypothesis testing techniques to support business and logistics decision-making.

CLO 2: Develop and interpret regression and correlation models for predictive analysis.

CLO 3: Utilize statistical software to analyze datasets and evaluate model accuracy.

CLO 4: Generate forecasts using time series methods to improve operational planning.

CLO 5: Communicate statistical findings professionally through reports, presentations, and project work.

PLOs / CLOs	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓	✓			✓			✓				
CLO 2	✓	✓	✓		✓				✓	✓	✓	✓
CLO 3	✓	✓	✓		✓	✓			✓	✓		✓
CLO 4		✓	✓	✓	✓	✓			✓	✓		✓

CLO 5		✓			✓	✓			✓			✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Hypothesis Testing: Single Mean and Proportion**			
Week 01	• Null and alternative hypotheses • Z-test and t-test • p-values and significance • Confidence intervals • Decision errors	Decision-based lectures; Worked numerical examples; Software demonstration	Quiz	CLO 1
Content 02	**Hypothesis Testing: Two Means and Proportions**			
Week 02	• Independent vs paired tests • Difference of means • SPSS demonstration • Interpretation of outputs	Computer lab session; Guided dataset analysis	Lab assignment	CLO1 & 3
Content 03	**Chi-Square Tests & Goodness of Fit**			
Week 03 & 04	• Contingency tables • Independence testing • Goodness-of-fit	Case-based learning; Dataset interpretation	Case analysis	CLO1 & 2

	• Business applications			
Content 04	**Analysis of Variance (ANOVA)**			
Week 06 & 07	• One-way ANOVA • Comparing multiple means • F-statistic • Post-hoc concept	Visual explanation of variance; Software-supported analysis	Assignment	CLO 2, 3
Content 05	**Simple Linear Regression**			
Week 08	• Model assumptions • Least squares estimation • R^2 interpretation • Residual analysis	Step-by-step modeling; Maritime/logistics dataset	Class Test	CLO2
Content 06	**Multiple Regression**			
Week 09	• Multiple predictors • Multicollinearity (conceptual) • Dummy variables • Model accuracy	Computer-based modeling; Project-oriented learning	Project	CLO 2, 3, 5
Content 07	**Nonparametric Tests**			
Week 10 & 11	• Mann–Whitney test • Wilcoxon test • Kruskal–Wallis test • When assumptions fail	Lecture	Group Discussion	CLO 1
Content 08	**Time Series Analysis & Forecasting**			

Week 12	• Moving average • Exponential smoothing • Trend models • Seasonal forecasting • Mean Square Forecast Error (MSFE) • Model selection	• Forecasting workshop • Spreadsheet modeling	Quiz;	CLO 4
Content 09	**Statistical Software & Applied Project**			
Week 13 & 14	• SPSS/Excel/R basics • Data entry and cleaning • Regression output • Forecast interpretation	Lab Based	Project report; Viva/presentation	CLO 3 & 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

c. Continuous Assessment: 40

d. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%

Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1) Recommended Readings:

i. Prem S. Mann (2012). Introductory Statistics 9th Edition, John Wiley & Sons, Inc. 1118473981

ii. Anderson, Sweeney, Williams, Camm & Cochran — Statistics for Business and Economics

iii. Ken Black. Business Statistics 6th Edition, Wiley.

PML 2207: Organizational Behavior

Part A

1. Course Code: PML 2207
2. Course Title: Organizational Behavior
3. Course Type: Core Course
4. Year/Level/Semester/Term: 2nd Year, 2nd Semester
5. Academic Session: 2025-26
6. Course Teacher/Instructor: To be mentioned
7. Pre-requisite: N/A
8. Credit Value: 03
9. Contact Hours: 42 Hours
10. Total Marks: 100

11. **Rationale of the Course**

This course provides foundational knowledge of human behavior within organizational settings. It examines individual, group, and organizational dynamics that influence performance, motivation, leadership, communication, and organizational effectiveness. The course prepares students to understand workplace behavior and develop managerial competencies essential for effective organizational performance.

12. Course Objectives

The objectives of this course are to:

- Introduce fundamental concepts and theories of organizational behavior.
- Develop understanding of individual behavior and personality in organizations.
- Explain group dynamics, leadership, and communication processes.
- Analyze motivation theories and their application in workplace settings.
- Examine organizational structure, culture, and change management.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

Upon successful completion of this course, students will be able to:

CLO 1: Explain key concepts, theories, and models of organizational behavior.

CLO 2: Analyze individual behavior including personality, perception, attitudes, and motivation.

CLO 3: Evaluate group behavior, leadership styles, and communication processes.

CLO 4: Assess organizational structure, culture, and change management practices.

CLO 5: Apply organizational behavior concepts to solve workplace problems ethically and effectively.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓				✓					✓		
CLO 2	✓	✓								✓		

CLO 3	✓		✓			✓				✓	✓	
CLO 4		✓					✓			✓		✓
CLO 5	✓		✓	✓				✓		✓		✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Introduction to Organizational Behavior**			
Week 01 & 02	• Definition and scope of Organizational Behavior • Importance of OB in management • OB models • Challenges and opportunities in OB	Lecture, Presentation, Class discussion	Quiz, In-class discussion	CLO 1
Content 02	**Individual Behavior in Organizations**			
Week 03 & 04	• Personality and individual differences • Perception and attribution • Attitudes and job satisfaction • Learning theories	Lecture, Case study, Group discussion	Assignment, Quiz	CLO 2
Content 03	**Motivation Theories and Applications**			

Week 05 & 06	• Early motivation theories (Maslow, Herzberg, McGregor) • Contemporary motivation theories (Expectancy, Equity, Goal-setting) • Application of motivation in workplace	Lecture, Case analysis	Class test	CLO 2,5
Content 04	**Group Behavior and Team Dynamics**			
Week 07	• Group formation and development • Team effectiveness • Conflict management • Power and politics	Lecture, Role play, Group activity	Quiz	CLO 3
Content 05	**Leadership and Communication**			
Week 08 & 09	• Leadership theories (Trait, Behavioral, Contingency) • Contemporary leadership approaches • Communication process and barriers • Organizational communication	Lecture, Case study, Presentation	Mid-Term Examination	CLO 3
Content 06	**Organizational Structure and Design**			
Week 10 & 11	• Types of organizational structures • Centralization vs decentralization • Organizational design and	Lecture, Case discussion	Assignment	CLO 4

	effectiveness			
Content 07	**Organizational Culture and Change**			
Week 12	• Organizational culture • Creating and sustaining culture • Organizational change and resistance • Change management strategies	Lecture, Case study	Quiz	CLO 4
Content 08	**Organizational Ethics and Contemporary Issues**			
Week 13 & 14	• Ethics in organizations • Corporate social responsibility • Workplace diversity • Stress management and work-life balance	Lecture, Group discussion	Class test	CLO 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy

The continuous assessment shall include class attendance and participation, quizzes/class tests, term paper/assignments/case study, and midterm examination (written test).

The number of quizzes/class tests of a theoretical course will be n+1, where n is the number of credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a) Continuous Assessment: 40

b) Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures

If a student misses the Mid-term Examination (with valid reasons) only once, he/she will get a chance for a make-up examination.

Part D

16. Learning Materials

A. Recommended Readings

i. Robbins, S.P. & Judge, T.A. – *Organizational Behavior*
ii. Luthans, F. – *Organizational Behavior*
iii. McShane, S.L. & Von Glinow, M.A. – *Organizational Behavior*
iv. Greenberg, J. & Baron, R.A. – *Behavior in Organizations*
v. Griffin, R.W. & Moorhead, G. – *Organizational Behavior*

B. Supplementary Readings

i. Instructor-provided lecture notes
ii. Relevant journal articles
iii. Case studies on contemporary organizational issues.

PML 2209: Container Terminal Management

PART A

1. Course Code: PML 2209
2. Course Title: Container Terminal Management
3. Course Type: Core
4. Year/Level/Semester/Term: 2nd Year, 2nd Semester
5. Academic Session: 2025-26
6. Course Teacher/Instructor: To be nominated
7. Prerequisite (if any): None
8. Credit value: 3
9. Contact Hours: 42
10. Total Marks: 100

11. Rationale of the Course:

Container terminals are vital hubs in global trade, enabling efficient transfer of goods between sea and land transport. With the growth of containerization, larger vessels, and inland connectivity via dry ports, effective terminal management is essential for smooth operations, safety, and competitiveness. For Bangladesh, where port capacity and efficiency are critical to economic growth, skilled professionals are needed to handle operational challenges, integrate modern technology, and comply with international standards. This course equips students with the knowledge and skills to manage container and dry port operations effectively, ensuring they can contribute to both national and global maritime logistics.

12. Course Objectives

- To introduce students to the principles, infrastructure, and functions of container terminals and dry ports in global and national logistics networks.
- To develop an understanding of terminal operations including ship-to-shore handling, yard management, gate processes, and vessel planning.
- To provide knowledge on handling dangerous and hazardous cargo in compliance with international safety regulations.
- To familiarize students with terminal management systems, automation technologies, and performance measurement tools.
- To enable students to analyze operational challenges and propose solutions for improving efficiency, sustainability, and competitiveness in container terminal management.

13. Course Learning Objectives (CLOs):

By the end of this course, students will be able to:

CLO 1: Explain the principles, infrastructure, and operational workflow of container terminals and dry ports, including their role in the global supply chain.

CLO 2: Analyze and evaluate operational processes such as ship-to-shore handling, yard management, gate operations, and dry port functions for efficiency and effectiveness.

CLO 3: Apply international standards and regulatory frameworks (e.g., IMDG Code, ISPS Code, SOLAS) to ensure safe handling of containers, including hazardous cargo, within terminal operations.

CLO 4: Use terminal performance indicators and automation technologies to propose solutions for improving operational efficiency, sustainability, and competitiveness in container terminal management.

14. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes

CLOs	PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8	PLO-9	PLO-10	PLO-11	PLO-12
CLO 1	✓			✓							✓	
CLO 2	✓	✓		✓	✓				✓			
CLO 3	✓		✓				✓	✓				
CLO 4	✓	✓	✓		✓	✓	✓			✓		✓

PART B

15. Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning and assessment strategy mapped with CLOs.

Course Content:

Week	Topic	Teaching-learning Strategy	Assessment Strategy	Corresponding CLOs
Content 1	**Introduction to Container Terminals**			
Week 1	Evolution of containerization, intermodal transport, and types of container terminals. Role in global supply chain.	Lecture, PP Presentation, Face-to-face learning	–	CLO1
Week 2	Terminal layout, quay & yard design, reefer areas, CFS. Overview of handling equipment (STS, RTG,	Lecture, Equipment images/videos, Face-to-face	Short quiz	CLO1

	RMG, reach stackers, straddle carriers).	learning		
Content 2	**Dry Port Operations & Functions**			
Week 3	Concept and importance of dry ports, link with seaports, ICD functions. Bangladesh examples (Pangaon, Kamalapur). Operational workflow at dry ports – cargo consolidation, customs clearance, storage. Integration with logistics corridors.	Lecture, PP Presentation, Case study discussion	Assignment on dry port benefits	CLO2
Content 3	**Terminal Operations**			
Week 4	Ship-to-shore operations: loading/unloading, lashing/unlashing, quay crane scheduling.	Lecture, Video demonstration, Face-to-face learning	Quiz	CLO2
Week 5	Yard operations: stacking strategies, reefer container handling, gate operations (in/out procedures).	Lecture, Simulation demo, Practical exercise	Assignment	CLO2
Content 4	**Dangerous & Hazardous Container Handling**			
Week 7 & 8	Classification of dangerous goods (IMDG Code), labeling, segregation rules. Risk assessment, emergency response plans, case studies (Beirut, Tianjin).	Lecture, PP Presentation, Safety posters	Midterm	CLO3

Content 5	**Vessel Planning & Berth Management**			
Week 9	Berth allocation, stowage planning basics, turnaround time optimization.	Lecture, PP Presentation, Planning exercises	Assignment	CLO3
Content 6	**Container Types, Coding & Documentation**			
Week 10	ISO container numbering, container types (dry van, reefer, open-top, flat-rack, tank).	Lecture, PP Presentation, Hands-on container code exercises	Short test	CLO3
Week 11	Documentation: Bill of Lading, EIR, customs clearance papers.	Lecture, Sample document review, Face-to-face learning	Assignment	CLO3
Content 7	**Terminal Management Systems & Automation**			
Week 12	TOS overview (Navis N4, Tideworks), gate automation, OCR, RFID, GPS tracking.	Lecture, Video demo, Practical simulation	Quiz	CLO4
Content 8	**Performance, Safety & Environmental Management**			
Week 13 & 14	KPIs (berth productivity, crane moves/hour, yard utilization, dwell time). Benchmarking against UNCTAD standards.	Lecture, PP Presentation, KPI calculation exercises	Assignment	CLO4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

PART D

16. Learning Materials

Text:

a. Patrick M. Alderton, Port Management and Operations

b. Maria G. Burns, Port Management and Operations

c. Theo Notteboom, Athanasios Pallis, and Jean-Paul Rodrigue, Port Economics, Management and Policy

d. Alan E. Branch and Michael Robarts (2014). Elements of Shipping, Routledge, Taylor & Francis Group, London and New York

PML 2211 Study Tour 2

Part A

1. Course Code: PML 2211
2. Course Title: Study Tour 2
3. Course Type: Capstone
4. Year/Semester: 2nd year, 2nd Semester
5. Prerequisite (if any): None
6. Credit value: 1.5
7. Total Marks: 100

8. Rationale of the Course:

The course shall offer students hands-on learning experiences, promoting an extensive understanding of port facilities, operations and the dynamics of maritime industry.

9. Course Objectives:

This course will help the students relate theoretical knowledge to practical fields and industry standards.

10. Course Learning Outcomes (CLOs):

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

CLO 1: Demonstrate an understanding of the maritime industries of Bangladesh
CLO 2: Understanding the importance of sea port facility developments in Bangladesh
CLO 3: Understanding sea port operation procedures and logistical challenges in Bangladesh

CLO 4: Understanding regulatory frameworks governing maritime activities in Bangladesh and analyze their influence on industry standards as well as international compliance

Part B

11. Contents and guidelines

Study tour to various ports, container terminals, inland depots, multimodal transport nodes and maritime regulatory organizations for a duration of 2-3 business days. Tours to be planned by the respective course coordinator in consultation with the program coordinator to suitable locations in advance considering the practical demonstrations of the relevant theory courses which are already taught during the ongoing and past semesters. Designated officers/representatives from the host ports and maritime organizations shall act as a demonstrator to describe various activities of their individual organizations, challenges and organizational framework as per the prior request of the tour coordinator taking into account the CLOs.

Part C

13. Assessment and Evaluation

The distribution of marks for the performance evaluation of each student on the study tour is given below:

a. Tour Attendance: 20%

b. Active Participation: 20%

c. Report Submission: 30%

d. Presentation: 30%

Third Year First Semester

PML 3101: Supply Chain Management

Part A

1. Course Code: PML 3101
2. Course Title: Supply Chain Management
3. Course Type: Core Course
4. Year/Level/Semester/Term: Year 3, Semester 1
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Prerequisite: Management, Operations Management
8. Credit value: 3
9. Contact Hours: 42
10. Total Marks: 100
11. **Rationale of the Course:** To provide the recent and updated perspectives of supply chain management so that supply chain practitioners in various maritime organizations can develop and improve their knowledge, skills and aptitude to develop and direct more "Customer-Centric" management approaches to make their respective organization an ethical profit-centre.
12. **Course Objectives:** The objective of the course is to introduce the students about logistics and supply chain management, the role of supply chain management in business as well as the role and functions of port and shipping in the supply chain management.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

Course Learning Outcomes (CLO)	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
On completion of this course, students will be able to understand basic	✓											

supply chain for manufacturing and service industry;												
Identify the significance of SCM in different dimensions and drivers of transport chain management									✓			
explain the concept of to Logistics Chain Management in relation to port				✓								
Apply the concept of logistics integration in Port and maritime transport												✓
Apply the concept of supply chain in Port and maritime sector				✓								

Part B

14.Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Supply chain Management**			
Week 01	Definition of SC, Importance of SC, Components of SCM,	Lecture, Presentation	Quiz	CLO1

	Driving forces, Entities of Basic Supply Chain (SC) -Supply Chain for Manufacturing Industry, Components of manufacturing SC, Service Industry, SCM in Service Industries			
Content 02	**Logistics Management**			
Week 02	Origin & definition, Development of Logistics, Development of logistics- Military Logistics – Deregulation-Competition-IT- Power Channel, Profit Leverage, Types of logistics, Logistics Management	Lecture, Presentation		CLO1
Content 03	Warehouse Management			
Week 03	Warehouse- purpose, types, design; Forecasting- Need of forecasting, Methods of forecasting, Warehousing Operations, Public vs private warehousing, Material handling equipment, Packaging isses, Computerization, Warehouse productivity measurement	Lecture, Case-Based Learning, Problem Solving	Case Study	CLO2
Content 04	Inventory Management			

Week 04	Key Inventory term, Demand forecasting, Effective Inventory management, Sourcing decisions in SC, Suppler Assessment factors Contracts and SC Performance, Bullwhip effect, SC relationships, Conflict resolution strategies, Macro processes in SCM Supplier Relationship Management (SRM) Internal Supply Chain Management (ISCM) Customer Relationship Management (CRM)	Lecture, Presentation, Problem Solving	Assignment	CLO2, CLO3
Content 05	Transportation			
Week 05	Transportation in SC, Factors affecting transportation decisions, Mode of transportation-Road, Rail, Air, Intermodal, Multimodal Transport, Transport cost & pricing,	Lecture, Presentation	Short Quiz	CLO2
Content 06	Global Logistics			
Week 06	Introduction, International distribution channel strategies-exporting, licensing, joint	Lecture, Case-Based Learning	Presentation	CLO3

	venture, managing global logistics- Direct ownership, importing, Terms of Trade, EPZ, EEZ, Role of FF, Documentation,			
Content 07	Port Logistics			
Week 07, 08, & 09	Loading/ unloading operation, CFS Operation, ICD Operation, ICT Operation, Port centric logistics, Hinterland logistics & global supply chain	Lecture, Presentation, Group Work	Group Project	CLO3, CLO4
Content 08	Maritime Logistics			
Week 10, 11, & 12	Maritime transport and logistic as trade facilitator, Intermodal freight transport &, Multimodal Transport, Inland waterways, Developing Liner service network in container shipping, Supply chain integration in container shipping, Concept of transport chain	Lecture, Presentation	Quiz	CLO4
Content 09	Case Studies with Video presentation			
Week 13 & 14		Presentation, Case-Based Learning	Video Presentation	CLO1–CLO4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the

number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

16. Part D

1) Recommended Readings:
- Chopra, S., & Meindl, P. (2016). Supply Chain Management: Strategy, Planning, and Operation.
- Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2008). Designing and Managing the Supply Chain.
- Coyle, J.J., Langley, C.J., & Gibson, B.J. (2013). Supply Chain Management: A Logistics Perspective.

PML 3103: Research Methodology

Part A

1. Course Code: PML 3103

2. Course Title: Research Methodology

3. Course Type: GEd

4. Year/Level/Semester/term: 3rd Year, First Semester

5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite: N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** The primary aim of this course is to introduce students to the majority of the quantitative as well as qualitative research methods used most frequently by management scholars, particularly within the domains of innovation and entrepreneurship studies.

12. **Course Objectives:** The primary aim of this course is to introduce students to the majority of the quantitative as well as qualitative research methods used most frequently by management scholars, particularly within the domains of innovation and entrepreneurship studies. To formulate and write research questions, hypotheses and research objectives Effectively select the correct research design Examine critically the importance of a sampling strategy in both quantitative and qualitative research and be familiar with key sampling methods Undertake a critical literature review and recognize the strengths and weaknesses in secondary data.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

Course Learning Outcomes (CLO)	PLO 01 Mentions	PLO 02 Business	PLO 03 Critical	PLO 04 Logistics	PLO 05 Analytical	PLO 06 Leadership	PLO 07 Environmen	PLO 08 Ethics and	PLO 09 Individual	PLO 10 Project	PLO 11 Communicat	PLO 12 Adaptabilit
Be able to know how to design, implement and complete the research work (CLO 1)			✓		✓				✓			
Be able to understand qualitative and quantitative research designs, methods, instruments, data analysis and	✓	✓			✓							

presentation. (CLO 2)												
Be able to demonstrate knowledge of research processes (reading, evaluating, and developing) (CLO 3)					✓				✓	✓		
Be able to explain the rationale for research ethics, and the importance of and local processes for Institutional Review Board (IRB) review; (CLO 4)		✓			✓			✓				

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	Introduction and Types of Research			
Week 01	What is research? Data collection and sources Primary and secondary data Qualitative, Quantitative research, Inductive vs. deductive research, action research, causal research	Lecture Presentation Face to face learning	Quiz	CLO 1
Content	Framework of a Research Project			

02				
Week 02 & 03	Introduction, literature review, methodology, analysis and findings, conclusion and recommendation	Effective Class Discussions Self-directed learning	Class Participation	CLO 1 & 2
Content 03	Different methods for data analysis			
Week 04 & 05	Correlation, Regression, ANOVA, Fuzzy AHP, BWM	Effective Class Discussions Team-Based Learning Group work	Assignment	CLO 2
Week 06	Interview analysis, Delphi method	Team-Based Learning Group work	Assignment	CLO 2
Content 04	Identifying and Labeling Variables, Constructing Hypotheses and Meta-Analyses, and Constructing Operational			
Week 07	Definitions of Variables and in hand practice	Lecture Presentation	Hands-on Task	CLO 2
Content 05	Selecting a Problem and Reviewing the Literature			
Week 08	Literature review	Team-Based Learning Case Based Learning Group Work Lecture	Project	CLO 1 & 2
Content 06	Concluding Steps of Research			
Week 09 & 10	Abstract / Executive summary, Introduction, methodology and	Effective Class Discussions	Draft Submission	CLO 2 & 3

	results			
Week 11	Conclusion, Recommendation	Effective Class Discussions	Peer Review	CLO 3
Content 07	Referencing and Application of Software and Spreadsheet			
Week 12	Mendeley, Chicago/Turabian, APA etc.		Practical Assignment / Exercise	CLO 3
Content 08	Research in practice			
Week 13	Development of research proposal, funding, limitation	Discussions Group work	Research Proposal Project	CLO 3 & 4
Content 09	Different Aids for Research			
Week 11	Visualization tools, analytics,	Group work	Practical Exercise	CLO 3 & 4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%

Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

a) Recommended Readings:

1. William C Emory, Business Research Methods, Richard D Irwin.

2. Donald R Cooper, Business Research Methods 7th Ed, McGraw Hill, 2001.

3. Krishnaswami, Ranganatham, Methodology of Research for Social Science, Himalaya, Mumbai, 2001.

4. Anderson J. et.al, Thesis and Assignment writing, Wiley Eastern.

5. Research Methodology by C.R. Kothari

PML 3105: Port and Transport Safety and Security

PART A

1. Course Code: PML 3105

2. Course Title: Port and Transport Safety and Security

3. Course Type: Core

4. Year/Level/Semester/Term: 3rd Year, 1st Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Prerequisite: None

8. Credit Value: 3

9. Contact Hours: 42

10.Total Marks: 100

11. Rationale of the Course:

Ports and transport networks are critical infrastructures vulnerable to accidents, occupational hazards, cyber threats, and terrorism. Ensuring safety and security is fundamental for operational continuity, compliance with international regulations, and sustainable growth. This course equips students with practical knowledge of port and transport safety management, covering IMO, ILO, ICAO, and CPATI-aligned standards (e.g., ISPS Code, ILO-OSH, IMDG, MARPOL, and SOLAS). It prepares graduates to identify, analyze, and mitigate risks, while enhancing resilience and emergency response capacities in the maritime and logistics sector.

12. Course Objectives:

- To introduce students to the principles, frameworks, and codes governing port and transport safety and security.
- To develop understanding of occupational safety, risk assessment, and hazard control measures in port and transport infrastructure.
- To provide knowledge on international conventions and CPATI-relevant standards (ISPS Code, SOLAS, IMDG, ILO-OSH, MARPOL).
- To build capacity for managing emergencies, disaster response, and port facility security assessments.
- To enable students to propose sustainable, ethical, and innovative solutions for enhancing port and transport safety and security.

13. Course Learning Outcomes (CLOs):

By the end of this course, students will be able to:

CLO1: Explain the principles, frameworks, and international conventions governing port and transport safety/security.

CLO2: Analyze occupational hazards, risks, and accident prevention strategies in port and transport systems.

CLO3: Apply ISPS, SOLAS, IMDG, MARPOL, and ILO-OSH codes to ensure compliance and safe operations.

CLO4: Evaluate and propose improvements in port facility security assessments (PFSA), emergency response, and disaster management.

CLO5: Integrate sustainability, ethics, and technological innovation (digital security, cyber risk management, automation) into port and transport safety/security strategies.

14. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

CLOs	PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8	PLO-9	PLO-10	PLO-11	PLO-12
CLO 1	✓			✓				✓			✓	
CLO 2	✓	✓		✓	✓		✓		✓			
CLO 3	✓		✓		✓	✓	✓	✓				
CLO 4	✓	✓	✓		✓	✓			✓	✓	✓	✓
CLO 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

PART B

15. Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning and assessment strategy

Week	Topic	Teaching-learning Strategy	Assessment Strategy	CLOs
Content 1: Introduction & Frameworks				
Week 1	Principles of safety & security in ports and transport systems. Importance in global trade.	Lecture, PP Presentation	–	CLO1
Week 2	International regulatory frameworks: IMO, ILO, ICAO, WTO; CPATI-related safety/security pillars.	Lecture, Case study	Short quiz	CLO1
Content 2: Occupational Safety & Risk Assessment				
Week 3	Occupational hazards in ports: mechanical, chemical, fire, slips/falls. ILO-OSH framework.	Lecture, Video demo, Safety poster review	Assignment	CLO2
Week 4	Risk assessment & hazard identification methods (HAZID, HAZOP, bow-tie analysis).	Lecture, Practical exercises	Quiz	CLO2
Content 3: International Codes & Conventions (Compliance)				
Week 5	ISPS Code: port facility security assessments (PFSA) & security plans (PFSP). Roles of PFSO/SSO/CSO.	Lecture, Simulation	Assignment	CLO3
Week 6	SOLAS & MARPOL: accident prevention, oil spill response, fire protection.	Lecture, Case study discussion	Quiz	CLO3
Week 7 & 8	IMDG Code: dangerous goods handling, segregation, labeling, storage. Case studies (Beirut, Tianjin).	Lecture, PP Presentation, Safety posters	Midterm	CLO3
Content 4: Emergency Response & Disaster Management				

Week 9	Port emergency response: firefighting, evacuation, oil spill contingency, natural disasters.	Lecture, Simulation drill, PP Presentation	Assignment	CLO4
Week 10	Security threats: piracy, terrorism, smuggling, cyber risks. Countermeasures.	Lecture, Case study (Maersk cyber-attack)	Short test	CLO4
Content 5: Safety & Security Technology				
Week 11	Safety/security technologies: CCTV, scanners, biometrics, drone surveillance, cyber-security.	Lecture, Demonstration, Practical simulation	Assignment	CLO5
Week 12	Automation & AI for port safety: predictive analytics, smart gates, risk dashboards.	Lecture, Video demo, Group activity	Quiz	CLO5
Content 6: Sustainability & Ethical Practices				
Week 13	Environmental sustainability: green port initiatives, waste management, reducing carbon footprint.	Lecture, PP Presentation	Assignment	CLO5
Week 14	Ethics, responsibility & resilience in port/transport safety management. CPATI perspective.	Lecture, Case study	Final Assignment	CLO5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40
b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

PART D:

16. Learning Materials

1. Recommended Texts

a. Maria G. Burns (2018). Port Management and Security. CRC Press.

b. Michael McNicholas (2016). Maritime Security: An Introduction. Butterworth-Heinemann.

c. IMO Publications: SOLAS Consolidated Edition, ISPS Code, IMDG Code.

d. ILO (2001). Guidelines on Occupational Safety and Health Management Systems (ILO-OSH 2001).

e. OECD (2018). Ensuring Safe and Secure Transport Infrastructure.

f. Alan E. Branch & Michael Robarts (2014). Elements of Shipping. Routledge.

PML 3107: Integrated Transport Management

PART A

1. Course Code: PML 3107

2. Course Title: Integrated Transport Management

3. Course Type: Core

4. Year/Level/Semester/Term: 3rd Year, 1st Semester

5. Academic Session: 2025- 2026

6. Course Teacher/Instructor: To be nominated

7. Prerequisite: None

8. Credit value: 3

9. Contact Hours: 42

10. Total Marks: 100

11. Rationale of the Course:

Integrated Transport Management (ITM) addresses the planning, coordination, and management of multi-modal transport systems to ensure efficient, safe, and sustainable cargo and passenger movement. With the rise of global trade, urbanization, and smart transport corridors, seamless integration between road, rail, inland waterways, air, and maritime transport has become crucial. For Bangladesh, improving connectivity between ports, dry ports, economic zones, and hinterlands is vital to support Vision 2041. This course provides students with conceptual and practical knowledge on transport integration, logistics corridor management, ICT-enabled systems, safety and security, and sustainability frameworks.

12. Course Objectives:

- To introduce students to the principles, infrastructure, and functions of integrated and multimodal transport systems.
- To develop understanding of the role of road, rail, inland waterways, maritime, and air

transport in global and national logistics networks.

- To provide knowledge on intermodal transport corridors, dry ports, and inland container depots (ICDs).
- To familiarize students with CPaTI (Combined Port and Transport Infrastructure) concepts and their role in seamless trade facilitation.
- To enable students to apply ICT, automation, and digital platforms for efficient transport and logistics management.
- To enhance awareness of sustainability, safety, security, and risk management in integrated transport systems.

13. Course Learning Outcomes (CLOs):

By the end of this course, students will be able to:

CLO 1: Explain the principles, infrastructure, and operations of multimodal and integrated transport systems.

CLO 2: Analyze transport corridors, ICDs, and CPaTI models to evaluate efficiency and connectivity in global and regional trade.

CLO 3: Apply safety, security, and sustainability frameworks to integrated transport operations.

CLO 4: Utilize ICT-based solutions (e.g., digital freight platforms, GPS, RFID, blockchain) for transport and logistics integration.

CLO 5: Critically assess challenges in Bangladesh's integrated transport system and propose solutions aligned with Vision 2041.

14. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

CLOs	PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8	PLO-9	PLO-10	PLO-11	PLO-12
CLO 1	✓			✓					✓			

CLO 2	✓	✓	✓	✓	✓					✓		✓
CLO 3	✓		✓		✓	✓	✓	✓				
CLO 4	✓	✓			✓	✓	✓		✓	✓	✓	✓
CLO 5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

PART B

15. Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning Strategy and assessment strategy

Week	**Topic**	**Teaching-learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 1 – Fundamentals of Integrated Transport Systems				
Week 1	Introduction to integrated transport systems; role in global and national logistics; modes of transport and interconnectivity.	Lecture, PP Presentation, Face-to-face learning	–	CLO1
Week 2	Transport networks: road, rail, air, inland waterways, maritime. Characteristics, strengths, and limitations.	Lecture, Case study discussion, Video demo	Short quiz	CLO1
Content 2 – Policy, Planning & Institutional Framework				
Week 3	Transport policy, legal and institutional frameworks in Bangladesh; role of government & private sector.	Lecture, PP Presentation, Policy document review	Assignment on transport policy	CLO2
Week 4	National and regional transport planning; integration with sustainable development goals	Lecture, Case study (Bangladesh Delta Plan, BRI), Group	Quiz	CLO2

	(SDGs).	discussion		
Content 3 – Transport Infrastructure & Intermodal Connectivity				
Week 5	Intermodal transport hubs: dry ports, inland container depots (ICDs), logistics parks.	Lecture, PP Presentation, Case study (Pangaon ICT)	Assignment	CLO2
Week 6	Infrastructure challenges: congestion, last-mile delivery, hinterland connectivity.	Lecture, Video demo, Field visit (if possible)	Assignment	CLO2
Content 4 – Transport Operations & Safety				
Week 7	Transport operations management: scheduling, routing, cost optimization.	Lecture, Simulation demo, Exercises	Quiz	CLO3
Week 8	Safety regulations in multimodal transport (IMO, ICAO, ILO, national frameworks).	Lecture, PP Presentation, Safety posters	Midterm	CLO3
Content 5 – Security & CPATI (Cargo, Port & Transport Interface)				
Week 9	Port and transport security interface (CPATI): ISPS Code, customs, and cargo security.	Lecture, Case study (global security incidents), PP Presentation	Assignment	CLO3
Week 10	Risk management, security technologies (CCTV, scanning, RFID, cyber-security in transport).	Lecture, Video demo, Practical examples	Short test	CLO3
Content 6 – Technology & Digitalization in Transport				
Week 11	ICT in transport: e-documentation, EDI, blockchain, port community systems.	Lecture, Hands-on practice, Demo of software	Assignment	CLO4
Week 12	Intelligent Transport Systems (ITS), automation, AI & big	Lecture, Video demo, Group project	Quiz	CLO4

	data applications in logistics.			
Content 7 – Performance, Sustainability & Competitiveness				
Week 13	KPIs for integrated transport (efficiency, reliability, cost, safety). Benchmarking with global standards.	Lecture, PP Presentation, KPI calculation exercises	Assignment	CLO4
Week 14	Environmental impacts of transport: emissions, congestion, noise. Green logistics and sustainable solutions.	Lecture, Case study, Group discussion	Assignment/Presentation	CLO4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%

Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

PART D

16. Learning Materials

1. Recommended Texts / References

a. Rodrigue, J-P., Comtois, C., & Slack, B. (2020). The Geography of Transport Systems. Routledge.

b. Theo Notteboom, Athanasios Pallis & Jean-Paul Rodrigue. Port Economics, Management and Policy.

c. Maria G. Burns. Port Management and Operations. Routledge.

d. Kenneth Button & David Hensher. Handbook of Transport Systems and Traffic Control. Elsevier.

e. Branch, Alan E. Elements of Shipping. Routledge.

f. UNCTAD & World Bank reports on Multimodal Transport & Trade Facilitation.

g. WTO, WCO, and IMO guidelines on Trade, Safety, and Transport Integration.

PML 3109: Air Freight Management

PART A

1. Course Code: PML 3109

2. Course Title: Air Freight Management

3. Course Type: Core

4. Year/Level/Semester/Term: 3rd Year, 1st Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Prerequisite (if any): None

8. Credit value: 3

9. Contact Hours: 42

10. Total Marks: 100

11. Rationale of the Course:

Air freight is a key enabler of global trade, ensuring fast and reliable transport of high-value and time-sensitive goods. For Bangladesh, which relies heavily on exports like garments, pharmaceuticals, and perishables, efficient air freight management is essential to maintain competitiveness. This course equips students with the knowledge of air cargo operations, IATA/ICAO regulations, security protocols, and emerging digital trends, enabling them to address real-world logistics challenges and contribute to the country's vision of becoming a regional logistics hub.

12. Course Objectives:

- Understand the role and significance of air freight in global trade.
- Learn international regulations and air cargo security (including CPATI).
- Analyze air cargo operations, planning, and cost optimization.
- Explore technological innovations and digitalization in air freight.
- Apply practical solutions to challenges in the air freight sector.

13. Course Learning Outcomes (CLOs):

By the end of this course, students will be able to:

CLO1: Demonstrate knowledge of the fundamentals of air freight and the role of key stakeholders.
CLO2: Apply international rules, regulations, and conventions governing air freight transport.
CLO3: Evaluate safety, security, and CPATI-related issues in air cargo operations.
CLO4: Analyze the economic, technological, and sustainability aspects of air freight management.

14. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

CLOs	PLO-1	PLO-2	PLO-3	PLO-4	PLO-5	PLO-6	PLO-7	PLO-8	PLO-9	PLO-10	PLO-11	PLO-12
CLO1	✓	✓		✓							✓	✓
CLO2	✓	✓	✓		✓			✓	✓		✓	
CLO3	✓	✓	✓	✓	✓			✓	✓		✓	✓
CLO4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

PART B

15. Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning and assessment strategy

Week	Topic	Teaching-learning Strategy	Assessment Strategy	CLOs
Content 1 – Fundamentals of Air Freight & Aviation Industry				
Week 1	Introduction to air freight transport: global importance, characteristics, advantages & limitations.	Lecture, PP Presentation, Face-to-face learning	–	CLO1
Week 2	Air cargo industry stakeholders: airlines, freight forwarders, consolidators, customs, ground handling agents.	Lecture, Case study, Video demo	Quiz	CLO1
Content 2 – International Frameworks & Regulations				
Week 3	ICAO, IATA, FIATA, WTO, and other regulatory bodies. Key	Lecture, PP Presentation, Policy document review	Assignment on ICAO/IATA rules	CLO2

	conventions (Warsaw, Montreal, Chicago).			
Week 4	Air cargo agreements, liability issues, Warsaw & Montreal Conventions, AWB (Air Waybill) rules.	Lecture, Case study discussion, Group work	Quiz	CLO2
Content 3 – Air Freight Operations				
Week 5	Air cargo terminal operations: cargo acceptance, handling, storage, ULDs (Unit Load Devices).	Lecture, PP Presentation, Case study (Hazrat Shahjalal Int. Airport)	Assignment	CLO2
Week 6	Aircraft types for cargo, belly cargo vs freighters, load planning & capacity utilization.	Lecture, Video demo, Simulation	Assignment	CLO2
Content 4 – Safety, Security & CPATI				
Week 7	Cargo safety regulations: dangerous goods (IATA DGR), live animals, perishables, pharmaceuticals.	Lecture, PP Presentation, Demonstration	Quiz	CLO3
Week 8	Security interface (CPATI): screening, ISAGO, customs clearance, cyber-security in air cargo.	Lecture, Case study (cargo thefts, terrorism), Video demo	Midterm	CLO3
Content 5 – Technology & Digitalization in Air Freight				

Week 9	E-freight initiatives: E-AWB, Cargo-IMP, Cargo-XML, blockchain in air freight.	Lecture, Hands-on demo, Group practice	Assignment	CLO4
Week 10	Airport cargo management systems, automation, AI & big data in air freight logistics.	Lecture, Software demo, Group project	Quiz	CLO4
Content 6 – Performance, Costs & Economics				
Week 11	Air cargo economics: cost structures, pricing strategies, surcharges, revenue management.	Lecture, PP Presentation, Exercises	Assignment	CLO4
Week 12	Performance indicators: on-time delivery, reliability, safety, customer satisfaction. Benchmarking with global airlines.	Lecture, Case study, KPI calculation	Short test	CLO4
Content 7 – Sustainability & Future Trends in Air Freight				
Week 13	Environmental issues: emissions, noise pollution, carbon offsetting, sustainable aviation fuels (SAF).	Lecture, PP Presentation, Group discussion	Assignment	CLO4
Week 14	Future trends: drones, autonomous cargo aircraft, global supply	Lecture, Video demo, Group presentations	Assignment/Presentation	CLO4

	chain integration, green air logistics.			

Part C

16. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

PART D

17. Learning Materials

1. **Recommended Texts / References**

a. Doganis, R. (2019). Flying Off Course: Airline Economics and Marketing. Routledge.

b. Air Transport Association (IATA). (Latest Edition). Air Cargo Tariff and Rules (TACT) Manual.

c. International Civil Aviation Organization (ICAO). (Latest Edition). Annexes related to Air Cargo and Security.

2. Supplementary Readings

d. Wensveen, J. (2018). Air Transportation: A Management Perspective. Routledge.

e. Hinkelman, E. G. (2020). Dictionary of International Trade: Handbook of Air & Ocean Freight Logistics. World Trade Press.

f. IATA. Dangerous Goods Regulations (DGR) Manual.

g. Boeing World Air Cargo Forecast (Latest Edition).

h. Academic journals: Journal of Air Transport Management, International Journal of Logistics Management, Transport Policy.

PML 3111: Maritime Law and Conventions

Part A

1. Course Code: PML 3111
2. Course Title: Marine Law and Conventions
3. Course Type: Core
4. Year/Level/Semester/term: 3rd Year, 1st Semester
5. Academic Session:
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** The Maritime Law and Conventions course provides maritime professionals and students with essential knowledge of the legal framework governing international shipping. It promotes safety at sea, protection of the marine environment, and efficient maritime operations. The course helps learners understand the rights and responsibilities of shipowners, masters, crew, and authorities while ensuring compliance with

international conventions. Overall, it prepares individuals to operate within global legal standards and supports safe, secure, and environmentally responsible maritime transport.

12. Course Objectives: The objective of the Maritime Law and Conventions course is to provide knowledge of international maritime laws and conventions to ensure safe, secure, and environmentally responsible shipping. It helps students understand the rights and responsibilities of maritime personnel, promotes compliance with international regulations, and develops professional competence for effective maritime operations.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: Demonstrate knowledge of the fundamental principles and sources of international maritime law and conventions.

CLO 2: Apply relevant IMO conventions to ensure safe and efficient ship operations.

CLO 3: Explain the legal responsibilities of shipowners, masters, and maritime authorities under maritime law.

CLO 4: Analyze maritime incidents and identify applicable legal provisions and conventions.

CLO 5: Promote compliance with maritime regulations for safety, security, and marine environmental protection.

Course Learning Outcomes (CLO)s	PLO 01 Maritime Logistics Knowledge	PLO 02 Business Problem Analysis	PLO 03 Critical Decision Making	PLO 04 Logistics and the Society	PLO 05 Analytical Ability	PLO 06 Leadership	PLO 07 Environment and Sustainability	PLO 08 Ethics and Morality	PLO 09 Individual Work and Team Work	PLO 10 Project Management and Finance	PLO 11 Communication	PLO 12 Adaptability to Change
CLO 1	✓			✓								
CLO 2	✓			✓							✓	
CLO 3	✓										✓	

CLO 4							✓					✓
CLO 5							✓					✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	Introduction to Maritime Law			
Week 01	• Introduction to Maritime Law Meaning and scope of maritime law • Sources of maritime law (custom, treaties, conventions, national law) • Public vs. Private maritime law	Presentation Lecture Effective class Discussion	Discussion	CLO1
Content 02	**International Maritime Organization (IMO)**			
Week 02	• Introduction to IMO • History and Establishment • Objectives and Functions • Organizational Structure (Assembly, Council, Committees) • Major Conventions (SOLAS, MARPOL, STCW, etc.) • Maritime Safety and Security • Marine Environmental Protection • Role of IMO in Global Shipping			
Content	**Maritime Boundaries and Law of the Sea**			

03				
Week 03 & 04	UNCLOS (United Nation Convention on the Law of Sea): Introduction to UNCLOS • Territorial waters and maritime zones • Exclusive Economic Zone (EEZ) • Continental shelf Baselines internal waters and territorial sea, straits used for international navigation, archipelagic states, contiguous zone, continental shelf, exclusive economic zone, fisheries, land-locked and geographically disadvantaged states The High Seas: Legal Status of the High Seas, High Seas Freedoms, nationality of Ships, Status of Ships on the High Seas International seabed area.	Lecture Effective class discussion	Quiz	CLO3
Content 04	**Settlement of International Maritime Disputes**			
Week 05	Settlement of disputes, The International Tribunal for the Law of the Sea (ITLOS), The International Court of Justice (ICJ), Arbitration and Other Forms of Alternative Dispute Resolutions (ADR)	Lecture Presentation Group work	Group Task	CLO2
Content 05	**Major International Maritime Safety Conventions**			
Week 06 &07	International Convention for the Safety of Life at Sea, 1974 (SOLAS) and the 1978 and 1988 Protocols thereto as amended, ISM Code and safety management systems Load Line Convention STCW Convention	Presentation Lecture Group Work Discussion	Assignment Class test	CLO2

	COLREG (Collision Regulations) Hongkong Convention			
Content 06	**Marine Environmental Protection**			
Week 08 &09	MARPOL – International Convention for Prevention of Pollution from Ships, 1973 as modified by Protocol to thereto known as MARPOL 73/78 as amended, International Convention for Prevention of oil, garbage, sewage, and air pollution International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 and the 1996 Protocol thereto.) Ballast water management Civil Liability Convention (CLC), Civil liability and compensation for pollution damage	Presentation Case based learning Lecture	Presentation Quiz	CLO1
Content 07	**Carriage of Goods by Sea**			
Week 10 & 11	Hague-Visby Rules Hamburg Rules Rotterdam Rules Bills of lading and charter parties	Lecture Presentation Group Based learning Marketing problem solving	Quiz	CLO3
Content 08	**Nationality, Registration, and Ownership of Ships under International Maritime Law**			
Week 12& 13	Nationality, registration and ownership of ships: Nationality of Ships. Ship Registration, Registration and Ownership of Ships, The Concept of 'Genuine Link', Types of Ship Registries.	Lecture Group Based learning Case based learning	Quiz	CLO2
Content 09				

	Contemporary Maritime Issues			
Week 14	• Globalization and maritime transport • Piracy and maritime security • Environmental challenges and marine pollution • Climate change and sea-level rise • Future trends in maritime activities	Lecture	Discussion	CLO4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

c. Continuous Assessment: 40

d. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get

chance for make-up.

Part D

16. Learning Materials

E. Recommended Readings:

i. ***Introduction to Maritime Law – Martin Davies***

ii. ***Maritime Law – Christopher Hill***

iii. ***Principles of Maritime Law – Susan Hodges***

iv. ***The International Law of the Sea – D.R. Rothwell & Tim Stephens***

v. ***Maritime Law and Practice – Edited by various authors***

vi. ***Cases and Materials on Maritime Law – Author varies by edition***

vii. ***Admiralty and Maritime Law – Author varies by edition***

viii. **SOLAS: International Convention for the Safety of Life at Sea, 1974 – Consolidated Edition, 2024**

ix. **MARPOL: International Convention for the Prevention of Pollution from Ships – Consolidated Edition, 2022** (IMO official consolidated text) — includes articles, protocols, annexes & unified interpretations as of 2022.

x. **United Nations Convention on the Law of the Sea (UNCLOS), 1982** – Official treaty text, signed in 1982, entered into force **1994**. (IMO/UN official publication)

Third Year Second Semester

PML 3201: Fleet Management

Part A

1. Course Code: PML 3201

2. Course Title: Fleet Management

3. Course Type: Core Course

4. Year/Level/Semester/term: Third Year, Second Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite: N/A

8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** As a dynamic and complex sector, maritime industry requires specialized knowledge and skills to effectively manage fleets of ships. As the industry evolves, there is a growing demand for professionals who possess comprehensive expertise in various aspects of fleet management, including regulatory compliance, crew operations, technical operations, commercial operations, financial management, and sustainability practices. This advanced course in fleet management aims to equip maritime professionals with the necessary competencies to navigate the challenges and opportunities in today's maritime landscape.

12. **Course Objectives:** The objective of this master's level course is to provide maritime professionals with advanced knowledge and practical skills in fleet management, enabling them to effectively oversee and optimize the operations of maritime fleets. Through a comprehensive curriculum covering key aspects of ship management, regulatory compliance, crew operations, technical operations, commercial operations, financial management, and sustainability practices, participants will develop a deep understanding of the complexities involved in managing fleets of ships. By the end of the course, participants will be equipped to make informed decisions, implement best practices, and drive performance improvements in fleet management.
13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

Upon successful completion of this course, the student will be able to:-

CLO 1: Understand the regulatory framework governing maritime.

CLO 2: Evaluate crew operations management practices and develop strategies to optimize crew recruitment, training, and performance, ensuring efficient crew operations.

CLO 3: Apply technical management principles to oversee ship maintenance, dry docking, and expenditure management, ensuring the efficient and safe operation of maritime fleets.

CLO 4: Analyze commercial operations management practices to optimize revenue generation and minimize operational risks in fleet management.

CLO 5: Develop financial strategies to support fleet management objectives, including assessing

sources of ship finance and funding options.

PLO / CLO	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓				✓							
CLO 2	✓	✓			✓							
CLO 3:	✓	✓			✓							
CLO 4:	✓	✓			✓							
CLO 5:	✓				✓							✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	**Fundamentals of Ship Management**			
Week 01	General knowledge of Fleet/ship Management in all its aspects; History of Ship/Fleet Management, Shipping Company Structures, Type of ship management model, Ship Management Activities and Services, Cause of outsourcing the ship management, Ship Management Contracts, Ship	Lecture Discussion	Class test Written Examination	CLO 1

	Registration and Flagging, Analyze the market to make judgments on the outsourcing criteria. “Flag of Convenience”.			
Content 02	**Regulatory Framework**			
Week 02	Four Pillars of Legislation- SOLAS, MARPOL, STCW, MLC; Ship certificates and documents, Flag State, Port State Control, Classification Society	Lecture Discussions Self-directed learning	Written Examination	CLO 1
Content 03	**Crew Operations Management**			
Week 03 & 04	Crew Management and its Operations, Role and responsibility of crew manager, Demand and Supply of Seafarers, Factors affecting seafarer’s demand and supply, Manning Agent, Role of Employer and Employee, Employment Contract, Documentation and Certification, Crew Change procedure, Crew Wages Function, Managing Claims, Human Element- Identification, Selection and Recruitment of Crew, Cultural Diversity, Crew Training and Education, Managing Crew Performance and Expectations, Role of Marine Academies,	Lecture Case Based learning	Class test Written Examination	CLO 2

	Relationship Between Shipping Companies and Marine Academies			
Content 04	**Technical Operations Management:**			
Week 05 & 06	Technical Management and its activities, Organizational Structure of Technical Department, Relationship with others department, Duties of technical superintend, Ship management agreement function (submission of quotations, contracts and addenda, ship budgets, accounting), running of the ship (accepting new ships and/or out of management, how to assign ships to superintendents, how to manage/monitor ships, importance of ship certification, readiness for trading), Office emergency response functions, Maintaining the ship (planned maintenance, different survey, identifying critical equipment, managing modifications, dry docking and afloat repairs), managing expenditure (operating budget, purchasing, invoicing, stock control, selection and maintenance of supplier	Lecture Case Based learning	Mid term Written Examination	CLO 3

	contracts).			
Content 05	**Commercial Operations Management**			
Week 07 & 08	Commercial Operations, Charter Market, Role of the Charter Party, Charter Party Fixtures, Chartering Process: Offering and Countering, Charter Party Forms, Bills of Lading, Voyage Estimating, Freight and Hire, Deadfreight, Laytime, Demurrage and Despatch, Post-fixture Operations, Voyage Instructions, Appointment of Agents, Vessel's Daily Operations, Monitoring Bills of Lading, Collection of Freight and Hire, Time Sheets and Laytime Calculations, Dealing with Cargo and Charter Party Claims, Bunker Operations	Effective Class Discussions	Written Examination	CLO 4
Content 06	**Financial Resources in Shipping**			
Week 09 & 10	Ship Finance and its necessity, Sources of Shipping Finance, Bank Debt, Export Credit Agencies, Bond Issues, Private Equity, Public Equity, Financial Leasing, Operating Leasing, Mezzanine Financing, Islamic Financing	Effective Class Discussions, Case Based learning	Midterm Written Examination	CLO 5
Content 07	**Basic of Ship Stability**			
Week	Ship Stability, Basic ship	Effective Class	Class Test	CLO 3

11	structure, Types of Equilibrium, Angle of Loll, How to Correct, 6 Degree of Freedom.	Discussions	Written Examination	
Content 08	**Vessel Fuel Management**			
Week 12	Fuel Strategy of Vessel, Pros and Cons of various types of fuel	Effective Class Discussions, Case Based learning	Class Test Written Examination	CLO 3
Content 09	Case study:			
Week 13 & 14	"Maersk Line: Optimizing Fleet Efficiency Through Digitalization" "Carnival Corporation: Crew Welfare and Performance Management" "Navigating Regulatory Compliance: Challenges Faced by MSC" "Hapag-Lloyd: Commercial Strategy and Market Dynamics" "Scorpio Tankers Inc.: Financial Sustainability in a Challenging Market Environment"	Effective Class Discussions Case study	Assignment	CLO 1 CLO 2 CLO 3 CLO 4 CLO 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

c. Continuous Assessment: 40

d. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16.Learning Materials

1. **Recommended Readings**

i) "Ship Stability for Masters and Mates",Authors: Bryan Barrass, D.R. Derrett, Publisher: Butterworth-Heinemann, Year: 2006, ISBN: 978-0750681379

ii) Shipping Operations Management, Editors: I.D. Visvikis, P.M. Panayides, WMU Studies in Maritime Affairs, DOI: https://doi.org/10.1007/978-3-319-62365-8, Publisher: Springer Cham.

PML 3203: Ship Brokering and Chartering

Part A

1. Course Code: PML 3203

2. Course Title: Ship Broking and Chartering

3. Course Type: Core Course

4. Year/Level/Semester/term: Third Year, Second Semester

5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be mentioned
7. Pre- requisite: N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** Chartering is a fundamental element of sea transport since it determines the profit margins of all involved companies. To be successful in chartering requires a multi-faceted knowledge. This course develops advanced knowledge and analytically presents the chartering business from a commercial, operational, economic, financial, legal, contractual perspective.
12. **Course Objectives:** This course covers the fundamentals of ship chartering (hiring) process. Students will be able to evaluate the fundamentals of the chartering business, including the processes, policies, strategies, behaviors, obligations, rights, and decisions of shipowners and charterers (or shippers), before, during, and after the execution of a ship's charter, upon completion of this course.
13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)**

CLO 1 -Be able to Discuss chartering terminology and the crucial role of charterparties in sea transport.

CLO 2 - Be able to explain the obligations and rights of shipowners and charterers.

CLO 3 - Be able to explain the commercial and operational background to the ship chartering business on a general economic, pre-fixture, fixture, and post-fixture basis.

CLO 4 - Be able to discuss chartering negotiations, the risks and liabilities of chartering vessels, and innovative commercial management techniques.

CLO 5 - Be able to learn about the buying behaviors of charterers and shippers, the chartering policies of shipowners, and the role of shipping marketing in changing chartering policies.

Course Learning Outcomes (CLO)	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12
CLO 1	✓			✓								
CLO 2	✓		✓	✓								
CLO 3	✓		✓	✓								
CLO 4	✓	✓	✓	✓								
CLO 5	✓	✓	✓	✓								

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	INTRODUCTION TO THE BUSINESS OF CHARTERING			
Week 01	Indicative Structure: Shipping Market Professionals involved in the Chartering Business - Shipowner, Carrier / Liner Operator, Charterer, Ship broker, Shipper, Industrial Carrier, Chartering Broker, Forwarding Agent, Ship Agent. Types of Charters- Voyage Charter, Time Charter, Bareboat Charter, CoA Charter, Other Hybrid Charters Sources of Chartering Information - Market Reports, Cargo Orders, Position Lists, Indications, Offers-Counter	Lecture Discussion	Class test	CLO 1 CLO 2

	Offers.			
Content 02	FINANCIAL ASPECTS OF CHARTERING			
Week 02	Indicative Structure: Charter Market and Freight Market Charter Market Segmentation Bulk Market, Liner Market. Main Differences of Bulk and Liner Markets, Freight Market Mechanism Freight Indices, World scale	Lecture Discussions Self-directed learning	Class test Assignment	CLO 3
Content 03	COMMERCIAL ASPECTS OF CHARTERING			
Week 03 & 04	Indicative Structure: Pre-Fixture Stages of a Charter • Stage of Sale of Goods • Stage of Investigation • Stage of Negotiation • Case Studies Fixture Stage of a Charter • Drawing up the Charterparty • Signing the Charterparty • Interpretation of the Charterparty • Case Studies Post-Fixture Stages of a Charter Chartering Terminology and Abbreviations	Lecture Case Study	Class test	CLO 3
Content 04	CONTRACTUAL ASPECTS OF CHARTERING-CHARTERPARTIES			
Week 05	Indicative Structure: Types of Charterparties-Voyage Charterparties, Time Charterparties, Bareboat Charterparties, Contracts of Affreightment	Lecture	Mid term	CLO 1 & 4

	Approved and Recommended Charterparties			
Week 06 & 07	Legal Regime of Charterparties The Role of the Charterparty in the Bulk Market Rules of Charterparty Construction Rules of Charterparty Interpretation Common Charterparty Clauses & Concepts Standard Clauses per Type of Charter	Lecture, discussion, independent reading, learning from web-based resources	Mid term	CLO 1 & 4
Content 05	LEGAL ASPECTS OF CHARTERING			
Week 08	Indicative Structure: Shipowners' Obligations at the main Types of Charter • Shipowners' Obligations at the Voyage Charter • Shipowners' Obligations at the Time Charter • Cases Charterers' Obligations at the main Types of Charter • Charterers' Obligations at the Voyage Charter • Charterers' Obligations at the Time Charter • Cases	Effective Class Discussions	Mid term	CLO 4 & 5
Week 09 & 10	Claims Issues and Disputes Resolution • Negotiation • Mediation • Arbitration • Litigation Risks arising from Chartering Vessels • Commercial Risks • Operational Risks • Financial Risks • Ethical Risks	Effective Class Discussions	Mid term	CLO 4 & 5

	• Legal Risks			
Content 06	ECONOMIC ASPECTS OF CHARTERING – VOYAGE ESTIMATIONS			
Week 11	Indicative Structure: Chartering Calculations Stages of Voyage Estimations • First Stage: Voyage Plan • Second Stage: Measurement of Cargo • Third Stage: Calculation of Costs • Fourth Stage: Calculation of Income • Fifth Stage: Final Result • Practical examples	Effective Class Discussions, Calculations Case Based learning	Written Examination	CLO 3
Week 12	Special Estimations Tanker Estimations Practical Examples	Effective Class Discussions, Calculations Case Based learning	Written Examination	
Content 07	ECONOMIC ASPECTS OF CHARTERING – LAYTIME CALCULATIONS			
Week 13 & 14	Indicative Structure: Dry and Liquid Cargo Laytime Stages of Laytime Calculation • 1st Stage: Commencement of Laytime • 2nd Stage: Duration of Laytime • Definite Laytime • Calculable Laytime • Indefinite Laytime • 3rd Stage: Interruptions of Laytime • 4th Stage: Cessation of Laytime • 5th Stage: Final Analysis and Result • Normal Laytime • Average Laytime • Reversible Laytime Practical Examples	Effective Class Discussions, Calculations Case Based learning	Written Examination	CLO 3

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

Learning Materials

1. **Recommended Readings**

   i. Shipbroking and Chartering Practice by Evi Plomaritou, Anthony Papadopoulos (8th Edition), Informa Law from Routledge.

PML 3205: Psychology

Part A

1. Course Code: PML 3205
2. Course Title: Psychology
3. Course Type: Allied Course
4. Year/Level/Semester/term: Third Year, Second Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite: N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** A psychology degree can lead to a rewarding career in social science. The field offers insights into our human experiences, helps us connect with others, and can mean the difference between a life well-lived and a life of challenges.
12. **Course Objectives:** To sum up, psychology is centered on four major goals: to describe, explain, predict, and change or control behaviors. These goals are the foundation of most theories and studies in an attempt to understand the cognitive, emotional, and behavioral processes that people face in their daily lives.
13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)**

    CLO 1: Knowledge Base in Psychology. Upon completion of a Bachelor of Science in Psychology, students will be able to.

    CLO 2: Scientific Inquiry and Critical Thinking.

    CLO 3: Ethical and Social Responsibility in a Diverse World

    CLO 4: Communication.

    CLO 5: Professional Development.

Course Learning Outcomes (CLO)	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
(CLO 1)	✓											
(CLO2)					✓							
(CLO 3)								✓				
(CLO 4)											✓	
(CLO 5)												

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	Introduction to Psychology			
Week 01	Origin of psychology Nature of psychology as a science	Lecture; Presentation;	Quiz	CLO 1
Content 02	Methods of Psychology Scope of Psychology			
Week 02	Methods of Psychology	Lecture, Group discussion	Interim	CLO 1
Week 03	Scope of Psychology	Effective Class Discussions Case Based learning	Assignment	CLO 1
Content 03	Sub-field of psychology			
Week 04 & 05	Different fields of Psychology and their importance	Lecture; Presentation	Group presentation	CLO 1
Content 04	Psychological basis of behavior			
Week	Psychological behavior	Team-Based	Class Test	CLO 1

07	Different types of Psychological Behavior	Learning Case Based Learning		
Content 05	The nervous; Motivation; Emotion: Conflict and adjustment			
Week 08	Motivation	Lecture Effective Class Discussions	Assignment	CLO 4
Week 09	Emotion			
Week 10	Conflict and adjustment	Effective Class Discussions	Role Play	CLO 2
Content 06	Mental health and re-adjustment techniques			
Week 11	Mental Health and Related Issues	Lecture; Case Based learning	Assignment; Short essay	CLO 5 & 3
Content 07	Attention; Perception; Learning; Remembering and forgetting; Intelligence; Testing personality			
Week 12 & 13	Attention; Perception; Learning; Remembering and forgetting; Intelligence;	Effective Class Discussions	Quiz; class test	CLO 4
Week 14	Testing Personality	Lecture, Demonstration of personality tests, Hands-on practice	Practical test; Assignment	CLO 4

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16.Learning Materials

Recommended Readings

a. Andrews. T.G (Ed.), Methods of Psychology, New York: Witey, 1948
b. Bartlett, F.C, Remembering: A Study in Experimental and Social Psychology, Cambridge University Press, 1995

PML 3207: Operations Research

Part A

1. Course Code: PML 3207
2. Course Title: Operations Research
3. Course Type: Core
4. Year/Level/Semester/term: Third Year, Second Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): Business Mathematics
8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: The Operations Research (OR) course is an analytical method of problem-solving and decision-making that is useful in the management of organizations. The course will tremendously help the students in decision-making in the complex environment.

12. Course Objectives: The objective of this course is to enable the student to understand and analyze managerial, logistical and engineering problems to equip him to use the resources such as capitals, materials, productions, controlling, directing, staffing, and machines more effectively.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1 -Be able to use variables for formulating complex mathematical models in management science, industrial engineering and logistics.

CLO 2 - Be able to build and solve transportation models and assignment models.

CLO 3 - Be able to design new simple models, like: CPM, MSPT to improve decision-making and develop critical thinking and objective analysis of decision problems.

CLO 4 - Be able to simulate different complex decision-making software and spreadsheets.

Course Learning Outcomes (CLO)	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12
CLO 1	✓		✓		✓						✓	
CLO 2								✓		✓		✓
CLO 3			✓				✓				✓	
CLO 4						✓		✓				✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	Introduction to operations research			
Week 01	History of operations research, applications, modeling the linear Programming	Lecture Presentation Face to face learning	Ice breaking quiz	CLO 1
Content 02	Linear programming			
Week 02 & 03	Solving the linear programming, the simplex method	Effective Class Discussions Self-directed learning	Class test	CLO 1
Week 04 & 05	Shadow price, theory of the simplex method	Effective Class Discussions Case Based learning	Presentation	CLO 2
Content 03	Duality			
Week 06	Dual theory, sensitivity analysis	Lecture Presentation	Assignment	
Content 04	The transportation and assignment problems			
Week 07 & 08	The transportation problem, a streamlined simplex method for transportation problem	Team-Based Learning Case Based Learning	Quiz	CLO 1 & 2
Week 09 & 10	The assignment problem, a special algorithm for the assignment problem	Group Work Lecture	Quiz	CLO 3
Content 05	Dynamic programming			
Week 11	Characteristic of dynamic programming	Effective Class Discussions	Case Study	CLO 2 & 3

Week 12	Deterministic dynamic programming	Effective Class Discussions	Case Study	CLO 3
Content 06	Integer programming			
Week 13	Prototype examples, BIP applications and formulation examples	Effective Class Discussions Case Based learning	Interview	CLO 1 & 3
Content 07	Application of Software and Spreadsheet			
Week 14	Software and Spreadsheet	Software simulation Group work	Test of simulation	CLO 4

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1. **Recommended Readings**

i. Introduction to Operations Research Paperback – International Edition, January 1, 1995

ii. Introduction to Operations Research, (11th Edition) By Frederick Hillier, Gerald Lieberman.

iii. Fundamentals of Operations Research Hardcover (January, 1968) by And Maurice W. Sasieni; Ackoff, Russell L

PML 3209: Case Study

Part A

1. Course Code: PML 3209
2. Course Title: Case Study
3. Course Type: Capstone
4. Year/Semester: Third year, Second Semester
5. Prerequisite: None
6. Credit value: 2
7. Contact Hours: 28
8. Total Marks: 100

9. Rationale of the Course:

Case Study bridges the theory-practice gap by exposing students to real-world scenarios, fostering critical thinking, and developing problem-solving and decision-making skills essential for success in the maritime industry.

10. Course Objectives:

The Case Studies in Port & Shipping Management course aims to:

- Bridge theory and practice by analyzing real-world maritime challenges.

- Develop critical thinking and problem-solving skills for complex scenarios.
- Sharpen communication and collaboration through case discussions.
- Cultivate strategic thinking and ethical awareness in decision-making.

11. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcomes (PLOs)

CLO 1: Analyze real-world maritime challenges using theory
CLO 2: Evaluate solutions and develop effective strategies for case studies
CLO 3: Communicate findings and recommendations clearly
CLO 4: Collaborate effectively in case study discussions
CLO 5: Apply ethical considerations in maritime decision-making

Course Learning Outcomes (CLO)	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12
CLO 1	✓	✓	✓							✓	✓	
CLO 2	✓	✓	✓	✓						✓		✓
CLO 3				✓	✓			✓			✓	
CLO 4				✓	✓			✓	✓			✓
CLO 5												

Part B:

12. Example of case study: Can be completed individually or in team.

Case 1: Market analysis

Ports facilitate trade. A port system of a country should enable importers and exporters. Every good accessibility to international markets. In addition, port complexes often are also important sites for logistics activities (warehousing and distribution) as well as port related industrial activities, such as petro-chemical industries, energy plants and steel mills. Thus, in the market analysis phase, detailed knowledge about a countries port system and relevant future developments is required.

Didactical approach

Teams will conduct a market analysis. Lectures will be given on port and shipping economics. To develop the students' judgement skills, the groups will discuss their approach, collected data and findings with another group.

Assignment

The assignment is to analyze the market for port development in a specific country. This includes the following steps:

1. Conduct desk research on market analysis and make a concise overview of the theoretical perspective on conducting market analysis.

2. Determine the main industries in the country, the main production / consumption centers and the main import and export products.

3. Analyze the trends and developments of the economy in the country, including GDP growth forecasts.

4. Assess the hinterlands of the ports in the country and the infrastructure connecting the sea port with important densely populated areas and industrial complexes.

5. Analyze (and discuss with experts) which segments and industries have a growth perspective.

6. Write a report which includes the following elements: GDP growth, population development, the most important freight transport corridors, the connection of the ports in the country to international maritime networks (with specific attention for the container shipping networks), location of important industrial clusters, and an analysis of the most important import-export commodities (trade volumes).

Case 2: Analysis of supply chains, trends, developments and port competition

90% of world trade volumes move over the oceans. This volume has grown substantially. But not all ports grow in similar fashion; some ports grow while others decline. Multiple historical, geographical, economic and political factors explain such patterns. Thus, a more detailed analysis than the one delivered in Case 1 is required to be able to identify potential port development

projects. Central to this in-depth analysis is developing deep insights in a country's most important supply chains.

Didactical approach

- Teacher elaborates on port competition and/or supply chain management.

- Secondly, the teams will discuss with another team the outcome of the Port competition analysis. The lecturers will provide a planning.

- Teams will present their findings to the other teams at the end of the period.

Assignment

The assignment is to develop in-depth analysis and deep insights in a country's most important supply chains and the resulting opportunities for port development. This includes the following steps:

1. Describe the history of the port system. How has the port system evolved over the years? What were important milestones that resulted in a significant increase /decrease of trade volumes?

2. Identify the main commodities handled by the ports in the country, and develop deep insights regarding these supply chains (who are the end users, what are competing supply chains, may alternative technologies disrupt the supply chain, what determines the volumes of production and consumption).

3. Make an analysis of the supply chains and assess the market potential of the most relevant commodities. Use trade statistics for this analysis and make a forecast for the freight flows in the country for next 5 years using a scenario method.

4. Assess the port development potential in the country. Is there a need for new terminals to facilitate efficient flow of commodities (dry bulk, liquid bulk, container, logistics, port related industries (e.g. chemicals, steel mills, energy plants).

5. Conduct desk research on port competition and make a concise overview of the theoretical concepts of port competition and assess the competitive position of the major ports in the country. Make a SWOT analysis for the different ports based on an internal analysis (what are the inherited resources which give the port a competitive edge. Take into account factor conditions such as

geographical location, people, equipment, infrastructure, port governance) as well as an external analysis (rival ports, customer base, supplier base, role of the government, related and supporting industries, demand from the market it serves).

6. Finalize part 2 with a rank of different potentially attractive port development opportunities. Describe each of the opportunities in terms of new activities that can be attracted to the port (such as terminals for dry/liquid bulk and containers, but also warehousing activities and port related industries. The highest ranking port development opportunity is selected and explored further.

Case 3: Stakeholder analysis

In order to have a good understanding of the feasibility of developing a port development partnership, deep understanding of the current situation, especially with regards to the stakeholders and port policy frameworks and regulations is required. The different involved parties have their own interests, roles, functions, income models, behavior, relations, wishes, strategy, ideas, etc. The central question in this assignment is to assess the feasibility of different partnership models.

Didactical approach

- Teacher elaborates on strategic environmental management (SEM) from a corporate social responsibility perspective. SEM is a smart way to approach stakeholders, to map and to manage them.

- Teacher elaborates about stakeholder management. What is it and how to deal with your stakeholders.

- The teams will discuss with another team their approach, collected data and findings.

Assignment

The assignment is to analyze the local situation for potential port development in a particular port or port area. This includes the following steps:

1. Describe the strategy of the port authority.

    a. What is the port's strategy, commercial policy (e.g. focus on particular commodities,

industries).

b. How is the port implementing the strategy (e.g. developments to accommodate particular commodities and customers).

c. Which companies have established facilities, make a list of newcomers.

2. Conduct desk research on stakeholder management and make a concise overview of stakeholder management from a theoretical perspective.

3. What are the parties involved in port development? Think broad (include all stakeholder groups).

4. What is the income model of the different players, in particular the port authority?

5. Determine the institutional and legal situation in a country in a particular port regarding port development.

6. Analyze the relation between the parties and the impact they have on the port development. Which role do they play? Which issues do they have/create? What power do they have?

7. Advice PoR on the strategy required to become successful in this port development initiative, by assessing the feasibility as well as the 'fit' with the goals of PoR, of the following partnership models:

a. A port development partnership where PoR is a majority shareholder and invests with partners in port infrastructure, to be leased to private companies (the landlord model with private investments in port infrastructure – this model is proposed in Porto Central).

b. A port development partnership where PoR is a majority shareholder in a Port Management Company, that gets a concession from a publicly owned port asset company (so that the port infrastructure remains 100% owned by the government) to develop these assets.

c. A port development partnership where PoR is a long term advisor of a government owned port development company, potentially with a minority share for PoR.

Part C

13. Assessment and Evaluation

The marks distribution is as follows:

Content	Marks
Report	60%
Presentation	30%
Oral Exam	10%

Mapping CLOs with the Teaching-Learning and Assessment Strategy:

CLOs	**Teaching-Learning Strategy**	**Assessment Strategy**
CLO 1	- Case study selection covering diverse port and maritime issues. - Interactive lectures on key concepts and terminology. - Case analysis discussions focusing on core issues and theoretical application.	- Written case study analyses through report requiring application of theory to identify key challenges. - Active class participation and discussions for demonstrating understanding and theoretical connections.
CLO 2	- Case study discussions exploring various solutions and their effectiveness. - Guest speaker/teacher insights on real-world strategies. - Collaborative learning activities (optional) to brainstorm and develop solutions as well as enable critical thinking abilities.	- Written case study analyses through report proposing and evaluating solutions with justification. - Case study presentations (individual/team) outlining proposed strategies.
CLO 3	- Case study presentations (individual/team) practicing clear communication. - Feedback on presentation skills (structure, delivery, visuals).	- Case study presentations assessed on clarity, conciseness, and effectiveness in conveying findings through literature reviews and recommendations. - Class participation evaluating communication skills during discussions.
CLO 4	- Collaborative learning activities (optional) requiring teamwork and communication. - Group discussions with assigned roles to encourage participation.	- Peer evaluation for teamwork and communication during collaborative learning activities (optional). - Class participation observations assessing collaborative engagement in

		discussions.
CLO 5	- Case study selection including scenarios with ethical dilemmas. - Discussions on ethical principles in maritime business practices. - Integration of ethics considerations into case analysis and solution development.	- Written case study analyses demonstrating consideration of ethical implications in proposed solutions. - Class participation observations assessing ethical considerations raised during discussions.

PML 3211: Entrepreneurship

Part A

1. Course Code: PML 3211
2. Course Title: Entrepreneurship
3. Course Type: Allied
4. Year/Level/Semester/term: 3rd Year, 2nd Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** This course introduces students to the principles, processes, and practices of entrepreneurship with a focus on the maritime, port, and logistics sectors. It aims to develop entrepreneurial thinking and equip students with the knowledge and skills to identify opportunities, develop business models, and launch ventures in the maritime industry. The course blends theory with practical applications relevant to the dynamic maritime business environment.

12. Course Objectives:

i. To provide students with a clear understanding of entrepreneurship and its role in economic and maritime sector development.

ii. To help students identify, evaluate, and develop new business opportunities in the port

and logistics industry.

iii. To develop students' skills in business planning, innovation, and resource mobilization.

iv. To enable students to understand the challenges of starting and managing small and medium enterprises (SMEs).

v. To build leadership and decision-making capabilities for maritime entrepreneurship.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

After completing this course, students will be able to:

i. **CLO 1:** Explain the fundamental concepts and importance of entrepreneurship in the maritime and logistics sector.

ii. **CLO 2:** Identify and analyze business opportunities and develop viable entrepreneurial ideas.

iii. **CLO 3:** Prepare and present an effective business plan for a port, shipping, or logistics-based enterprise.

iv. **CLO 4:** Demonstrate knowledge of financing, management, and marketing for startups and SMEs.

v. **CLO 5:** Evaluate risks and sustainability factors in maritime entrepreneurship.

Course Learning Outcomes (CLO)s	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓			✓								
CLO 2		✓			✓							
CLO 3			✓						✓		✓	
CLO 4						✓				✓		
CLO 5							✓	✓				✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	Introduction to Entrepreneurship			
Week 01	Definition, nature, scope, and importance of entrepreneurship; role in economic and maritime sector development. Types of Entrepreneurs and Entrepreneurship.	Presentation Lecture Effective class Discussion	Discussion	CLO 1
Content 02	**Entrepreneurial Process**			
Week 02	Idea generation, opportunity identification, feasibility analysis, and innovation in the maritime industry	Lecture, Brainstorming Workshop	Class Test, Quiz	CLO 2
Content 03	**Entrepreneurial Environment**			
Week 03	Economic, legal, and policy environment for entrepreneurship in Bangladesh; port and logistics sector prospects External and internal analysis, & business stake holder analysis.	Lecture Effective class discussion	Quiz	CLO 2
Content 04	**Business Planning**			
Week 04	Elements of a business plan; vision and mission statements.	Presentation Lecture	Assignment	CLO 3

	How to write a business plan, preparing and presenting a maritime startup business plan.	Group Work		
Content 05	**Entrepreneurial Finance**			
Week 05	Operating and capital budgets, pro forma (cash flow, profit/loss statement. Sources of finance, venture capital, angel investors, government support programs for maritime SMEs	Lecture, Case-Based Learning	Presentation	CLO 4
Content 06	**Marketing for Entrepreneurs**			
Week 06	Market research, Industry and competitor analysis, description of venture, difference between marketing and a business plan, segmentation, branding, and promotion for new maritime ventures	Lecture, Group Exercise	Quiz	CLO3
Content 07	**Organizational Plan**			
Week 07&8	Developing the management team, legal forms of business, tax attributes of forms of business & building the successful management team and a successful organizational culture.	Lecture Presentation Group work	Group Task	CLO 4 & 5
Content 08	**Innovation and Technology in Entrepreneurship**			

Week 09	Innovation management, digital entrepreneurship, e-logistics, and smart port initiatives	Lecture Group Based learning Case based learning	Quiz	CLO 2 & 5
Content 09	**Risk Management**			
Week 10	Entrepreneurial risk identification and mitigation; sustainable entrepreneurship in port and shipping.	Lecture Presentation	Assignment	CLO 5
Content 10	**Legal and Ethical Issues in Entrepreneurship**			
Week 11 &12	Business registration, intellectual property rights, environmental compliance	Lecture	Group presentation	CLO4
Content 11	**Final Project Presentation:**			
Week 13 &14	Preparation and presentation of a business plan related to port, shipping, or logistics entrepreneurship	Group Presentation	Business Plan Evaluation	All CLOs

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

c. Continuous Assessment: 40
d. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

F. Recommended Readings:

i. **Robert D. Hisrich, Michael P. Peters, & Dean A. Shepherd (2020)** – *Entrepreneurship*

ii. **Donald F. Kuratko (2019)** – *Entrepreneurship: Theory, Process, Practice*

iii. **Timmons, J.A., & Spinelli, S. (2016)** – *New Venture Creation: Entrepreneurship for the 21st Century*

iv. **Bygrave, W.D., & Zacharakis, A. (2018)** – *Entrepreneurship*

PML 3213: Study Tour 3

Part A

1. Course Code: PML 3213
2. Course Title: Study Tour 3
3. Course Type: Capstone
4. Year/Semester: Third year, 2nd Semester
5. Prerequisite (if any): None
6. Credit value: 1.5
7. Total Marks: 100

8. Rationale of the Course:

The course shall offer students hands-on learning experiences, promoting an extensive understanding of port facilities, operations and the dynamics of maritime industry.

9. Course Objectives:

This course will help the students relate theoretical knowledge to practical fields and industry standards.

10. Course Learning Outcomes (CLOs):

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

CLO 1: Demonstrate an understanding of the maritime industries of Bangladesh
CLO 2: Understanding the importance of sea port facility developments in Bangladesh
CLO 3: Understanding sea port operation procedures and logistical challenges in Bangladesh
CLO 4: Understanding regulatory frameworks governing maritime activities in Bangladesh and analyze their influence on industry standards as well as international compliance

Part B

11. Contents and guidelines

Study tour to various ports, container terminals, inland depots, multimodal transport nodes and maritime regulatory organizations for a duration of 2-3 business days. Tours to be planned by the respective course coordinator in consultation with the program coordinator to suitable locations in advance considering the practical demonstrations of the relevant theory courses which are already taught during the ongoing and past semesters. Designated officers/representatives from the host ports and maritime organizations shall act as a demonstrator to describe various activities of their individual organizations, challenges and organizational framework as per the prior request of the tour coordinator taking into account the CLOs.

Part C

13. Assessment and Evaluation

The distribution of marks for the performance evaluation of each student on the study tour is

given below:

a. Tour Attendance: 20%

b. Active Participation: 20%

c. Report Submission: 30%

d. Presentation: 30%

Fourth Year First Semester

PML 4101: Marine Insurance and Claim

Part A

1. Course Code: PML 4101
2. Course Title: Marine Insurance and Claim
3. Course Type: Core
4. Year/Level/Semester/term: Year 4, Semester 1
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** This course provides the fundamental knowledge on principles of marine insurance, policy, and claim including marine cargo, hull, protection and indemnity (P&I), and other liability coverage and how these interrelate. This course is also intended to help students to gain a crucial awareness and understanding of the marine insurance industry and how it performs.
12. **Course Objectives:** This course familiarizes the students with the essential knowledge on principles of marine insurance, policy and claim. It explains the considerations of underwriting along with claims procedures need to be followed. It also helps to develop an understanding of general average and its adjustments from insurance perspectives and about the procedural aspects of recoveries from various third parties.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO 1 - Be able to understand the legal and financial aspects of marine insurance.

CLO 2 - Be able to know about the calculation of insurance claim.

CLO 3 - Be able to analyze different marine accidents and cases.

Course Learning Outcomes (CLO)	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11	PLO 12
CLO 1	✓											
CLO 2	✓											
CLO 3	✓											

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	Introduction to Marine Insurance			
Week 01	Evolution and need for Marine Insurance, Functions, nature and types of Marine Insurance, Marine Insurance Act, Marine Insurance Policy.	Lecture, Presentation, Effective Class Discussions		CLO 1
Week 02	Disclosure and non-disclosure, Express and implied warranties, Physical hazards, Exceptions, Insurable Interest, Duty of Fair Presentation, Roles within	Lecture, Presentation, Effective Class Discussions		CLO 1

	marine insurance (broker; underwriter; adjuster; etc), Underwriting process, Contracting insurance, Disputes			
Content 02	**Cargo Insurance**			
Week 03	Background and definition, **Proposal** Form, factors for acceptance, type of vessel, the Voyage or Transit, Type of Cargo, Packing forms, Containerization, Conditions of Insurance, INCOTERMS	Lecture, Presentation,	Classroom exercises	CLO 1 & 3
Week 04	Warranties, Declaration Forms, Conditions, Exclusions, Causation, Indemnity principle, Risks, Perils, Insurance duration, Claims and losses, Recoverable expenses, Subrogation and double insurance,	Lecture, Presentation,	Classroom exercises	CLO 1 & 3
Week 05	International sales contracts, Institute Trade Clauses, Institute Cargo Clauses (A, B, and C - 1983 and 2009 versions) Marine Cover Note, Policy Form, endorsements, Container Transport.	Lecture, Presentation,	Classroom exercises	CLO 1 & 3
Content 03	Hull & Machinery Insurance			
Week 06	Types of hull policy, Hull underwriting, Time and voyage policies, Institute Time Clauses (Hulls), Hull proposal form –	Lecture, Presentation, Effective Class Discussions	Assignment	CLO 1 & 3

	details of the vessel –trade details –documents – Valuation of ship – Classification of vessels – Rating factors			
Week 07	Hull initial rating – Renewal rating – Risks with adverse underwriting features – Warranties – Insurance of Fishing vessels – conditions of Insurance – insurance of sailing vessels – Insurance of Inland Vessels – Damage Cargo – Salvage Loss	Lecture, Presentation, Effective Class Discussions	Assignment	CLO 1 & 3
Content 04	Additional Marine Insurance Coverage			
Week 08	New building risk, Cover for piracy, War and strikes clauses, Freight insurance, Yacht insurance, Increased Value (IV), Mortgagees' Interest insurance, Builders' risk insurance, Overdue insurance.	Presentation, Team-Based Learning	MCQ	CLO 1 & 3
Content 05	Protection & Indemnity (P&I) Insurance			
Week 09	History of P&I Clubs, Rationale behind mutual insurance, Role of P&I Clubs, Constitution of a Club, Management of a Club, Legal status of the Rule Book, Specialist Clubs and special covers, P&I Clubs in practice, Third party liabilities including death and personal injury claims and	Effective Class Discussions, Team based Learning	Presentation	CLO 1 & 3

	pollution damage, ship owner's Protection and liability.			
Content 06	Reinsurance			
Week 10	Nature and purpose of reinsurance, Privity of contract, Reinsurance in practice, Types of reinsurance, Different categories of contracts, Methods of transaction, Relationships between primary and reinsurance contracts, Relationship between assured/reassured/ reinsurer, Risk retention groups	Presentation, Team-Based Learning	Quiz	CLO 1
Content 07	Marine Claims			
Week 11	Actual Total Loss – Constructive Total loss – Particular Average – Damage Cargo – Salvage Loss – General Average Loss – Sue and labour charge – Particular Charges – Salvage charges –	Presentation, Lecture	Case study	CLO 2
Week 12	Forwarding Charges – Cargo Claims – Procedures – Intimation of Claim – Insurance Surveys – Claims Payable Abroad – Recoveries from third parties – Hull Insurance Claims –Total Loss – Partial loss	Presentation, Lecture	Case study	CLO 2
Week 13	Particular Average – General Average – Salvage charges – Sue and labour Charges – Collision	Presentation, Lecture	Case study	CLO 2

	Liability –Claims of Ocean going vessels –fishing vessels –sailing vessels –inland vessels – General Average –Application of insurance to G.A Contribution and G.A Sacrifice.			
Content 08	Marine Recoveries			
Week 14	Marine recoveries from third parties –Carriage of Goods by Sea Act–Ship owner's responsibility, liabilities/rights and immunities – Notice of loss or damage – Time limit for legal action– Liabilities of Port Authorities – major and other ports – Postal Authority – Customs –Salvage Disposal.	Lecture, Presentation, Effective Class Discussions	Class test	CLO 1

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

c. Continuous Assessment: 40

d. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%

Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1) Recommended Readings:

i. Marine Insurance: An Essential Guide to Liability, Insurance, Law, the Market and Claims in the Maritime Industry by Sam Ignarski

ii. Marine Cargo Insurance (Lloyd's Shipping Law Library) by John Dunt

iii. The Function of Protection & Indemnity Marine Insurance in Relation to Ship Owner´s Liability for Cargo Claims: Framing the Legal Context by Joseph Tshilomb JK and . Llm

iv. Marine Insurance: Cargo Practice v. 2 by Robert H. Brown

v. Marine Insurance Law and Practice by Francis Rose

PML 4103: Strategic Management

PART A

1. Course Code: PML 4103

2. Course Title: Strategic Management

3. Course Type: Allied

4. Year/Semester/term: Year 4, Semester 1

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated
7. Pre- requisite (if any): N/A
8. Credit Value: 03
9. 9.Contract Hours: 42
10. Total Marks: 100
11. **Rationale of the course:** The course is designed to help the students apply the knowledge of the Strategic concept in the maritime and corporate sectors.
12. **Course Objectives:** On completion of this course, students will be able to:
    i. Understand the strategic decisions that maritime organizations make and have the ability to engage in strategic planning.
    ii. Explain the basic concepts, principles and practices associated with strategy formulation and implementation.
    iii. Integrate and apply knowledge gained in basic courses to the formulation and implementation of strategy from holistic and multi-functional perspectives.
    iv. Analyze and evaluate critically real-life company situations and develop creative solutions, using a strategic management perspective. 5. Conduct and present a credible business analysis in a team setting.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

CLO 1: Apply the knowledge in formulating, evaluating a corporate strategy.

CLO 2: Identify the contemporary strategies in the maritime field is under implementation and the implication of strategic management theories on it.

CLO 3: analyze the competitive situation and strategic dilemma in dealing with dynamic global business environment in terms of rapidly changing market trends and technological advancement

CLO 4: Evaluate challenges faced by management in implementing and evaluating strategies based on the nature of business and culture as a senior role in Management.

PLO / CLO	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓		✓									
CLO 2				✓								
CLO 3					✓							✓
CLO 4		✓					✓					

Part B:

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Correspondin**
Content 01	**Introduction to Strategic Management:**			
Week 01	Introduction Strategy and Strategic Management	Class Lecture	Class Participation	CLO 1
Week 02	Importance & Significance of Strategic Management in Maritime Domain.	Class Lecture	Class test	
Week 03	Mission, Vision, Goals and Objectives	Class Lecture and grp discussion	Quiz	CLO 1,3
Week 04 & 05	Corporate Strategic Management and Maritime Business	Class Lecture	Class test	CLO 2,3
Content 02	**Strategic Analysis and approach: Corporate and Maritime perspective:**			
Week	Strategic Analysis and Models,	Class Lecture and	Presentation	CLO3,4

06 & 07	Perspective Maritime Domain and Case studies	grp discussion		
Week 08 & 09	Strategic approach: Management solutions to long term in the complexity of maritime business.	Class lecture	Assignment	
Week 10 & 11	Formulation of Strategy: Levels of Strategy: a. Corporate Strategy, Business Strategy, Functional Strategy.	Class lecture	Class test	CLO3,4
Week 12 & 13	Analysis of Corporate Strategy & Effectiveness in Maritime perspective.	Class lecture and Case analysis	Written exam	CLO 4
Week 14	**Case study**	Class lecture and Case analysis	Assignment	

Part C:

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%

Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

16. Learning Materials

1. **Recommended Readings**

1) Strategic Management by Trehan, Wiley India.
2) Strategic Management Creating Value in a Turbulent World by Fitzroy, Wiley India.
3) Integrated Coastal and Ocean Management: Concepts and Practices (Constraints Management) by Biliana Cicin-Sain and Robert W. Knecht.
4) Blue Ocean Strategy by W. Chan Kim and Renée Mauborgne

PML 4105: Project Management

Part A

1. Course Code: PML 4105
2. Course Title: Project Management
3. Course Type: Allied
4. Year/Level/Semester/Term: Fourth Year, First Semester
5. Academic Session: 2025-2026
6. Course Teacher/Instructor: To be nominated
7. Prerequisite (if any): Management, Operations Management
8. Credit value: 3
9. Contact Hours: 42
10. Total Marks: 100

11. Rationale of the Course:

In today's world businesses are becoming more agile because they are using more project approach

than traditional approach in developing products. Project management is no longer viewed as a system entirely internal to the organization. It is now a competitive weapon that brings higher levels of quality and increased value-added opportunities for the customers.

12. Course Objectives: The objective of the course is to enable the students in developing project profiles, schedule activities and determine the cost-benefits of a project.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO-01: understand why project management is becoming an important and powerful practices in business.

CLO-02: understand how effective project management contributes to achieving strategic objectives.

CLO-03: explain the criteria for a successful selection and screening of a project

CLO-04: determine the different types of costs associated with a project

CLO-05: understand the different project scheduling techniques and distinguish among the main forms of terminations

PLO / CLO	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO-01	✓											
CLO-02					✓							
CLO-03				✓								
CLO-04								✓				
CLO-05				✓								

Part B

14.Course plan specifying content, CLOs, co-curricular activities (if any), teaching-learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01				

Week 01	**Introduction to Project Management: Defining Project:** Need for Projects – Project Characteristics – Project Life Cycle – Determinants of Project Success.	Lecture	Q/A, Quiz	CLO 1
Content 02				
Week 02 & 03	**Project Organization:** Organizational strategy – Stakeholder Management – Organizational Structure – Organizational Culture	Lecture	Q/A, Short questions	CLO 2
Content 03				
Week 04 & 05	**Project Selection:** Approaches to Project Screening and Selection – Financial Models – Project Portfolio Management	Lecture, Problem Solution	Q/A, Short Test	CLO 3
Content 04				
Week 06 & 07	**Leadership and Project Management:** Leaders Vs Managers – Behavior of a leader – Traits of effective leader –Project Management Ethics	Lecture, Assignment	Q/A, Broad Questions	CLO 1 & 2
Content 05				

Week 08 & 09	**Cost Estimating and Budgeting:** Types of Costs – Cost Estimation – Creating a Budget – Budget Contingencies	Lecture, Problem Solution	Q/A, Short Test	CLO 4
Content 06				
Week 10 & 11	**Project Scheduling:** Key Terminology – Developing a Network – Estimation of Duration – PERT - Determining the Critical Path – Determining Project Completion Time – Gantt Chart – CPM – Cost Estimate of a Project - Crashing a Project	Lecture, Problem Solution	Q/A, Short Test	CLO 5
Content 07				
Week 12	**Resource Management:** Basis of resource constraints – Resource loading – Resource Leveling – Loading Charts – Multi-project Environments	Lecture, Problem Solution	Q/A, Short Test	CLO 5
Content 08				
Week 13	**Project Evaluation and Control:** Control Cycles – Monitoring Performance – Value Management –	Lecture, Assignment	Q/A, Broad Questions	CLO 5 CLO 2

	Effective use of Earned Value Management			
Content 09				
Week 14	**Project Termination**: Types of Termination – Natural Termination – Early Termination – Final Project Report	Lecture	Q/A, Quiz	CLO 5

Part C

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%

Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16. Learning Materials

1. Recommended Readings

Suggested Text:

Pinto, Jeffrey K., *Project Management – Achieving Competitive Advantages*, Pearson, New York

Reference Books:

i. Meredith, Jack R. and Samuel J. Mantel, Jr., *Project Management: A Managerial Approach*, Seventh Ed. New Jersey: John Wiley & Sons

ii. Kerzner, Harold, *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*, Tenth Ed. New Jersey: John Wiley & Sons

iii. Mantel, Jr., Samuel J., Jack R. Meredith, Scott M. Shafer, and Margaret M. Sutton, *Project Management in Practice*, Fourth Ed. New Jersey: John Wiley & Sons, Inc.

PML 4107: Total Quality Management

Part A

1. Course Code: PML 4107

2. Course Title: Total Quality Management

3. Course Type: Allied

4. Year/Semester/term: Year 4, Semester 1

5. Academic Session: 2025-26

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite: N/A

8. Credit Value: 03

9. 9.Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: The course is designed to help the students to apply the knowledge

of Total Quality management (TQM) in complex Maritime Business environment.

12. Course Objectives:

To analyze the significance of Total Quality management in modern organizations.

Formulate the effective solutions to the Business problems with the principles of TQM.

13. Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)

CLO 1: apply knowledge of business excellence models and assess organization ‘s performance making reference to their criteria;

CLO 2: Explain the principle of total quality management and peculiarities of their implementation

CLO 3: Apply quality management methods analyzing and solving problems of organization in Leadership perspective

CLO 4: explain the prerequisites of evolution of total quality management.

PLO / CLO	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1	✓											
CLO 2	✓											
CLO 3					✓	✓						
CLO 4										✓		

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	Topic	Teaching-Learning Strategy	Assessment Strategy	Corresponding CLOs
Content 01	**Introduction to Total Quality Management:**			
Week 01	Quality basics and history Total quality concept, Evolution of quality concepts and quality paradigms.	Class Lecture		CLO 1 and 4
Week 02	Evolution of quality concepts and quality paradigms.	Class Lecture	Class test	
Content 02	**Organization and Process for TQM:**			
Week 03 & 04	Organization for total quality, process management	Class Lecture	Class test	CLO 1
Week 05	Quality teams and teamwork processes Basic problem-solving tools for quality improvement, Leadership and empowerment.	Class Lecture and Group Discussion	by Formative demonstration	CLO 3
Week 06 & 07	Basic problem-solving tools for quality improvement, Leadership and empowerment.	Class Lecture and Group Discussion	Class test	
Content 03	**Quality Standards and Design:**			
Week 08	Quality standards and award model. TQM implementation and case studies	Case study and Grp discussion	Assignment	CLO 2 and 3
Week 09	Quality through planning and design: QFD, policy		Assignment	

	deployment,			
Week 10	Quality design for six sigma, SPC	Class Lecture and Group Discussion	Class test	CLO 3
Week 11 & 12	Quality through innovation: TRIZ	Class Lecture	Written Exam	CLO3,4
Week 13	Quality through improvement: Six sigma, lean six sigma, kaizen	Class Lecture	Written Exam	CLO4
Week 14	Quality through IT, Aroused, Selling and Green Office	Class Lecture	Written Exam	CLO 4

Part C:

15. Assessment and Evaluation

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%
Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

16. Learning Materials

1. Recommended Readings

i) Introduction Total Quality Management (TQM) Principles, Methods, and Applications Sunil Luthra, Dixit Garg, Ashish Agarwal,and Sachin K. Mangla

ii) Handbook of Total Quality Management Christian N. Madu, Ph.D

iii) Fundamentals of Total Quality Management Process analysis and improvement Jens J.Dahlgaard

iv) Division of Quality and Human Systems Engineering, Linköping University,Sweden Kai Kristensen Aarhus School of Business, Aarhus, Denmark and Gopal K. Kanji Centre for Quality and Innovation, Sheffield Hallam University.

PML 4109: Smart Port Management

Part A

1. Course Code: PML 4109

2. Course Title: Smart Port Management

3. Course Type: Core Course

4. Year/Level/Semester/term: Fourth Year, First Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: To be nominated

7. Pre- requisite (if any): N/A

8. Credit Value: 03

9. Contract Hours: 42

10. Total Marks: 100

11. Rationale of the course: Digital technologies and automation are transforming the maritime industry. Ports, vital to global supply chains, are leading this transition. Smart port technologies improve efficiency, security, sustainability, and integration with global logistics networks

instead of traditional port administration. Terminals must have smart ports in order to compete in a digital and interconnected world. This course, "Smart Port Management," prepares students for this changing environment. It covers smart port management principles, technology, and practices. The training meets the growing need for professionals to lead digital transformation to ensure efficiency, security, and sustainability. The course prepares students for maritime and logistics issues and possibilities by focusing on real-world applications and emerging trends.

12. **Course Objectives:** In the "Smart Port Management" course, students learn how to lead the digital transformation of ports in the modern maritime industry. In this course, students will learn about smart port concepts like IoT, automation, big data, and cybersecurity. Students learn essential decision-making skills for evaluating and using these technologies to improve port operations, sustainability, and economic performance. Students will learn how to integrate smart port technologies with global supply chains to support flawless logistical operations in an interconnected world. The course also promotes sustainable behaviours and regulatory compliance by raising awareness of smart technology's environmental and ethical implications. This course prepares students for leadership roles in maritime and logistics by strengthening their problem-solving, project management, and adaptation abilities to handle the challenges and possibilities of a quickly changing business.

13. **Course Learning Outcomes (CLOs) and Mapping of CLOs with Program Learning Outcome (PLOs)**

PLO / **CLO**	PLO 01	PLO 02	PLO 03	PLO 04	PLO 05	PLO 06	PLO 07	PLO 08	PLO 09	PLO 10	PLO 11	PLO 12
CLO 1: Understanding Smart Port Concepts	✓	✓										✓
CLO 2: Application of Digital	✓	✓	✓		✓							✓

Technologies												
CLO 3: Port Automation and Robotics	✓		✓		✓							✓
CLO 4: Infrastructure and Sustainability					✓		✓					✓
CLO 5: Cybersecurity in Port Operations	✓				✓			✓				✓
CLO 6: Integration with Global Supply Chains	✓			✓	✓					✓		
CLO 7: Legal and Regulatory Compliance				✓				✓				✓

Part B

14. Course plan specifying content, CLOs, co-curriculum activities (if any), teaching learning and assessment strategy mapped with CLOs.

Week	**Topic**	**Teaching-Learning Strategy**	**Assessment Strategy**	**Corresponding CLOs**
Content 01	Introduction to Smart Port Concepts			
Week 01	• Definition and significance of smart ports • Evolution of port management • Traditional vs. smart ports • Key technologies driving smart ports	Lecture	Class test Summative	CLO 1
Content 02	Digitalization in Port Management			
Week	• Internet of Things (IoT) in ports	Effective	Class test	CLO 2

02 & 03	• Automation in cargo handling and terminal operations • Digital Twin technology for ports • Role of big data and analytics in port operations	Class Discussions Self-directed learning	Summative	
Content 03	Port Automation and Robotics			
Week 04	• Automated guided vehicles (AGVs) in ports • Autonomous cranes and yard operations • Impact of robotics on labor and efficiency • Case studies of automated ports	Lecture Presentation	Midterm Summative	CLO 3
Content 04	Smart Port Infrastructure			
Week 05 & 06	• Smart grids and energy management in ports • Sustainable port infrastructure development • Green ports and environmental considerations • Role of renewable energy in ports	Team-Based Learning Case Based Learning	Midterm Summative	CLO 4
Content 05	Cybersecurity in Ports			
Week 07& 08	• Cybersecurity challenges in smart ports • Protecting port data and digital infrastructure • Cyber risk management strategies • Case studies on cybersecurity incidents in ports	Effective Class Discussions	Class test Summative	CLO 5
Content 06	Smart Port Logistics and Supply Chain Management			
Week 09 & 10	• Integration of smart ports with global supply chains • Smart logistics and real-time tracking • Blockchain applications in port logistics • Case studies on smart supply chain	Effective Class Discussions Case Based learning	Class test Summative	CLO 6

	management			
Content 07	Port Community Systems (PCS)			
Week 11&12	• Concept and development of Port Community Systems • Benefits and challenges of PCS • Integration of PCS with global trade networks • Examples of PCS implementation in global ports	Software simulation Group work	Assignment Summative	CLO 6
Content 07	Regulatory and Legal Aspects of Smart Ports			
Week 13&14	• Legal frameworks governing smart port operations • International standards and regulations (e.g., IMO) • Compliance with environmental and safety standards • Challenges in implementing smart port regulations	Effective Class Discussions Case Based learning	Assignment Summative	CLO 7

Part C

1) Assessment Strategy: The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examination (written test). The number of quizzes/class tests of a theoretical course will be **n+1**, where n is the number of the credit hours of the course. All class test scores will be included in the evaluation, and the final mark will be based on the average of these scores.

2) Marks distribution:

a. Continuous Assessment: 40

b. Summative/Final: 60

Class attendance	05%
Class Participation/Observation	05%
Assignment/Term paper	05%

Quizzes/Class Test	10%
Mid-term Examination (Written)	15%
Final Examination	60%
Total	100%

3) Make-up Procedures: If anyone misses the Mid (with valid reasons) only once, s/he will get chance for make-up.

Part D

16.Learning Materials

1. **Recommended Readings**
   - "Smart Ports: A Digital Revolution" by Peter A. O'Brien
   - "Port Management and Operations" by Patrick Alderton
   - "Port Cybersecurity: Securing Critical Infrastructure" by Paul D. Williams
   - "The Digital Transformation of the Port Industry: A Paradigm Shift" by T. Notteboom, P. Parola, and G. Satta
   - "Smart Port Management and Sustainable Maritime Logistics" by Thierry Vanel slander and Christa Sys

Fourth Year Second Semester

PML 4201: Thesis

Part A

1. Course Code: PML 4201

2. Course Title: Thesis

3. Course Type: Capstone Course

4. Year/Level/Semester/term: Fourth Year, Second Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor: Supervisor and Co-supervisor

7. Pre-requisite: Research Methodology

8. Credit Value: 6

9. Contract Hours: 6 months

10. Total Marks: 100

11. Rationale of the course:

This course enables students to integrate and apply the knowledge and skills acquired throughout their program to conduct independent research on a relevant topic. It fosters critical thinking, analytical ability, and academic writing skills essential for solving real-world business and maritime management problems.

12. Eligibility for Thesis Course

i. Students shall be eligible to undertake the Thesis Course if they have achieved a Semester Grade Point Average (SGPA) of 3.50 or above in both semesters of the third year (1st and 2nd semesters).

ii. However, students with an SGPA below 3.50 who wish to pursue the thesis option may also apply by submitting a detailed research proposal. The Board of Undergraduate Studies and Research (BUGSR) may consider such applications based on the merit and satisfactory quality of the submitted proposal.

13. Syllabus Content:

i. Students will engage in independent research to produce an original thesis on maritime topics. Research may consist of archival investigation and/or fieldwork, including personal interviews, site reports, and condition assessments.

ii. The process of writing and submitting a thesis will provide students with understanding and competence in research and writing about conservation and preservation issues, which will be of use in the professional field.

iii. Students shall submit at least three thesis titles with a brief summary through the department to BUGSR for approval in the 4th year, first semester. A list of desirable supervisor(s) with relevant expertise can also be proposed.

iv. Students will be assigned a thesis supervisor, with whom they will communicate regularly.

v. BMU thesis guideline available online can be followed for word limits, font style and size, line spacing and other formatting requirements.

vi. An evaluation panel approved by BMU will decide the thesis grade. Students will present their final thesis to this panel for a defense. This will be a 20-minute presentation and a 10-

minute oral discussion about the thesis, where students will receive feedback.

vii. There should be a schedule and a deadline, including a progress report and a progress meeting to submit the thesis paper by the department and research supervisor.

14. Thesis Progress and Evaluation Timeline

Students undertaking the Thesis Course are required to submit a progress report to the Course Coordinator by the middle of the 4th year, 2nd semester. The final thesis report must be submitted by the fifth month of the same semester. Thesis defense shall be conducted during the last month of the semester.

The marks distribution is as follows:

Content	Marks
Thesis Report	60%
Presentation	30%
Oral Exam	10%

PML 4203: Internship

Part A

1. Course Code: PML 4203

2. Course Title: Internship

3. Course Type: Capstone Course

4. Year/Level/Semester/term: Fourth Year, Second Semester

5. Academic Session: 2025-2026

6. Course Teacher/Instructor:

7. Pre-requisite (if any):

8. Credit Value: 6

9. Contract Hours: 6 months

10. Total Marks: 100

11. Rationale of the course:

This course provides students with practical exposure to real-world operations in ports, shipping, and logistics organizations. It bridges the gap between academic knowledge and professional

practice by allowing students to apply theoretical concepts, develop industry-relevant skills, and gain insights into the dynamic environment of maritime trade and logistics management.

12. Assessment and Evaluation:

i. Internship work will be assigned individually on any issue pertaining to the organization **(Port and Shipping company/organization, commercial departments and business company/bank)** in which the students are engaged with.

ii. Students must submit the appointment or joining letter from the respective organization to the Course Coordinator for official record and verification.

iii. The Course Coordinator shall coordinate the internship program in association with the Head of the Department (HoD) and Dean.

iv. Upon completion of six (6) months of internship, the student must submit the Internship Report along with the following documents to the Course Coordinator:

- Appointment/Joining Letter
- Internship Completion Certificate issued by the host organization.

These documents are required for verification and evaluation purposes.

v. There is an internal supervisor from BMU approved by the department and an external supervisor from the Internship Providing Organization.

vi. Students have to obtain approval of the internship report from both the internal and external supervisors.

vii. An evaluation panel approved by BMU will decide the Internship grade. Students will present their final report to this panel for a defense. This will be a 20-minute presentation and a 10-minute oral discussion, where students will receive feedback.

The distribution of marks for the performance evaluation of the internship is given below:

a.	Satisfactory Attendance	20%
b.	Report Submission	30%
c.	Presentation	20%
d.	Oral Examination	30%

20. Part D Grading and Evaluation

1. Grading/ Evaluation

i) Grading Scale:

Letter grades and corresponding grade points will be awarded by the provisions (unified UGC grading system) shown below:

Grade	Grade points	Numerical Markings
A+	4.0	80% and above
A	3.75	75% to below 80%
A-	3.50	70% to below 75%
B+	3.25	65% to below 70%
B	3.00	60% to below 65%
B-	2.75	55% to below 60%
C+	2.50	50% to below 55%
C	2.25	45% to below 50%
D	2.00	40% to below 45%
F	0.00	below 40%
I	Incomplete	-
W	Withdrawn	-
X	Projects/Thesis continuation	-
E	Expelled	Due to exam offence

ii) Grade Point Average:

Grade Point Average (GPA) is the weighted average of the grade points obtained for all the courses passed/ completed by a student. For example, if a student passes/completes 'n' courses in a semester having credits C_1, C_2……. Cn and his/her grade points in these courses are G_1, G_2,....., Gn respectively then,

$$GPA = \frac{\sum_{i=1}^{n} Ci \times Gi}{\sum_{i=1}^{n} Ci}$$

Suppose a student has completed nine courses in a semester and obtained the following grades-

Course	Credits Ci	Grade	Grade points Gi	$C_i \times Gi$
EEE 101	3.00	A-	3.50	10.500
EEE 102	1.50	A+	4.00	6.000
EEE 103	3.00	A	3.75	11.250
EEE 104	1.50	B+	3.25	4.875
Phy 111	3.00	B-	2.75	8.250
Phy 112	1.50	C+	2.50	3.750
Chem 111	3.00	D	2.00	6.000
Chem 112	1.50	C	2.25	3.375
Math 111	3.00	B	3.00	9.000
Total	21.00	--	--	63.000

GPA= 63.000/21.00 = 3.00

iii) Cumulative Grade Point Average (CGPA)

The Cumulative Grade Point Average (CGPA) is the weighted average of the GPA obtained in all the semesters passed/ completed by a student. For example, if a student passes/completes 'n' semesters having total credits of TC_1, TC_2……. TCn and his/her GPA in these semesters are GPA_1, GPA_2,....., GPAn respectively then,

$$CGPA = \frac{\sum_{i=1}^{n} TCi \times GPAi}{\sum_{i=1}^{n} TCi}$$

Suppose a student has completed four semesters and obtained the following GPA-

Year	Semester	Credit Hours Earned TCi	GPA Earned GPAi	GPAi × TCi
1	1	21.00	3.737	78.330
1	2	20.50	3.93	80.565
2	1	19.75	3.96	78.210
2	2	20.25	4.00	81.000
Total		**81.50**		**318.105**

CGPA = 318.105/81.50 =3.90

Performance Evaluations:

Theoretical Courses: The performance of the theoretical courses shall be evaluated through continuous assessment and semester final examination. Forty percent (40%) of marks of a course shall be allotted for continuous assessment and remaining sixty percent (60%) shall be allotted to the Semester Final Examination. The continuous assessment shall include class attendance and participation, quizzes/class test, term paper/assignments/case study and midterm examinations. Distribution of marks is as follows:

a. Class Attendance: 05%
b. Observation/ Class Participation: 05%
c. Term Paper/Assignment/Case Study: 10%
d. Quizzes/Class Test: 05%
e. Mid Term Examination: 15%
f. Term/semester Final Examination: 60%

The number of quizzes/class tests of a theoretical course will be n+1, where n is the number of the credit hours of the course. Evaluation of performance of quizzes/class tests will be on the basis of best quizzes. The scheme of continuous assessment that a particular teacher wishes to follow for a course will be announced as course outline on the first day of the term. The performance of a student will be evaluated in terms of two indices, viz. Semester Grade Point Average (SGPA), and

Cumulative Grade Point Average (CGPA).

The basis for continuous assessment awarding marks for class attendance will be as follows:

Class Attendance Rate	**Allocated Marks**
90% and above	100%
85% to 89%	90%
80% to 84%	80%
75% to 79%	70%
70% to 74%	60%
65% to 69%	50%
60% to 64%	40%
59% and below	0%

Lab Courses:

The distribution of marks for Lab courses is given below:

Lab test	40%
Assignment / Report	20%
Viva/Presentation	10%
Quiz	10%
Attendance	10%
Class Performance / Observation	10%
Total =	**100%**

Thesis/Internship:

i) Thesis will be evaluated out of **100 marks**, ensuring a comprehensive assessment of research quality.

iii) Each student will conduct their research under the guidance of an assigned **Supervisor**. If required, a **Co-Supervisor** may be appointed to provide additional expertise and support.

The marks distribution for thesis is as follows:

Content	Marks
Report	60%
Presentation	30%
Oral Exam	10%

Internship: The distribution of marks for the performance evaluation of the internship is given below:

a.	Satisfactory Attendance	20%
b.	Report Submission	30%
c.	Presentation	20%
d.	Oral Examination	30%

Skill Development Courses: The performance of the field trip/study tour of each student will be evaluated as follows:

Content	Marks
Attendance	20%
Participation	20%
Visit Report	30%
Presentation	30%

iv) Eligibility for Appearing Term Final Examination:

To be eligible for appearing at the examination, a student shall have to fulfil the following criteria:

I. A student has to participate in the required number of classes, practical classes, tutorials. In this case, a student has to participate in the following number of classes to sit for the examination:
   a) 75% or above- Qualified.
   b) 60%- 74%- Non-Collegiate. In this case, the student must apply for appearing in the examination and pay the required fees.
   c) 59% or below- Disqualified.

II. Candidates shall have to fulfil the other conditions mentioned in the examination circular.

v) Retake:

It is expected that students will obtain a degree by clearing the entire offered courses of specified credit hours as per the syllabus within an academic period of three years. In case of failure to do so by any student the following guiding policies shall be adopted:

a. A student obtaining an F grade in a course may be allowed to repeat the course with the prior approval of the Head of the Department on the recommendation of the course coordinator. Such approval shall be reported to the academic council.

b. A student shall not be allowed to continue the program if he/she obtains a total of three or more F grades in any term/semester.

c. If at the end of the second or any subsequent semester, the cumulative GPA falls below 2.0 he/she shall not be allowed to continue in the programme.

vi) Incomplete (I) courses:

Grade 'I' means incomplete work. 'I' may be awarded to student when a course of study continues or extended to two consecutive semesters or a particular grade is not available during publication of results. 'I' shall be converted to the actual grade obtained by the student when available during the semester or by the following semester. Otherwise 'I' shall be converted to an 'F' Grade.

vii) Grade Improvement/Change

If a student passes a course with a grade point between 2.0 and 2.75, he/she will have the opportunity to participate in the improvement exam in that course only once. In this case, a student will be allowed to participate in the improvement exam only one subject/ course in a semester.

- If a student fails to improve his/ her previous grade despite participating in the improvement exam, his/ her previous grade will remain valid.
- For improvement of grade, the improvement exam will mean only the theoretical part (60%) of the subject/ course. In the case of Laboratory/ Practical/ Sessional/ Oral Examination, the improvement exam will not be accepted.
- The fee for improvement examination shall be fixed by the University.

viii) Dropout

A student must maintain a minimum CGPA of 2.20 per semester to continue in their program. If the student fails to maintain a minimum CGPA of 2.20 for two consecutive sessions, they are compelled to withdraw from the program.

ix) Course Waiver:

A student with relevant degrees from reputed universities may get maximum 16 credits waiver provided they fulfill the following conditions:

a) Obtained at least a 'B' grade or 1st class in a similar course in the earlier program
b) Minimum least 70% of the course contents are similar

All applications for course waiver will be reviewed by Equivalence Committee on a case-by-case basis and finally shall be approved by the Academic Council of BSMRMU

Reference

1(a). BAC 2021. Bangladesh Accreditation Council (BAC) Standards for Accreditation of Academic Program, BAC, Dhaka.
1(b). BAC 2021. Bangladesh National Qualifications Framework (BNQF) Part B: Higher Education.
2. UGC 2020. Template of Outcome Based Education (OBE) Curriculum (Revised).
3. BSMRMU 2013. BSMRMU Exam Regulation.