



Co-funded by the
Erasmus+ Programme
of the European Union



Course Name: Physical geography of the East Sea

Number of credits: 3 ECTs

Period: Fall/spring semester

Coordinator	Faculty of Marine Resources and Management
Credits	3 ECTs
Lecturers	Le Thi Kim Thoa
Level	BSc.
Host institution	Ho Chi Minh City University of Natural Resources and Environment
Course duration	1 semester (the classes will be scheduled in accordance with the university timetable)
New/revised	revised course (35%)

Summary

The module equips basic knowledge about the geographical location, natural characteristics and natural resources of the East Sea and Vietnam's waters as a foundation for specialized subjects such as law and policy of sea and islands, management sea and island resource management, marine ecology, management of Vietnam's waters and islands

Target student audiences

BSc. students majoring in marine resources and environment management

Prerequisites

Required courses (or equivalents): NO

Aims and objectives

The main course objective is to equip students with knowledge of:

- Understanding geographical features of the East Sea, including geographical location and natural characteristics of the East Sea and the Vietnam's waters
- Explain the distribution of different types of resources on the East Sea
- Analyze and explain the relationship between marine economic activities and issues of marine resources and environment
- Recognize the role of the sea in socio-economic development

The Authentic Tasks:

The course provides basic knowledge of physical geography of the East Sea and Vietnam's waters that helps students to understand and analyzing real world case studies of environment issues such as erosion, oil spill, mass fish deaths, red tide, algal blooms...

General learning outcomes:

By the end of the course, successful students will:



Knowledge	<ul style="list-style-type: none"> Understanding geographical features of the East Sea, including geographical location and natural characteristics of the East Sea and the Vietnam's waters
Comprehensive	<ul style="list-style-type: none"> To explore the topography of the East Sea
Application	<ul style="list-style-type: none"> Explain the distribution of different types of resources on the Sea
Analysis	<ul style="list-style-type: none"> Analyze and explain the relationship between marine economic activities and issues of marine resources and environment
Synthesis	<ul style="list-style-type: none"> Recognize the role of the sea in socio-economic development

Overview of sessions and teaching methods

The course will make most of interactive and self-reflective methods of teaching and learning and, where possible, avoid standing lectures and presentations.

- Learning methods**
- Lecture note presentations
 - Class discussion and participation
 - Reading assignment
 - Assignment
 - Group discussions and debates
 - Quizzes
 - Group presentation

Course outline

Week	Topics
Week 1, 2	Overview of the East Sea and the Vietnam's waters
Week 3, 4	Terrain characteristics of the East Sea and Vietnam's waters
Week 5	Climate characteristics of the East Sea and Vietnam's waters
Week 6	Coastal marine ecosystems in Vietnam
Week 7,8	Biological resources in Vietnam's waters
Week 9,10	Non-living resources in Vietnam's waters

Course Schedule

Topic 1: Introduction to physical geography of the East Sea (updated 15%)	
Learning objectives	<ul style="list-style-type: none"> • To gain a comprehensive understanding of the East sea's location, size, names, straits, bays, islands, archipelagos and its significance within the region. • To explore the geopolitical complexities and territorial disputes in the East Sea



	<ul style="list-style-type: none"> To learn about the economic significance of these areas such as fisheries, shipping lanes, potential energy resources.
Learning outcomes	<ul style="list-style-type: none"> Able to accurately locate, describe, and map the East Sea and Vietnam's water. Understand the complex political and territorial issues in the East Sea Understanding the economic significance of the marine areas, including the role in trade, fisheries...
Student deliverables	<ul style="list-style-type: none"> Exercise: individual assignments
Topic materials	Lecture of physical geography of the East Sea
Outline	<ul style="list-style-type: none"> - Location and boundaries of the East Sea - Area of the East Sea - Names of the East Sea - Bays in the East Sea - Islands and archipelagos in the East Sea - Vietnamese waters in the East Sea
Topic 2- Terrain characteristics of the East Sea and Vietnam's waters (updated 35%)	
Learning objectives	<ul style="list-style-type: none"> Provide students with a detailed understanding of the terrain characteristics of the East Sea and Vietnam' sea
Learning outcomes	<ul style="list-style-type: none"> Able to describe and identify the various types of terrain features in the East Sea and Vietnam' sea.
Student deliverables	<ul style="list-style-type: none"> Exercise: individual assignments
Topic materials	<ul style="list-style-type: none"> Lecture of physical geography of the East Sea
Outline	<ul style="list-style-type: none"> - Terrain characteristics of the East Sea region - Topographic characteristics of Vietnam's coastal region
Topic 3 – Weather and Climate characteristics of the Vietnam's waters (updated 35%)	
Learning objectives	<ul style="list-style-type: none"> Understanding the weather patterns, climate conditions in the Vietnam waters Appreciating how weather and climate characteristics influence the environmental and ecological features of the Vietnam water.
Learning outcomes	<ul style="list-style-type: none"> Able to describe the weather and climate patterns in the Vietnam waters, including seasonal variations, temperature ranges, rainfall distribution. Understand the influence of the southwest and northeast monsoons on weather patterns Able to discuss how weather and climate characteristics influence various aspects of society.
Student deliverables	<ul style="list-style-type: none"> Exercise: individual assignments



Topic materials	<ul style="list-style-type: none"> • Lecture of physical geography of the East Sea
Outline	<ul style="list-style-type: none"> - Weather and climate characteristics of Vietnam's coastal areas - Tidal regime in Vietnam's waters
Topic 4 - Coastal marine ecosystems in Vietnam (updated 35%)	
Learning objectives	<ul style="list-style-type: none"> • understand the major marine ecosystems in Vietnam • Understand the rich biodiversity found in these marine ecosystems • Address the human and natural factors affecting marine ecosystems.
Learning outcomes	<ul style="list-style-type: none"> • Able to identify and describe the major marine ecosystems in Vietnam • To describe various species of marine life • Assess the human and natural factors that influence the marine ecosystems.
Student deliverables	<ul style="list-style-type: none"> • Exercise: individual assignments
Topic materials	<ul style="list-style-type: none"> • Lecture of physical geography of the East Sea
Outline	<ul style="list-style-type: none"> - Mangrove Ecosystems - Seagrass ecosystem - Coral ecosystem - Upwelling ecosystem
Topic 5: Living resources in Vietnam's waters (updated 35%)	
Learning objectives	<ul style="list-style-type: none"> • Understanding of the living resources in Vietnam's waters and equip them with the knowledge and skill necessary for responsible resource management, conservation and sustainable harvesting.
Learning outcomes	<ul style="list-style-type: none"> • Able to identify and categorize the major living resources found in Vietnam's waters • Understanding the socioeconomic significance of living resources and their role in supporting the livelihoods of coastal communities and contributing to the national economy. • Recognize the importance of conserving and protecting living resources and their habitats.
Student deliverables	<ul style="list-style-type: none"> • Exercise: individual assignments
Topic materials	<ul style="list-style-type: none"> • Lecture of physical geography of the East Sea
Outline	<ul style="list-style-type: none"> - Marine fish resources - Marine shrimp resources - Seaweed resources - Special resources of molluscs in the intertidal area - Plankton resources - fish eggs - Other marine specialties



Topic 6- Non-living resources in Vietnam's waters (updated 45%)	
Learning objectives	<ul style="list-style-type: none"> • Help students gain a comprehensive understanding of the non-living resources in Vietnam's water and the complex issues associated with their exploration and exploitation.
Learning outcomes	<ul style="list-style-type: none"> • Able to identify and differentiate non living resources found in Vietnam's waters • Understanding the environmental impact of resources extraction.
Student deliverables	<ul style="list-style-type: none"> • Exercise: individual assignments
Topic materials	Lecture of physical geography of the East Sea
Outline	<ul style="list-style-type: none"> - Oil and Gas - Coal - Metallic minerals - Non-metallic minerals - Solar energy - wave and tidal energy - wind energy

Literature

Compulsory

[1]. Lecture of physical geography of the East Sea

Recommended:

[1] Le Duc To (1999), Oceanography of the East Sea, Hanoi National University Publishing House, Hanoi.

[2] Le Duc To (2004), Marine management, Hanoi National University Publishing House, Hanoi.

[3] Le Duc To, editor (2003), East Sea - Volume 1- Overview of the East Sea, Hanoi National University Publishing House, Hanoi.

[4] Vu Huu Sang (2007), Geography of the East Sea with Hoang Sa and Truong Sa, Stanford University, USA.

[5] Dang Ngoc Thanh (editor) (2003), East Sea - Volume 4 - Marine biology and ecology, Hanoi National University Publishing House, Hanoi.

[6] Pham Van Ninh (2003), East Sea - volume 2 - Hydrometeorology and marine dynamics, Hanoi National University Publishing House, Hanoi.

[7] Nguyen Manh Hung, editor (2009), Ocean wave energy in the East Sea and Vietnamese waters, Natural Science and Technology Publishing House, Hanoi.

Course workload

The table below summarizes course workload distribution:



Activities	Learning outcomes	Assessment	Estimated workload (hours)
In-class activities (30 hours)			
Lectures (2 hours/ week)	Attending online course, discussions, and demonstrations related to mapping digitization concepts, techniques and tools.	Class participation	10
Moderated in-class discussions (1 hour/ week)	Actively engaging in class discussions, asking questions, and contributing to the learning environment.	Class participation and preparedness for discussions	6
In-class assignments, homework assignment (1 hours/ week)	Practical exercises and labs	Class participation and preparedness for assignments	6
Reading and discussion of assigned papers for preparation for lectures	Reading course materials, textbooks, research papers, and relevant resources to gain a deeper understanding of mapping digitization concepts.	Class participation, creative and active contribution to discussion	8
Independent work (70 hours)			
Home work and Exercise	Ability to interpret data, analyze objects and use concepts, tools, and methods, and equations to solve problems.	Quality of individual assignments	70
Total			100

Course Assignments

Course assignments will constitute a multi-part project:

- **Assignment #1 -(home work):** Reading assignment on the overview of the East Sea and Vietnam's waters
- **Assignment #2 -(home work):** Reading assignment and answer some questions related to Terrain characteristics of the East Sea and Vietnam Sea
- **Assignment #3 -(home work):** Reading assignment and answer some questions related to Climate characteristics of the East Sea and Vietnam's waters
- **Assignment #4 -(home work):** Reading assignment and answer some questions related to Biological resources in Vietnam's waters.



Co-funded by the
Erasmus+ Programme
of the European Union



Grading

The students' performance will be based on the following:

Assessment	<ul style="list-style-type: none">• Progress assessment (40%):<ul style="list-style-type: none">- practice in class (15%):- Homework (25%):• Final assessment (60%):<ul style="list-style-type: none">- Semi- Final examination (10%)- Final examination (50%)
Evaluation	A (8,5 – 10) B (7,0 – 8,4) C (5,5 - 6,9) D (4,0 – 5,4)