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Course Name: MARINE RESOURCES AND ENVIRONMENT MANAGEMENT
Number of credits: 3 ECTs

Period: Fall/spring semester

Cooordinator	Faculty of Marine Resources and Management
Credits	3 ECTs
Lecturers	**Tran Thi Kim, Nguyen Van Tin, Nguyen Ky Phung, Phung Thi My Diem**
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	new course

Summary

The course provides basic knowledge about the resources of the sea and islands, tools for the management of marine resources, marine pollution and the control of marine pollution. The course also introduces the knowledge of the country's marine and island environment.

Target student audiences

BSc. students majoring in Marine Resources Management

Prerequisites

Required courses (or equivalents): NO

Aims and objectives

The principal purpose of the course is to give students the following knowledge:

- Analysis and evaluation of present marine environmental resources.
- Acquire knowledge of marine resource management tools.
- Marine Resource Assessment (MPA).
- Marine environment resource management tools.

The Authentic Tasks:

The course provides an understanding of marine resources and the environment.

General learning outcomes:

By the end of the course, successful students will:

Knowledge	• Understand the basic concepts of the marine and coastal environment.

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	• Understand the management and planning guidelines for the coastal/coastal zone. • Knowledge of marine and island resources • Capture objects and ways to manage a specific sea area. • Impacts of marine pollution • Marine-ocean pollution control systems.
Comprehensive	• Presenting the basic knowledge of the marine environment, the impacts of marine pollution and the marine-ocean pollution control systems.
Application	• Management and development of coastal zones
Analysis	• Resources of marine resources and the impact of marine pollution
Synthesis	• Knowledge of marine and island resources, the impact of marine pollution, marine-ocean pollution control systems

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

- Video presentations
- Project Based Learning
- Literature review
- Brainstorming
- Puzzles
- Query
- Mind map
- Problem-based learning
- Team work

Course outline

Week	**Topics**
Week 1	Integration for management of the natural resources and environment of the islands
Week 2; 3,4&5	Marine resources and the benefits of marine resources
Week 6-10	Marine pollution, the impacts of marine pollution
Week 11-15	Management of marine resources and environment

Course Schedule

This course will divide in to 4 topics as follows:

Topic 1: Integration for management of natural resources and environment of the islands. This section will focus on Basic concepts, Marine environment, Marine environmental problems.

Topic 2: Marine resources. This topic demonstrates the benefit of Biological resources; Benefit of Non-living resources; Coastal ecosystems, and Assessment method of resource benefit.

Topic 3: The effects of natural resources exploitation on the marine environment. This content will introduce the natural characteristics of the marine environment; Impacts by mining resources using the resource for biological resources and non-living resources.

Topic 4: Management of Marine Resources and Environment. The section will focus on the tools for managing environmental resources, such as Laws and policies, economic tools, Emission fee, Pollution emission control, Escrow - refund system, Ecolabel; Resource planning and management; Marine pollution control system; and Ocean pollution control system.

Literature

Compulsory
1. Lecture of Marine resources and environment management

Recommended:

1. Quản lý tài nguyên và môi trường biển, Nguyễn Kỳ Phùng, 2016
2. Quản lý biển, Lê Đức Tố, 2004
3. Quản lý tổng hợp vùng ven biển, Nguyễn Lân Anh, Trần Văn Phước, Nguyễn Trọng Lương, 2011
4. Quản lý nhà nước tổng hợp và thống nhất về biển, hải đảo, Đặng Xuân Phương,Nguyễn Lê Tuấn, 2014
5. Markus Salomon, Till Markus (eds.), Environmental Management and Governance: Advances in Coastal and Marine Resources [1 ed.], Springer International Publishing, 2015.
6. Markus Salomon, Till Markus (eds.), Handbook on Marine Environment Protection. Science, Impacts and Sustainable Management, Springer, 2018.
7. G Carleton Ray, Jerry McCormick-Ray, Marine conservation: science, policy, and management, John Wiley & Sons Inc, 2014.
8. Islam, Nazrul; Jørgensen, Sven Erik, Environmental management of marine ecosystems, CRC Press, 2018.
9. Darius Bartlett, Louis Celliers, Geoinformatics for marine and coastal management, CRC Press, 2016.

Course workload

The table below summarizes course workload distribution:

Activities	Learning outcomes	Assessment	Estimated workload (hours)
In-class activities (34 hours)			
Lectures	Integration for management of natural resources and environment of the islands	Class participation	16

Moderated in-class discussions	Understand the basic concepts of the marine and coastal environment. Types of marine resources causes of marine pollution, marine-ocean pollution control systems	Class participation and preparedness for discussions	6
In-class assignments, homework assignment	Determine the national sea and island spatial distance. The benefits of marine resources	Class participation and preparedness for assignments	6
Reading and discussion of assigned papers for preparation for lectures	Familiarity with and ability to critically and creatively discuss key concepts, tools and methods as presented in the literature	Class participation, creative and active contribution to discussion	6
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			***104***

Course Assignments

Course assignments will constitute a multi-part project:

- Assignment #1 -(in-class)
- Assignment #2 - (home work)
- Assignment #3 –(home work)
- Assignment #4 (mostly in-class)

Grading

The students' performance will be based on the following:

Assessment

- Progress assessment (30%):
  - Exercise (15%):
  - Homework (15%):
- Final assessment (60%):
  - Final examination (45%)
  - Semi- Final examination (15%)

Evaluation

A (8,5 – 10)
B (7,0 – 8,4)
C (5,5 - 6,9)
D (4,0 – 5,4)