



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

## LECTURE

# CONTROL OF MARINE POLLUTION

Lecturer: Prof. Nguyen Ky Phung  
MSc. Dang Thi Thanh Le





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# LECTURE NOTE

## MODELLING THE MARINE ENVIRONMENT

### COURSE SYLLABUS

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# GENERAL INFORMATION

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Vietnamese subject name:	Kiểm soát ô nhiễm biển
English subject name:	Control of Marine pollution
Code subject:	
Knowledge block:	Specialized
Number of credits:	3 ETCs
Number of theoretical periods / sessions:	30 periods
Number of practice periods / sessions:	No
Prerequisite subject:	No



# COURSE DESCRIPTION

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The course will provide students with in-depth knowledge about the environment and skills to perform environmental management in accordance with modern development trends. Specifically, the subject will equip students with knowledge about measures to prevent and control marine pollution and related legal requirements in the control and monitoring of the marine environment.



# COURSE GOALS

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Students are equipped with knowledge of:

- Measuring to prevent and control marine pollution
- Monitoring compliance with legal requirements in marine pollution control.
- Working at an individual level and collaborate in groups to communicate and discuss among individuals in groups for learning and reporting.



# LEARNING OUTCOMES

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After completing the course students can:

- Present the current state of the marine environment
- Understand the role of marine pollution control
- Distinguishing sources of marine pollution
- Apply professional ethics in designing solutions to prevent and control marine pollution
- Evaluate the plan to control marine pollution
- Strengthen teamwork skills, report making and presentation skills.
- Demonstrate active learning capacity.



# COURSE ASSESSMENT

Course assignments will constitute a multi-part project:

- Assignment #1 -(in-class) : will help students understand the basic knowledge of dynamics currents and tides.
- Assignment #2 - (home work): will help students understand the basic knowledge of flow dynamics and hydrography
- Assignment #3 –(home work): will help students understand the processes of the transmission of substances to the marine and ocean environment
- Assignment #4 (mostly in-class): Understanding the basic knowledge of flow dynamics and hydrography, the basic knowledge of modelling of substance transmission in marine environment.

## Grading

- Assessment
- Progress assessment (40%):
    - Exercise (15%):
    - Homework (15%):
  - 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)

# COURSE OUTLINE

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Week 1: Issues about marine resources and environment

Week 2: Legal aspects of marine pollution control

Week 3: General control of marine pollution

Weeks 4, 5, 6, 7 & 8: Prevention and Response to Marine Environmental Incidents

Week 9 & 10: seminar report



# COURSE ASSESSMENT

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Test time	Evaluation form	Evaluation Tool	Weight	Score scale	Evaluation Criteria
Throughout the learning process	Individual, group	Ask questions, individual exercises, group exercises	10%	10	Answer the question with the right focus, thinking and depth
Week	group	seminar	20%	10	Rubric
Week 11	Individual,	Final exam	70%	10	multiple choice format. content related to the course content.

# REFERENCES

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- [1] Gabriela Argüello, **Marine Pollution, Shipping Waste and International Law**, Routledge, 2020
- [2] Nicholas P. Cheremisinoff, **Pollution control handbook for oil and gas engineering**, Wiley-Scrivener, 2016
- [3] Matthias Ehrhardt (eds.), **Mathematical Modelling and Numerical Simulation of Oil Pollution Problems**, Springer International Publishing, 2015
- [4] Andrés Hugo Arias, Jorge Eduardo Marcovecchio, **Marine Pollution and Climate Change**, CRC Press, 2017
- [5] Senthil Kumar, **Modern Treatment Strategies for Marine Pollution: Recent Innovations**, Elsevier, 2020
- [6] Myron Nordquist, **United Nations Convention on the Law of the Sea 1982**, Volume VII, Brill, 2011