

## COURSE SYLLABUS

**1. Course Name: Practice in Environmental Monitoring**

**2. Course code:** EOEM326310

**3. Credit Units :** 2 credits (0: 2: 4) (0 unit of theory/ 2 units of practical/ 4 units of self-study )

Duration: 4 weeks; Time: Summer semester at the end of the third year

**4. Course instructors:**

Hoang Thi Tuyet Nhung

Nguyen Hai Au

**5. Course Requirements:**

Prerequisite course: None

Previous course: General Environment, Environmental Management

**6. Course description:**

Students are equipped knowledge and skill to design the program of environmental monitoring for company. Moreover, students are able to analyse monitoring data in real situation.

**7. Course goals**

<b>Goals</b>	<b>Goal description</b> <i>(Course's contributions to student)</i>	<b>Programme Expected learning outcome (ELOs)</b>
<b>G1</b>	Applying knowledge about air, water, soil quality monitoring in realistic situation	ELO3
<b>G2</b>	Ability to use equipments, machines as well as to calculate and solve environmental monitoring data	ELO5, ELO8
<b>G3</b>	The skills of teamwork	ELO9
<b>G4</b>	Ability to organize environmental monitoring program for a company	ELO15

**8. Course learning outcomes**

Course expected learning outcome		Description (After accomplishing this course, students are able to: )	Expected learning outcome
G1	CLO1	Summarize the way of environmental monitoring	ELO3
G2	CLO2	Access the report of environmental monitoring	ELO3
	CLO3	Use the equipments for measuring and sampling monitoring parameters	ELO5
G3	CLO4	Analyse environmental parameters	ELO8
	CLO5	Work in group	ELO9
G4	CLO6	Design the program for environmental monitoring for a company	ELO15
	CLO7	Write report environmental monitoring for a company	ELO15

## 9. Learning Materials

References:

[1] Pham Ngoc Dang, Quan ly moi truong do thi va KCN, xay dung publisher, 2000

[2] Nguyen Van Kiet, Huynh Trung Hai, Quan trac nuoc thai Cong nghiep, KHKT publishe , 2006

[3] ESCAP, Huong dan cac Phuong phap quan trac nuoc, khong khi, chat thai nguy hai, INFOTERRA, Vietnam/United Nations/ESSA Tech, Ltd, 1994

[4] Le Quoc Hung, *Các phương pháp và thiết bị quan trắc môi trường nước*. Vietnam Academy of Science and Technology, 2006.

[5] Cooperative reseach Center for Freshwater Ecology. *Australian Guildlines for Water Quality Monitoring and Reporting*. Australian and New Zealand Environment and Conservation Council; Agriculture and Resource Management Council of Australian and New Zealand, 2000.

[6] Frank R Burden, Ian McKelvie, Ulrich Forstner, Alex Guenther, *Environmental Monitoring Handbook*, McGraw-Hill, 2002

## 10. Student assessment:

- Grade scale: 10

- Assessment includes:

Type	Content	Timeline	Assessment method	CLOs	Rate (%)
<b>Kỹ năng</b>					<b>20</b>
Exercise #1	Design the program for environmental monitoring for a company	Week 2	Questions	CLO1	20
<b>Thực nghiệm</b>					<b>30</b>
Exercise #1	Analyse environmental parameters	Week 3 - 10	Monitoring data	CLO3 CLO4 CLO5	<b>30</b>
<b>Thuyết trình</b>					<b>50</b>
Exercise #1	Evaluate the results of environmental monitoring	Week 12	Report and oral test	CLO1 CLO2 CLO6 CLO7	50

#### 10. Detailed contents of course:

Week	Contents	CLOs
1	<b>Part 1: GUIDELINES FOR PRACTICE (0/10/20)</b>	
	<b>A/ Content and pedagogical methods in class</b> <b>Content</b> <ul style="list-style-type: none"> <li>1.1 Objectives and meaning of practice in environmental monitoring for environmental engineering</li> <li>1.2 Guide to collect information, document, use the information in environmental monitoring</li> <li>1.3 Guide to solve the requirement of environmental monitoring</li> <li>1.4 Work out the performance of environmental monitoring</li> </ul> <b>Pedagogical methods:</b> <ul style="list-style-type: none"> <li>+ Discussion</li> <li>+ Guide to practice: <ul style="list-style-type: none"> <li>1. Assignment task: Three students are in one group for environmental monitoring in a company.</li> <li>2. Requirement: Students find out the environmental problem of the company.</li> </ul> </li> </ul>	CLO1 CLO2
	<b>B/ Self-study content</b> <ul style="list-style-type: none"> <li>+ Students find out the environmental problem of the company.</li> <li>+ Refer to the documents to analyse parameters in environmental monitoring.</li> </ul>	CLO1

	<b>Part 2: PRACTICE IN THE COMPANY (0/40/80)</b>	
2-5	<b>A/ Content and pedagogical methods in class</b> <b>Content</b> 2.1 Find out the compapy/factory activities 2.2 Describe all environmental problems 2.2 Design the program of environmental monitoring for the compapy/factory 2.3 Implement the the program of environmental monitoring <b>Pedagogical methods:</b> + Discussion + Guide to practice 1. Guide to students how to make plan for monitoring 2. Manage the activites of students about monitoring	CLO1 CLO2 CLO3 CLO4 CLO5
	<b>B/ Self-study content</b> + Synthesis the data of environmental monitoring + Write the report	CLO1 CLO2 CLO6 CLO7
	<b>Part 4: REPORT PROTECTION (0/10/20)</b>	
6	<b>A/ Content and pedagogical methods in class</b> <b>Content</b> 4.1 Student presents the knowledge of the program of environmental monitoring made 4.2 Questions and responses <b>Pedagogical methods:</b> + Questions and responses + Discussion	CLO5 CLO7
	<b>B/ Self-study content</b> + Review the knowledge which the students have not mastered	CLO1

### 11. Learning Ethics:

- + The copy of all the exercises and translated information from internet are banned. If this thing is detected, the process score of students will be zero; and in serious case, these students who joined this problem, will be banned from taking their final exam.
- + In case of the detection of students who replace the others in the exam, all of them will be suspended or leaved the learning program.

### 12. Date of first approval: August 1<sup>st</sup>, 2012

**13. Approval by:**

**Dean of the faculty**

**Head of department**

**Complier**

**A/Prof. Nguyen Van Suc**

**MSc Nguyen Thi Minh  
Nguyet**

**Hoang Thi Tuyet Nhung**

**14. Date and Up-to-date content**

<p><b>1<sup>st</sup> time:</b> - Update content of the programme adjusted in 2015</p>	<p>Instructor:  Hoang Thi Tuyet Nhung  Head of Department:  Dr. Tran Thi Kim Anh</p>
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