COURSE SYLLABUS

WASTE TREATMENT ENGINEERING: PRACTICE

Credits: 02 (02 practice– 06 self-study)

Code: MT 03014

Expected Learning Outcomes

Indicators	Upon the completion of the course, student able to	Expected learning outcomes of program
	Knowledge	
CELO1	**Apply** specialized knowledge in project planning and information assessment of waste source status.	ELO5: **Design** waste treatment works (solid, liquid, gas) according to national and international standards and regulations
CELO2	**Select** waste treatment technology by explaining appropriate aspects of the selected technology	ELO5: **Design** waste treatment works (solid, liquid, gas) according to national and international standards and regulations
CELO3	**Determine** of technical parameters for waste treatment works	ELO5: **Design** waste treatment works (solid, liquid, gas) according to national and international standards and regulations
CELO4	**Develop** technical drawings for waste treatment system	ELO5: **Design** waste treatment works (solid, liquid, gas) according to national and international standards and regulations
	Skills	
CELO5	**Synthesize** information on the characteristics of waste sources and the main criteria in selecting and proposing treatment technologies	ELO7: Work in group and leading the group working effectively.
CELO6	**Use** computer software, specialized software in calculating parameters and building technical drawings of work items of the waste treatment system	ELO9: **Apply** appropriate approaches and methods and techniques to investigate, survey and research issues of the environmental science.
CELO7	**Present** selected technology options based on basic knowledge bases combined with the use of modern techniques and sound scientific arguments.	ELO10: **Use** modern technology, equipment and techniques in activities of managing and protecting natural resources and the environment
	Attitude	
CELO8	Form a spirit of autonomous thinking, a sense of responsibility and promoting collective intelligence in the process of project implementation	ELO11: **Determine** a clear future orientation, passion for career and a sense of lifelong learning.

Brief descriptions

Chapter 1. Practice on solid waste treatment engineering

Chapter 2. Practice on air pollution treatment engineering

Chapter 3. Practice on wastewater treatment engineering

Learning methods

- Students conduct experiment according to the contents of course syllabus.
- Self-study: study documents according to the instructed reading materials of lecturers, and through e-learning system.
- Group discussion, exchange with teachers about classroom experiments and e-learning.
- Write an final report.

Assessment methods

- Grading scale: 10
- Evaluation:

Project proposal (10%)	Implementation of proposal (20%)	Final report (20%)	Final presentation (50%)

Student tasks

- Attendance: students are required to participate 100% of classes.
- Preparing for the lecture: Students must master the principles of technology, read the practice guide before class. Prepare materials as requested by the lecturers.
- Participate in group discussion and homework required by lecturers
- Practice: students attend all practical exercises that are part of the teaching content.
- Presentation and Discussion: students must be responsible for discussing the assigned work and presentations of the group's work and finalizing the practice report as a basis for assessment.

Key academic staffs

Lecturer: **Vo Huu Cong**

Email: vhcong@vnua.edu.vn

Lecturer: **Nguyen Ngoc Tu**

Email: nguyenngoctu@vnua.edu.vn

Lecturer: **Ho Thi Thuy Hang**

Email: htthanghp@gmail.com