COURSE SYLABUS

AIR POLLUTANT AND SOLID WASTE TREATMENT ENGINEERING

Credits: 03 (Lectures 03 – Practices 0 – Self-study 09)

Code: MT 03013

Expected learning outcomes

Indicators	Upon the completion of the course, student able to	Expected learning outcomes of program
	Knowledge	
CELO1	Analyze the characteristics of solid and gaseous pollutants in the direction of treatment techniques.	ELO2: Apply the knowledge of natural science, politics, social science and humanities, law, economics, and awareness of contemporary issues in the field of environmental sciences.
CELO2	Select solid waste/air pollutant treatment technology in accordance with current regulations.	ELO4: Develop sustainable solutions for the management and protection of the environment and natural resources based on different perspectives of natural science, social science, and humanities.
CELO3	Propose simple models for controlling solid waste and emissions that meet current standards	ELO4: Develop sustainable solutions for the management and protection of the environment and natural resources based on different perspectives of natural science, social science, and humanities.
CELO4	Evaluate the effectiveness of processing technology to optimize the system	ELO 5: Design waste treatment facilities (solid wastes, wastewater, and air pollutants) according to national and international standards and regulations.
	Skills	
CELO5	Integrating secondary information to propose small and simple scale model for solid waste / emissions treatment system	ELO6: Apply systematic, critical, and creative thinking in solving problems in the environmental and related fields.
CELO6	Carry out data collection, analysis, select treatment solutions and calculate parameters in solid waste and exhaust gas treatment equipment.	ELO9: **Apply** appropriate approaches, suitable methods, and techniques to investigate, survey, and study environmental problems.
	Attitude	
CELO7	Conscious self-control in learning, researching, completing professional knowledge, updating new knowledge about environmental protection solutions.	ELO11: **Define** a clear career orientation; possess a passion for one's career and a sense of lifelong learning.

Brief descriptions

Chapter 1. **General introduction to air quality**

Chapter 2. **Dust treatment engineering**

Chapter 3. **Air treatment engineering**

Chapter 4. **General introduction to solid waste treatment**

Chapter 5. **Solid waste treatment by landfill**

Chapter 6. **Solid waste treatment by incineration**

Learning methods

- Students prepare material related to the content of the subject
- Students participate in lectures, participate in homework, and discuss in groups
- Students participate in online learning schedule by the university and lecturers
- Case study analysis: analyzing and selecting treatment technology, analyzing the structure, components and operating principles of treatment equipment, analyzing diagrams and technological processes handling.

Assessment methods

- Band score: 10
- Evaluation:

Attendance and discussion (10%)	**Assignments** (40%)	**Final examination** (50%)

Student tasks

- Attendance: Students must attend at least 75% of the class and participate in class activities.
- Participate in all class delivered via online methods scheduled by the university and lecturer.
- Assignment: All students attending this module must complete 100% of the classroom assignments.
- Mid-term assessment: taking mid-term tests (taking class tests) according to the teacher's schedule.
- Final exam: Students who are eligible for the exam are allowed to take the exam, the test is built according to the regulations.

Key academic staffs

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