THUYLOI UNIVERSITY

FACULTY OF CHEMISTRY AND ENVIRONMENT

DIVISION: ENVIRONMENTAL ENGINEERING & MANAGEMENT

Course syllabus

Undergraduate – advanced program

ENVIRONMENTAL DESIGN PROJECT

CODE: CVEG 4179

1. **Number of credits**: 5 (2-3-0)
2. **Class hours**: 45;

Of which: Theory: 25 Exercise/Practice: 44 Others: 6

3. **Education program**

- *Compulsory course for:*
- *Optional course for: Civil Engineering*

4. **Evaluation and grading**

Content	Frequency	Description	Time	Grade distribution
Attendance	15		Weekly	15%
Project progress Reports				25%
WTP project				30%
WWTP project				30%
Total				**100%**

5. Binding conditions

- *Course prerequisite: Completion of subjects "Environmental Engineering",*
- *Course preparatory* :
- *Couse corequisite:*
- *Others: "Environmental Engineering Design"*

6. Course description

Interpret the example drawings in water treatment plant, in wastewater treatment plant; designing a real component of these above the plants; estimating the rough costs: investment costs, capital cost, operation and maintenance costs...

7. Instructors:

No	Full name	Education Degree	Mobile	Email	Title/position
1	Bùi Thị Thủy	PhD	0911 27 66 00	thuybt@tlu.edu.vn	Lecturer/ Deputy Head
2	Phạm Nguyệt Ánh	PhD	0913 832 442	anhpn@tlu.edu.vn	Lecturer

8. Textbook

- Mackenzie L. Davis. Water and Wastewater Engineering: Design Principles and Practice. 2011, McGraw-Hill, ISBN 978-0-07-339786-3.

- References: EPANET distribution software, http://www.epa.gov/nrmrl/wswrd/dw/epanet.html

9. Course schedule

No	Lecture content	Activities	Number of class hours		
			Theory	Practice	Others
1	Interpreting the example drawings of an water treatment plant	* Lecturer: - Subject and syllabus introduction - Evaluation method introduction - Show some example drawings - Query * Student: - Answer the question from lecturer - Presentation of the exercise	1	3	
2	Interpreting the example drawings of an water distribution network for a certain area	* Lecturer: - Show some example drawings - Query * Student: - Answer the question from lecturer	1	3	

		- Presentation of the exercise			
3	Interpreting the example drawings of an wastewater treatment plant	* Lecturer: - Show some example drawings - Query * Student: - Answer the question from lecturer - Presentation of the exercise	1	3	
4	Interpreting the example drawings of an wastewater collection system for a certain area	* Lecturer: - Show some example drawings - Query * Student: - Answer the question from lecturer - Presentation of the exercise	1	3	
	Interpreting the example drawings of water supply and drainage system for buildings	* Lecturer: - Show some example drawings - Query * Student: - Answer the question from lecturer - Presentation of the exercise	1	3	
5	Design of a Sedimentation basins (W & WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
6	Design of Coagulation/flocculation systems (W)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
7	Invited speaker	* Speaker: - Presentation - Query			3

		* Students: Answer the question from the speaker			
8	Design of Lime-soda softening systems (W)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
9	Design of Granular media filtration systems (W & WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
10	Design of Disinfection systems (W & WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
11	Design of Residual treatment & handling systems (W & WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
12	Design of Preliminary treatment systems (WW); Design of Primary treatment systems (WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
	Invited speaker	* Speaker: - Presentation			3

		- Query * Students: Answer the question from the speaker			
13	Design of Secondary treatment systems (WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
14	Design of Tertiary treatment systems (WW)	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	3	
15	Design of water supply and drainage system for buildings	* Lecturer: - Presentation and instruction - Query * Students: - Answer the question from lecturer - Presentation of the exercise	2	2	
	Total		**25**	**44**	**6**

10. Contact information

A. Address: Room 315 – Building A5, Thuyloi University

B. Head of division

- Full name: Assoc. Prof. PhD. Nguyễn Thị Thế Nguyên
- Mobile: 0983 033 532
- Email: nguyen.n.t@tlu.edu.vn

Hanoi, date .....

Head of faculty **Head of division**

PGS. TS. Nguyễn Thị Thế Nguyên