COURSE SYLABUS

COLOID CHEMISTRY

Credits: 02 (Lectures 01 – Practices 01 – Self-study 06)

Code: MT01003

Expected Learning Outcomes

Indicator	Upon completion of the course, Student able to	Expected learning outcomes of program
Knowledge		
CELO1	Ilustrate the basic characteristics of the coloid chemistry	ELO3: Evaluate the impact of natural resource exploitation and emissions on environmental quality.
CELO2	Apply thes laws and knowledge of colloid chemistry to solve the excercise about coloid systems.	ELO1: Apply the knowledge of natural science, politics, social science and humanities, law, economics, and awareness of contemporary issues in the field of environmental sciences. ELO2: Analyze environmental quality including designing and conducting experiments, collecting data, and interpreting results.
CELO3	Describe environmental – related coloid phenomena	ELO1: Apply the knowledge of natural science, politics, social science and humanities, law, economics, and awareness of contemporary issues in the field of environmental sciences. ELO2: Analyze environmental quality including designing and conducting experiments, collecting data, and interpreting results.
Skills		
CELO4	Work basic experimental in coloid chemistry.	ELO 6: Apply systematic, critical, and creative thinking in solving problems in the environmental and related fields. ELO 9: Apply appropriate approaches, suitable methods, and techniques to investigate, survey, and study environmental problems.
Attitude		
CELO5	Be positive in learning and research	ELO11: Define a clear career orientation; possess a passion for one's career and a sense of lifelong learning.

Brief descriptions

- Chapter 1: Overview of coloid system
- Chapter 2: Properties of molecular dynamics and light diffusion of colloidal systems
- Chapter 3: Surface energy and adsorption
- Chapter 4: Structure of electric double layer and surface potential
- Chapter 5: The stability of the colloidal system and coagulation
- Chapter 6: Solution of polymers and colloids
- Chapter 7: The formation of structure and aerosol

Student tasks:

- Attendance: Students must attend at least 75% of the class and participate in class activities and 100% practical, discussion sessions.
- Exercise: Complete the exercises corresponding to the learned part
- Participate fully and actively in discussions.
- Mid-term exam: All students must take the mid-term exam
- All students must take the final exam.

Assessment methods

1. **Grading scale: 10**
2. **Evaluation:**

Group discussion: 10%
Practice: 10%
Mid-term exam: 20%
Final exam:60%

Key academic staffs

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