COURSE SYLABUS

ANALYTICAL CHEMISTRY

Credits: 02 (Lecture 1,5 – Pracices 0,5 – Self-study 06)

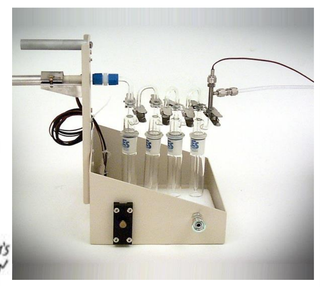
Code: MT01004

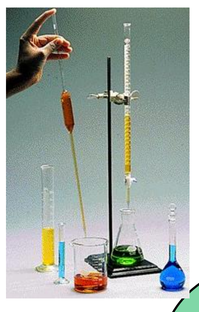
Experted Learning Outcomes

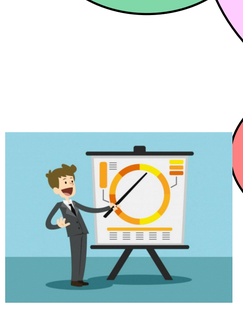
Indicator	Upon completion of the course, Student able to	Expected learning outcomes of program
Knowledge		
CELO1	Summarize certain concepts and principles in analytical chemistry; advantages and disadvantages of gravimetric methods; advantages and disadvantages of volumetric methods;	ELO1: **Apply** the knowledge of natural sciences, politics, society, humanities, law, economics and the understanding of contemporary issues into environmental sciences
CELO2	Apply gravimetric method to analyze the presence of specific analytes in the environmental field.	ELO2: **Analyze** environmental qualities including design and implement the environmental tests, data collection and interpretation. ELO3: **Evaluate** the impact of resource exploitation and emissions on environmental quality
CELO3	Apply volumetric method to analyze the presence of specific analytes in the environmental field.	ELO2: **Analyze** environmental qualities including design and implement the environmental tests, data collection and interpretation. ELO3: **Evaluate** the impact of resource exploitation and emissions on environmental quality
Skills		
CELO4	Apply analytical methods adapted to the sample to be analyzed.	ELO 6: **Apply** systematic thinking, critical thinking and creative thinking in solving environmental problems and related fields.
CELO5	Work in group.	ELO7: **Work** in group and **Lead** the multi-functional team.
CELO6	Calculate results, discuss results and write reports.	ELO 10: **Use** modern technology, equipment and techniques in natural resources and environment management and protection activities.
Attitude		
CELO7	Be proactive and positive in learning and research.	ELO11: **Determine** a clear professional orientation, career passion and a sense of lifelong learning

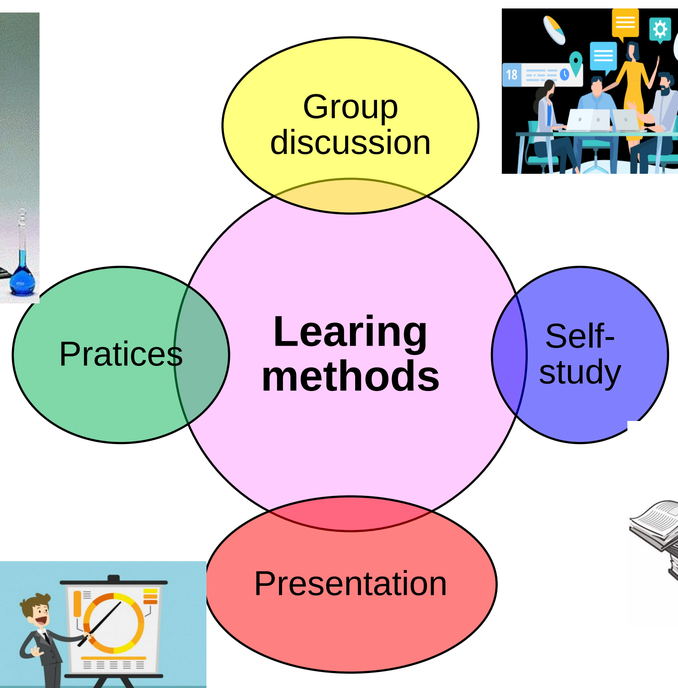
Brief descriptions

- Chapter 1: The basic concepts of analytical chemistry
- Chapter 2: Gravimetric method of analysis
- Chapter 3: Titrations in analytical chemistry
- Chapter 4: Instrumental analysis (lear more)









Student tasks

- Attendance: Students must attend at least 75% of the class and participate in class activities and 100% practical, discussion sessions.
- Preparing for the lecture: Students must read and carefully the lectures; do homework; presentation; groups discussion.
- Midterm test and final test: Students are required to take midterm test and final exam.

Assessment methods

1. Grading scale: 10
2. Evaluation:

- Attend class and group discussions: 10 %
- Pratice assessments: Students reach practice. These are the conditions for the final exam.
- Midterm test: 30%
- Final exam: 60%

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