

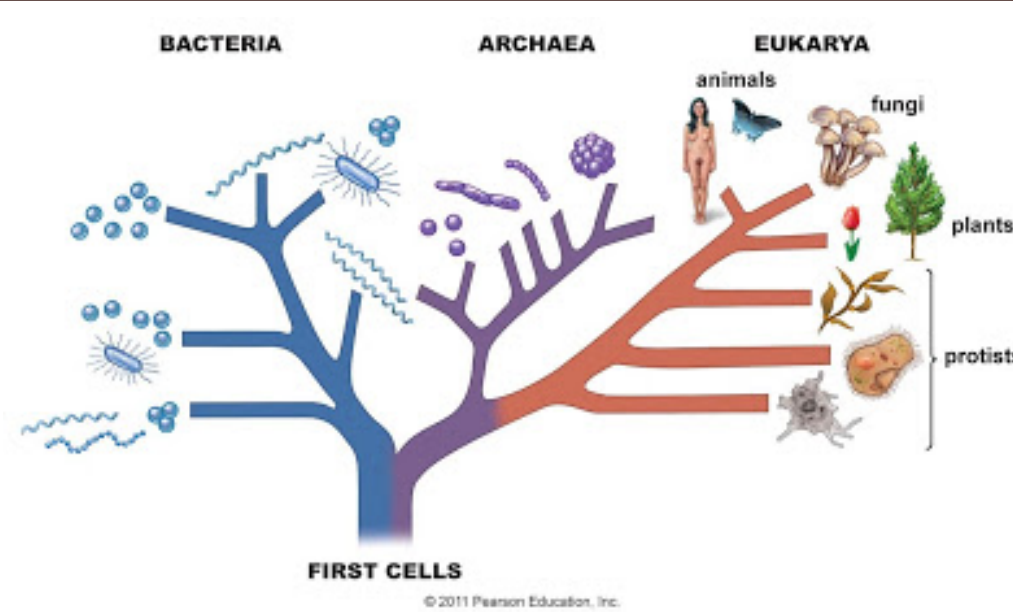


COURSE SYLLABUS

General Microbiology

Credits: 02 (Lectures 1.5 – Practices 0.5 – Self-study 06)

Code: MT02033



Experted Learning Outcomes



Indicator	Upon completion of the course, Student able to	Expected learning outcomes of program
Knowledge		
CELO1	Presenting the role of microorganisms in human activities and in agriculture - forestry - fishery, environmental protection to apply to various fields of life and society	ELO1: Apply the knowledge of natural sciences, politics, society, humanities, law, economics and the understanding of contemporary issues into environmental sciences
CELO2	Presenting of morphology, structure and specific characteristics of virus from which to apply and confirm the role of virus in life, society and environmental protection	ELO1: Apply the knowledge of natural sciences, politics, society, humanities, law, economics and the understanding of contemporary issues into environmental sciences
CELO3	Distinguish, describe the morphology, size, structure of bacteria, actinomycetes, yeasts, fungi, cyanobacteria and algae, from which to apply their role in life, nature and environmental protection	ELO3: Evaluate the impact of resource exploitation and emissions on environmental quality
CELO4	Presenting metabolism of microorganisms, decomposition of organic matters by microorganisms in nature to apply to agricultural production and environmental protection	ELO 6: Apply systematic thinking, critical thinking and creative thinking in solving environmental problems and related fields. ELO7: Work in group and Lead the multi-functional team. ELO8: Communicate effectively via oral, written, and multimedia with stakeholders in a dynamic environment; Obtain an English standard as required by the Ministry of Education and Training.
CELO5	Describe the microbial genetics; The effect of environmental factors on the growth and development of microorganisms from which to apply in life, nature and environmental protection	ELO3: Evaluate the impact of resource exploitation and emissions on environmental quality
Skills		
CELO6	Observing, distinguishing microorganisms, microbial staining and morphological observation.	ELO 10: Use modern technology, equipment and techniques in natural resources and environment management and protection activities.
CELO7	Teamwork, searching for documents on the content of the course	ELO7: Work in group and Lead the multi-functional team.
Attitude		
CELO8	Develop future career orientation; actively learning and updating knowledge	ELO11: Determine a clear professional orientation, career passion and a sense of lifelong learning

Brief descriptions

- Chapter 1: Overview
- Chapter 2: Virus
- Chapter 3: Other groups of microorganisms
- Chapter 4: Microbial physiology
- Chapter 5: Microbial genetics
- Chapter 6: Effect of Environmental conditions on microorganisms and the distribution of microorganisms in nature

Student tasks:

- Attendance: Students have to attend at least 75% of the class and 100% practical sessions.
- Self-study: Students read the books provided by the lecturer as well as preparing concern documents before going to class.
- Seminar: Students have to prepare materials, presentation and discussions in group as the requests of the lecturer
- Final exam: All students eligible to take part in the final exam
- Attitude: positively ask questions, make comments and protect personal opinions

Assessment methods

1. Grading scale: 10

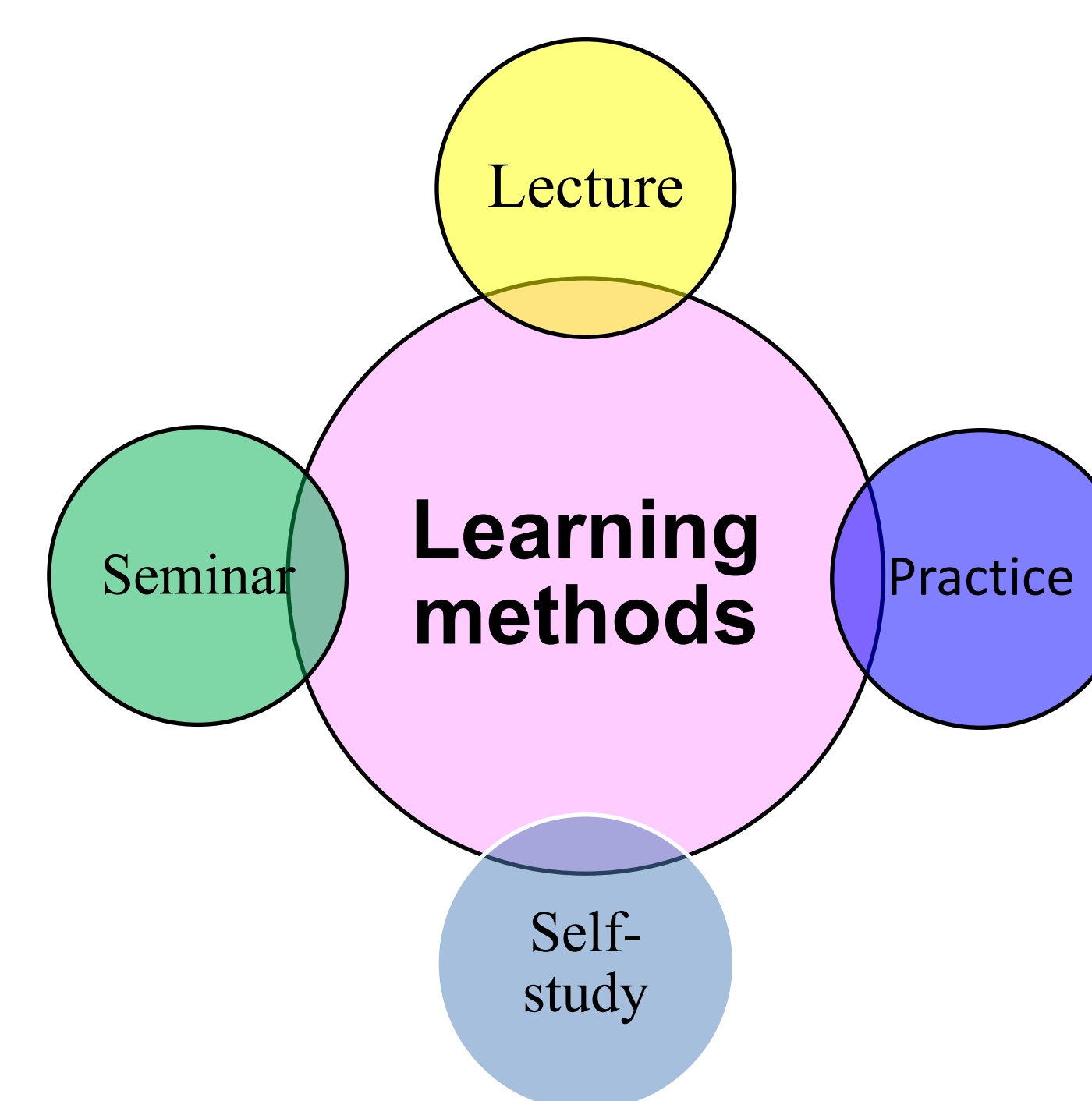
2. Evaluation:

Discussion: 10 %

Practice: 10%

Seminar: 20%

Final exam: 60%



Key staff: Dr. Vu Thi Hoan, Email: vythoan@vnua.edu.vn; **Staffs:** Ass.Dr. Nguyen Thi Minh, Dr. Dinh Hong Duyen, Dr. Nguyen The Binh, Dr. Nguyen Xuan Hoa, MSc. Nguyen Tu Diep, MSc. Nguyen Thi Khanh Huyen