

SEMESTER I & II
LSM2291 FUNDAMENTAL TECHNIQUES IN MICROBIOLOGY

Prerequisite: LSM1102 or LSM1106

Workload: 13 lecture hours + 32 laboratory hours

Course description:

This module gives an overview of microbial diversity, the biological properties of microbes, methods and approaches in the study of microbiology. At the end of the module, students should have fundamental knowledge of microbiology, including tools in the study of cells and microbes and the awareness of biosafety, and students should be excited by the microbial world and wishing to know more.

S/N	Topics	Lecture hours	Practicals
1.	Introduction to the diversity of microbial world and phylogeny	2h	
2.	Biosafety	1h	
3.	Isolation and identification of microbes	4h	
4.	Microbes in the environment: Where are microbes found and why are they there	4h	
5.	Microbes and immunity	2h	
6.	Soil microbiology: Isolation, identification and characterization (antibiotic producers, polysaccharide producers)		8h
7.	Water-borne pathogens: Isolation, enumeration, physiology and behaviour outside the host		8h
8.	Food microbiology: Isolation, enumeration and characterization (yeast, lactic acid bacteria, enteric bacteria)		8h
9.	Human skin microbiology: Isolation, are they pathogens?		8h
		Lectures: Practicals:	13h 32h
		Total hours:	45h

MODE OF ASSESSMENT: Continuous Assessment (70%); Laboratories (30%)

MODULE COORDINATORS:

(Semester I) A/P Tan Shyong Wei, Kevin Dr Chen Yu Shen, John	(Tel: 6516-6780, E-mail: mictank@nus.edu.sg) (Tel: 6516-3517, E-mail: miccjy@nus.edu.sg)
(Semester II) A/P Chu Jang Hann, Justin A/P Sim Tiow Suan	(Tel: 6516-3278, E-mail: miccjh@nus.edu.sg) (Tel: 6516-3280, E-mail: micsimts@nus.edu.sg)

LECTURERS

Semester I:

A/P Tan Shyong Wei, Kevin
Dr Chen Yu Shen, John

Semester II:

A/P Chu Jang Hann, Justin
A/P Sim Tiow Suan
A/P Tan Yee Joo