

**SEMESTER I & II**  
**LSM2203 – EXPERIMENTAL MICROBIOLOGY**

**Prerequisite(s)/Co-requisite(s): LSM1101 or LSM1102 or LSM1103**

**Workload: 1-0.5-2.5-2-5**

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         |
|     | Human skin microbiology: Isolation, are they pathogens?  |                        | 8h         |
|     |  | <b>Lectures: 13h</b>   |            |
|     |  | <b>Practicals: 32h</b> |            |
|     |  | <b>Total hours:</b>    | 45h        |

**Reference Manuals:**

**Module Coordinators:**

(Semester I)

A/Prof Lee Yuan Kun/Prof Ng Mah Lee (Tel: 6516-3284, Email: micleeyk@nus.edu.sg/  
(Tel: 6516-3283, E-mail: micngml@nus.edu.sg)

(Semester II)

Dr Justin Chu Jang Hann/A/P Sim Siow Suan (Tel: 6516-3283, Email: micngml@nus.edu.sg)/  
(Tel: 6516-3278, E-mail: miccjh@nus.edu.sg)

**MODE OF ASSESSMENT:**

**Continuous Assessment (90%)**

**Laboratories (10%)**

**LECTURERS**

**Semester I:**

Assoc Prof Lee Yuan Kun

Professor Ng Mah Lee

Assist Prof Kevin Tan

**Semester II:**

Dr Justin Chu Hang Hann

Assoc Prof Sim Tiow Suan

Assoc Prof Ho Bow