

SEMESTER II

LSM3224 MOLECULAR BASIS OF HUMAN DISEASES

Prerequisite: Pass in LSM2101 and LSM2103

Workload: 26 lecture hours + 6 tutorial hours + 18 laboratory hours

This module aims to provide students with in-depth knowledge of the basic molecular mechanisms underlying common human diseases, such as genetic, metabolic and infectious diseases. Examples of diseases highlighted will include cancer, diabetes and obesity among others. During lectures and tutorials, there will be discussions based on data from current research in the respective fields. Practicals are designed to support student learning of the concepts covered. Prospective students should be equipped with fundamental understanding of molecular and cell biology, biochemistry and microbiology. Basic knowledge of genetics and general human physiology will also be helpful. Overall, the module aims to provide students with knowledge and critical-thinking skills to understand human health and diseases as applicable to their personal lives or for subsequent studies in research laboratories.

S/N	Topics	Lecture hours
1	METABOLIC DISEASES Examples: DIABETES OBESITY	Yeong Foong May 6 hours
2	INFECTIOUS DISEASES MICROBIAL FACTORS AND PATHOGENECITY IMMUNITY AND HOST-CELL INTERACTIONS	Yeong Foong May 8 hours
3	CANCER GENETICS PATHWAYS MODEL SYSTEMS	Takaomi Sanda 8 hours
4	ECHNIQUES AND APPROACHES	Yeong Foong May 4 hours
		Total Lectures : 24h Tutorials: 6h Practicals: 3 x 6 = 18h
Total hours:		48h

MODE OF ASSESSMENT:

Laboratories: 20% (There will be three 6-hour laboratory sessions)
 Mid-term: 20%
 Assignment: 20%
 Final Examinations: 40%

MODULE CO-ORDINATOR:

A/P Yeong Foong May (Tel: 6516 8866, Email: bchyfm@nus.edu.sg)

LECTURERS:

A/P Yeong Foong May (Tel: 6516 8866, Email: bchyfm@nus.edu.sg)
 Asst Prof Takaomi Sanda (Tel: 65161016, Email: csitakao@nus.edu.sg)