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.

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<tr>
<th>S/N</th>
<th>Topics</th>
<th>Lecture hours</th>
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| 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   | TECHNIQUES 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:
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