SISP 1115
Microbial Control in Health and the Environment

Course Description

This course provides students an introduction to the world of managing and controlling unwanted microorganisms in both our bodies and the environment. Through engaging lectures and laboratory sessions, students will explore the diverse types of microbes that exist within our surroundings. The course delves into the mechanisms and strategies employed to effectively controlling microbes in various settings. Students will have the opportunity to gain hands-on experience in safely handling microorganisms, applying sterile procedures, and designing experiments to evaluate antimicrobial efficacy against bacteria.

Topics

- Introduction to Microorganisms
- Characterization of Bacteria using Gram staining
- Human Microbiome
- Controlling Microorganisms in Humans and the Environment
- Controlling Microorganisms in Food

Grading Scheme

- Written lab report (30%)
- Group Presentation (25%)
- Peer evaluation (5%)
- In-class participation (10%)
- Final examination (30%)

[Topics and grading schemes are subject to change as deemed appropriate. Students will receive information and guidelines in class on how they will be assessed for the course.]

Teaching Mode

The course will be delivered face-to-face.

Attendance Requirement

Attendance is expected and required. The minimum attendance required is 70%. Attendance for the assessment activities [e.g. group presentation and final exam] is mandatory.

Instructor(s) Profile

Dr. Jessica TANG

Dr. Tang received her Ph.D. in Microbiology from Kings College, University of London. Currently, she serves as a Lecturer in the Division of Life Science at the HKUST where she teaches lecture courses including microbiology as well as experiential laboratory course. Additionally, she is also an instructor of the HKUST Team for the iGEM competition – the largest international synthetic biology competition for undergraduates, and for the International Biology Olympiad (IBO) student training program. She is a dedicated educator and has successfully delivered a wide range of life science courses using various pedagogical approaches and formats to students. She hopes to ignite a love of learning and cultivate curiosity in her students for further exploration of the subject.