

Course Description: This is a practical course accompanying the lecture course LIFS1901 General Biology I. It provides students with some basic concepts and some hands-on experience in biological investigation within the areas covered by LIFS1901. The emphasis is on the understanding and application of the scientific principles underlying the experimental designs and procedures. **Co-requisite:** LIFS1901 General Biology I **Credit Point:** 1

Intended Learning Outcomes (ILOs): On successful completion of this course, students are expected to be able to:

1. explain the scientific principles underlying the experimental procedures described in various laboratory sessions;
2. demonstrate some basic laboratory techniques for carrying out the life science experiments described in various laboratory sessions;
3. apply scientific reasoning and knowledge to analyze and interpret experimental data;
4. apply appropriate ethical principles to practical laboratory work and data interpretation.

Weekly Meeting Time & Venue: Mon 1:30-4:20 pm Room 4160 (Life Science Teaching Lab)

Course Schedule:

Week	Date	Content
1	Sep 3	Course introduction; Lab regulations; Group arrangement; Lab coat
2	Sep 10	Practical 1: Freshwater pond microbes
3	Sep 17	Individual test of skills in microscope use
4	Sep 24	Individual test of skills in microscope use (cont)
5	Oct 1	<i>Holiday, no class</i>
6	Oct 8	Practical 2: Cell permeability & osmosis
7	Oct 15	Individual test of skills in micropipettor & microcentrifuge use
8	Oct 22	Individual test of skills in micropipettor & microcentrifuge use (cont)
9	Oct 29	Practical 3: Plant leaves & pigments
10	Nov 5	Practical 4: Nucleic acid isolation
11	Nov 12	Group project: Optimizing growth conditions for a microscopic alga
12	Nov 19	Group project (cont)
13	Nov 26	Group project (cont)

Student Learning Activities: Performing laboratory experiments, observing laboratory demonstrations, completing laboratory worksheets, reading course instructive materials & exploring relevant materials from other resources

Student Learning Resources: Course instructive materials, textbook for LIFS1901, library and internet-based resources

Assessment Scheme:

- **Laboratory Skill Tests (Pass/Fail)**, assessing ILO 2
[Failure in any one skill test will result in failure in this course]
- **Laboratory Reports (50%)**, assessing ILOs 1, 2, 3 & 4
- **Final Exam (50%)**, assessing ILOs 1, 2, 3 & 4

Instructor: Dr. Eugene S. C. HUNG (bohsc@ust.hk, x7303, Room 5451)

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Teaching Assistants: Mr. Chun Po FUNG, Miss Queenie Wing Sze LAI, Mr. Chun Hei LI, Miss Phoebe Lut Fei TAM, Miss Emily Oi Ying WONG