

**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 4	Course introduction; Lab regulations; Group arrangement; Lab coat
2	Sep 11	Practical 1: Freshwater pond microbes
3	Sep 18	Practical 2: Cell permeability & osmosis
4	Sep 25	Skills test – Use of microscope
5	Oct 2	<i>Holiday, no class</i>
6	Oct 9	Skills test – Use of microscope
7	Oct 16	Practical 3: Plant leaf & pigments
8	Oct 23	Practical 4: Nucleic acid isolation
9	Oct 30	Skills test – Use of micropipettor & microcentrifuge
10	Nov 6	Skills test – Use of micropipettor & microcentrifuge
11	Nov 13	Group project: Finding out about the microbes in the jar
12	Nov 20	Group project (cont)
13	Nov 27	Group project (cont) & Briefing on final examination

**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:**

- **Practical Reports (5% x 4)**, assessing ILOs 1, 2, 3 & 4
- **Laboratory Skills Test (10% x 2)**, assessing ILO 2
- **Group Project (20%)**, assessing ILOs 1, 2, 3 & 4
- **Final Exam (40%)**, assessing ILOs 1, 2, 3 & 4

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