

LIFS 1902 General Biology II

Course Outline-Fall 2018

1. Instructors

| Instructors | Office | Extension | E-mail address |
|--|-----------|-----------|--|
| Prof. Karl HERRUP (Course Coordinator) | Room 5466 | x7302 | herrup@ust.hk |
| Prof. Chun LIANG | Room 5524 | x7296 | bccliang@ust.hk |
| Dr. Philip LAM | Room 5515 | x8714 | ylam@ust.hk |

2. Meeting Time and Venue

Lectures:

Date/Time: Monday 12.00 – 13.20 ; Wednesday 12.00 – 13.20

Venue: LTL

3. Course Description

Credit points: 3

Pre-requisite: LIFS1901 OR level 3 or above in HKDSE 1x Biology OR a passing grade in AL/AS Biology

Exclusion: NIL

Grading: A+ to F

Brief information/synopsis:

This course targets science students who have acquired basic knowledge in fundamental biology through HKDSE Biology, LIFS1901, or another biology course/program at the equivalent level. It functions as a bridging course to prepare the students for further study in life science. Its focus is on human biology, human genetics, and biotechnology. Current examples will be used as well to relate the knowledge to real life issues.

4. Intended Learning Outcomes

On successful completion of this course, students are expected to be able to:

| No. | ILOs |
|-----|--|
| 1 | Explain the basic structures and life processes in humans. |
| 2 | Explain basic inheritance of traits and gene expression in humans. |
| 3 | Explain basic biotechnologies and discuss their impacts on human lives. |
| 4 | Discuss the relevance of life science to the study of humans as a living organism. |

5. Assessment Scheme

- a. Mid-term Examination duration: 2 hrs
Final Examination duration: 3 hrs
- b. Percentage of coursework, examination, etc.:

| <u>Assessment</u> | <u>Assessing Course ILOs</u> |
|---------------------|------------------------------|
| Mid-term Exam (50%) | ILO: 1, 2, 3, 4 |
| Final Exam (50%) | ILO: 1, 2, 3, 4 |

6. Student Learning Resources

Lecture notes

Textbook: *Inquiry into Life*, 14th/15th ed. By Sylvia S. Mader; McGraw Hill

Textbook: about HK\$505 after student discount (Sell at campus bookstore)

Textbook + Connect Plus: HK\$515 after student discount (Sell at campus bookstore)

Connect Plus (With ebook): US\$38.5 per code

SmartBook: US\$31 per code

LearnSmart: US\$16.5 per code.

7. Course Schedule

| Date | Topic (Relevant chapter in the textbook) | Instructor |
|----------------|--|-------------------|
| Sep 3, 5, 10 | Introduction; DNA structure and gene expression (25) | Liang |
| Sep 12 | Patterns of gene inheritance (23) | Liang |
| Sep 17 | Evolution (27) | Herrup |
| Sep 19 | Chromosomal basis of inheritance (24) | Liang |
| Sep 24 | Development (22) | Lam |
| Sep 26, Oct 3 | Respiratory system (15) | Lam |
| Oct 8, 10 | Endocrine system (20) | Herrup |
| Oct 15 | Reproduction (21) | Herrup |
| Oct 19, 7-9pm | Mid-term exam (covers lectures from Sep 3 – Oct 15) | |
| Oct 22, 24 | Circulatory system (12) | Herrup |
| Oct 29, 31 | Lymphatic, immune systems & infectious diseases (13) | Herrup |
| Nov 5 | Osmoregulation & excretion (16) | Herrup |
| Nov 7, 12 | Digestive system and nutrition (14) | Liang |
| Nov 14 | Biotechnology (26) | Liang |
| Nov 19, 21, 26 | Nervous system | Herrup |
| Nov 28 | Aging (22) | Herrup |