Fall 2021-22   LIFS 1901   General Biology I

Class Time:     Monday and Wednesday    09:00-10:20

Room: LTJ

Course Description:
This course targets science students not having sufficient biological knowledge for the entry to a life science program of a 4-year undergraduate curriculum. It provides students with a general overview of fundamental biology: basic characteristics of life (the chemistry of life, cells), vital life processes (respiration, photosynthesis), and essential concepts of genetics, and evolution. Topics on human diseases and gene technology will also be covered.

Credit Points: 3

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

(1) Describe the basic characteristics of life and its composite units

(2) Describe the interactions of organisms with each other and with the physical environment, taking particular account of energy source, the survival of individuals and the survival of a group.

(3) Apply the basic knowledge of the characteristics of life and the interactions of organisms to explain essential life processes.

(4) Illustrate how life science provides an investigative approach to interpreting the natural world.

Recommended Reading:
- E-book: Campbell Biology: Concepts & Connections with Mastering Biology (Pearson)–purchase the access code in the university bookstore, price HKD 399, access code valid for 18 months
Teaching & Learning Activities:

- Two 80-minute online lectures per week

Assessment:

**Examinations:** [Assessing all ILOs]

- Parts I & II
  - Examination 45%
  - In-class clicker questions 5%
- Parts III & IV
  - Examination 50%

Instructors

<table>
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<tr>
<th>Dr. Eugene HUNG</th>
<th>Room</th>
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<tbody>
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<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td>Sep 1, 6</td>
<td>The study of life</td>
<td>Ch. 1</td>
<td>Tang</td>
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<tr>
<td>Sep 8, 13</td>
<td>The Chemical Basis of Life/The Molecules of Life</td>
<td>Ch. 2, 3</td>
<td>Tang</td>
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<tr>
<td>Sep 15, 20</td>
<td>Cell Structure and Function</td>
<td>Ch. 4</td>
<td>Tang</td>
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<tr>
<td>Sep 27, 29</td>
<td>Biological membranes: Structure and Function</td>
<td>Ch. 5</td>
<td>Tang</td>
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**Part II: Energy Transfer Through Living Organisms**

- Oct 4, 6 Energy and Enzymes Ch. 5 Tang
- Oct 11, 13 Respiration, revision class Ch. 6 Tang
- **Oct 18 Mid-term examination (Parts I & II)** Tang

**Part III: Continuity of Life**

- Oct 20, 25, 27 Determination of Form & Function of an Organism Ch. 10, 11 Hung
- Nov 1, 3, 8 Making of a New Life Ch. 8, 27 Hung

**Part IV: Biodiversity**

- Nov 10, 15, 17 Differences among Living Individuals Ch. 9, 13 Hung
- Nov 22, 24, 29 Variety of Living Things on Earth Ch. 16, 17, 18 Hung

(TBA) **Final examination (Parts III & IV)** Hung