

Biology of Human Health
LIFS 1020 (Spring 2019-2020)

Faculty Instructors:

Prof Kenny Chung, Course Co-ordinator (bckchung@ust.hk; Rm 5439)
Prof Robert Ko, (bcrko@ust.hk; Rm5534)

Meeting Time and Venue

Time: 13:30 – 14:50 (WED)
13:30 – 14:50 (FRI)

Venue: CYTG010

Course Description:

Credit Points: 3

Pre-requisite: Nil

Exclusion: LIFS 1901, LIFS 1902, Level 3 or above in HKDSE 1/2x Biology OR in HKDSE 1x Biology, OR HKAL Biology, LIFS 4760

This course aims to provide students with contemporary knowledge of biological, environmental and societal factors that are related to the health and well-being of human individuals. The health of human, environment as well as society are interrelated. By corollary, it is essential to fully understand human health and diseases in terms of biological disparities. In the past few years, there has been a growing interest in integrating human health, environment and society between practitioners from differential fields. Objective of the course is to address the correlations between the three corresponding areas under a challenging, interdisciplinary nexus.

Intended Learning Outcomes:

By the end of this course, the students are expected to be able to:

1. Explain fundamental principles and interplayed relationships between biology, environment and society in human health.
2. Identify roles of biological disciplines in human health.
3. Recognize the consequences of biological disparities in relation to human health.
4. Describe the effects of environmental and societal factors on human health.
5. Discuss the importance of nutrition and exercise in maintenance of healthy lifestyles.

Assessment Scheme:

- (a) Midterm Exam: 60 min; Final Exam (90 min); All MC questions
- (b) Percentage of exam and course work

<u>Assessment</u>	<u>Assessing Course ILOs</u>
40% by Midterm Exam	(1), (4), (5)
40% by Final Exam	(2), (3), (5)
20% by short essay (400 words)	(1), (2), (3), (4), (5)

Student Learning Resources:

Recommended Reading:

Human Health: Biology, Environment and Society (2009), McGraw Hill.
Mulvihill ML, Zelman M, Holdaway P, Tompary E and Raymond J (2006) *Human Diseases*. 6th

Teaching and Learning Activities:

Students have to attend lectures which are assisted by video presentations. They also work on a short essay on a selected topic.

Class Schedule

LIFS 1020 (2018/19 Spring Semester)

Feb 7 & 12 (Prof Ko)

Biological Organization of the Human Body System – From Cells to Organisms

Feb 14-Mar 13 (Prof Chung)

The Maintenance of Life I - Needed or Unneeded (*e.g. Carbohydrates*)

The Maintenance of Life II - Needed or Unneeded (*e.g. Proteins*)

The Maintenance of Life III - Needed or Unneeded (*e.g. Lipids & Essential Minerals*)

Environmental Health I - Toxic versus non-toxic (*e.g. Air/Land/Water Pollution*)

Environmental Health II - Hot versus Cold (*e.g. Global Warming*)

Mar 18 Mid-Exam (cover up to Mar 13)

Mar 20-May 8 (Prof Ko)

The History of Human Health (how diseases shaped our society)

The Foreigners - To Live or to Die (e.g. infectious diseases and our responses)

The Busy Brain - To Think and to Sense (e.g. stress, depression etc)

The Crazy Cell - To Divide or to Stop (e.g. Cancers)

Societal Health I – Aged versus Young (e.g. Family Stress and Financial Burden)

Societal Health II – Aged versus Young (e.g. Medical Management)

Healthy Lifestyles – Fit versus Unfit (e.g. Exercise and Training)