LIFS 1020 – Biology of Human Health

School:	**School of Science**
Subject Area:	**Life Science**
Course Credit:	**3**
Instructor:	**LAM Yeung, TANG Jessica Ce Mun**
Pre-requisite/co-requisite:	**Nil**

Notes:

- The syllabi provided here is for reference only and may be subject to changes and adjustments as determined by the course instructors.

Biology of Human Health

LIFS 1020 (Summer 2025)

Instructors:

Dr. Jessica Tang (bocemun@ust.hk)
Dr. Philip Lam (ylam@ust.hk)

Meeting Time and Venue

Time: 9:30 am – 12:50 pm (Mon, Wed, Fri)

Venue: Rm 2465 (Lift 25/26)

Course Description:

Credit Points: 3
Pre-requisite: a passing letter grade in CORE 1401 OR CORE 1402 OR CORE 1403 OR CORE 1404 OR LANG 1002 (prior to 2022-23)
Exclusion: Level 3 or above in HKDSE 1/2x Biology or in HKDSE 1x Biology, LIFS 1901, LIFS 1902

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 humans, the environment, as well as the society, are interrelated. By corollary, it is essential to fully understand human health and diseases in terms of biological disparities. In recent years, there has been a growing interest in integrating human health, environment, and society between experts from different fields. The objective of the course is to address the correlations between the three corresponding areas under a stimulating, 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, the environment, and society in everyday life.
2. Describe how diseases can affect human health and how they may be treated using recent technologies.
3. Describe how a healthy lifestyle can be maintained and the consequences of biological disparities in relation to human health.
4. Describe the effects of environmental and societal factors on human health.
5. Execute effective oral communication and written scientific language of biology of human health.

Assessment Scheme:

(a) Final Exam: All MC questions
(b) Written assignment: Group Presentation Script
(c) In-class quizzes: All MC questions
(d) In-class participation
(e) Group presentation#
(f) Peer evaluation (it will impact individual student's presentation score)

#Presentation topics will be provided later.

Mapping of Course ILOs to Assessment Tasks

Assessment	Assessing Course ILOs
40% by Final Exam	(1), (2), (3), (4)
10% by Quizzes	(1), (2), (3), (4)
10% by Participation*	(1), (2), (3), (4)
30% by Group Presentation#	(1), (2), (3), (4), (5)
10% by Group Presentation Script	(1), (2), (3), (4), (5)

*Students are required to:

Participate in iPRS questions
Participate in discussion
Miss NO more than 2 classes in the course

#5% out of 30% comes from peer evaluation. Students are required to complete the evaluation between July 7 to 9.

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 that are assisted by video presentations. They also need to work on an individual short essay on a selected topic and a face-to-face group presentation.

Course AI Policy

Generative AI tools may be used to assign student's learning, more details will be given in class**.**

Oral presentation rubric:

Criteria	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Relevance of topic to life science	Topic is highly relevant and directly addresses contemporary human health issues; demonstrates thorough understanding.	Topic is relevant; adequately addresses human health but may lack depth in some areas.	Topic is somewhat relevant; basic connection to life science but lacks clarity	Topic is not relevant; minimal connection to life science.
Content	Well-researched; presents clear, accurate information with strong arguments; articulates key points effectively.	Good research; presents mostly clear information but may have minor inaccuracies.	Basic research present; some information unclear or lacking depth, with inaccuracies noted.	Little to no research; many inaccuracies and unclear key points presented.
Clarity	Presents information clearly and logically; key points are articulated effectively.	Generally clear presentation; key points are mostly understandable but may lack some clarity.	Some points are unclear; could improve on articulating key ideas	Presentation is confusing and difficult to follow; key points are poorly articulated.
Speaking Skills	Engaging delivery; excellent use of voice modulation, body language, and eye contact; effectively interacts with the audience.	Good delivery; mostly uses effective body language and eye contact, with some audience engagement.	Limited engagement; could improve body language and eye contact; minimal audience interaction.	Poor delivery; lacks eye contact and body language; does not engage the audience.
Time management	Completes presentation within the allotted time; allows adequate time for Q&A.	Completes presentation on time but may rush through some sections; limited time for Q&A.	Over or under time; significant portions of content rushed or omitted, little time for Q&A.	Fails to manage time effectively; presentation is too long or too short, with no time for Q&A.

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
A	**Excellent Performance**	**Demonstrates a comprehensive grasp of subject matter and critical thinking.**
B	**Good Performance**	**Shows good knowledge and understanding of the main subject matter, and the ability to analyze and evaluate issues. Displays high motivation to learn.**
C	**Satisfactory Performance**	**Possesses adequate knowledge of core subject matter, competence in dealing with familiar problems, and some capacity for critical thinking. Shows persistence and effort to achieve broadly defined learning goals.**
D	**Marginal Pass**	**Has threshold knowledge of core subject matter.**
F	**Fail**	**Demonstrates insufficient understanding of the subject matter. Shows limited ability to think critically and exhibits minimal effort towards achieving learning goals. Does not meet the threshold requirements for development in the discipline.**

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to Academic Integrity | HKUST – Academic Registry for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

Course Schedule

LIFS 1020 (2025 Summer Semester)

Date	Topic	Instructor
June 16	Biological Organization of the Human Body System – From Cells to Organisms	Lam
June 18	The Maintenance of Life I - Needed or Unneeded (*e.g. Characteristics of life*)	Lam
June 20	The Maintenance of Life II - Needed or Unneeded (*e.g. Carbohydrates & Lipids*)	Lam
June 23	The Maintenance of Life III - Needed or Unneeded (*e.g. Proteins*)	Lam
June 25	Environmental Health - Toxic versus non-toxic & Hot versus Cold (*e.g. Air/Land/Water Pollution & Global Warming*)	Lam
June 27	The Foreigners - To Live or to Die (*e.g. Bacterial Infections*)	Tang
June 30	The Busy Brain - To Think and to Sense (*e.g. stress, depression; Alzheimer's diseases, etc.*)	Tang
July 2	The Crazy Cell - To Divide or to Stop (*e.g. Cancers*)	Tang
July 4	Societal Health - Aged versus Young, Fit versus Unfit *(e.g. Stress, age-related problems in society)*	Tang
July 7	Group Presentation	Lam & Tang
July 9	Group Presentation	Lam & Tang
July 11	**Final Exam (scope: June 16 to July 4)**	Lam & Tang