

The Hong Kong University of Science and Technology

UG Course Syllabus

Climate Change, Big History and Sustainability

CIVL 1190

3 Credits

Pre-/co-requisites: None

Name: LAU, Kai Hon Alexis

Email: alau@ust.hk

Course Description

[Big History as an emerging interdisciplinary framework, provides a long-term perspective to see the world through reconstructing the history from the big bang all the way to the present. In such a longer time scale, overview of stars, planetary and species evolution, as well as concepts in climate change and how it is related to sustainability of the planet's environment for its current inhabitants, including humanity, will be discussed. The physical science basis, impacts, risk, mitigation and adaptation measures of climate change will also be investigated (including technical and social solutions). For local and regional vulnerabilities, such as extreme weather events, sea levels rise, storm surge and coastal flooding, will be covered. The significance of collective learning under the big history framework, both as a driver for our exponentially growing impacts, as well as for better solutions, will be highlighted.].

Assessments:

[List specific assessed tasks, exams, quizzes, their weightage]

Assessment Task	Contribution to Overall Course grade (%)
In-class discussion and iPRS	30%
Group discussion and individual summary	30%
Group poster and presentation	20%
Individual final essay	20%

Required Texts and Materials

[List required textbooks, readings, and any other materials]

Intergovernmental Panel for Climate Change (IPCC) Fifth Assessment Report (AR5)

- AR5 Synthesis Report: Climate Change 2014
- AR5 Climate Change 2013: The Physical Science Basis
- AR5 Climate Change 2014: Impacts, Adaptation and Vulnerability
- AR5 Climate Change 2014: Mitigation of Climate Change

Jared Diamond

Collapse: How Societies Choose to Fail or Succeed (2005)

David Christian

Big History: Between Nothing and Everything (2014)

Yuval Harari

Sapiens: A Brief History of Humankind (2015)

[Optional] Additional Resources

[List any additional resources, such as online platforms, library resources, etc.]

Jared Diamond

Upheaval: How Nations Cope with Crisis and Change (2019)

David Christian

Digital resource: Big History Project

Yuval Harari

Homo Deus: A Brief History of Tomorrow (2016)

21 Lessons for the 21st Century (2018)