

This syllabus is a general representation of the course as previously offered and is subject to change.

BIOL 445 – Darwin’s Fishes

General Course Syllabus (as of April 2019)

About the Course:

Course description: A series of computer-assisted lectures using ichthyology and the work of Charles Darwin to illustrate basic principles of biology, and their practical implementation, i.e., how biologists select research programs, generate and test hypotheses, and present their case to peers and the public.

Course format: Informal lectures (mornings) and focused discussions of selected texts and video content (afternoons).

Credits: 3

Prerequisites: This course is restricted to students in one of these programs: BSC in year: ≥ 3

Course Learning Objectives:

By the end of this course, students should be able to present and discuss how scientists work and how science is done, using Charles Darwin as a model, and his work as a starting point for a number of contemporary issues in (a) epistemology [how do we *know* things], and (b) deontology/ethics [what a scientist is supposed to *do*, especially when things go wrong].

Textbooks and Additional Resources:

Required readings: *Origin of Species* (paperback editions available at any bookstore).

Course Evaluation:

Assessment	Weight
Class participation	10%
Mid-term essay	20%
End of term essay	40%
End of term (written) exam	30%

Schedule of Topics:

An approximate schedule of topics/weekly activities

1. Introducing the course and Darwin
2. Modes of Evolution
3. From Hypothesis to Theory and Theory of Coral Reef Development
4. Shifting Baselines and the Impacts of Fisheries and Climate Change on the World's Marine Ecosystems
5. Deontology and Ethics in Science
6. Science and the Paranormal
7. Skepticism and Science
8. Altruism
9. General Debates in Ichthyology

Course Policies:

- Students are expected to participate in debates during the course, to ask questions and to be respectful of their peers and the classroom environment.
- The end-term assignment will require each student to meet for 15 minutes with the instructor.
- Plagiarism and academic dishonesty will not be tolerated under any circumstances.
- Students who can find themselves in the waiting list or unable to register to the class can contact the instructor or the teaching assistant to help them register.

University Policies:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence.

UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom.

UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances.

UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available on [the UBC Senate website](#).