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

BIOL 332 – Protistology

General Course Syllabus (as of September 2019)

About the Course:

Course Description: A course on protist cell biology, ecology, genetics, and evolution; origins of multicellularity; and the role of protists in micropaleontology, parasitology, and oceanography.

A few lectures will be spent on the ways protists are useful or detrimental to human endeavours (medical and veterinary issues, biofuels, nanotechnology, etc.), but the bulk of the course will focus on the biology of protists in their own right, the ways they shape the biology of the planet as a whole, and the reasons why it is worthwhile studying these fascinating but very underappreciated life forms.

Course Format: Lecture and Laboratory
Credits: 4
Pre-requisites: BIOL 200

Course Learning Objectives:

Course Goal: by the end of this course, students should be able to evaluate current views on the evolutionary processes that gave rise to eukaryotic diversity. Across the various units in the course, students should:

1. Gain foundational knowledge to assess evidence and assumptions on eukaryotic biology and discuss the significance or protists in our ecosystem.
2. Apply knowledge and skills to find and identify protists in the field or under a microscope, as well as research and communicate on protist topics using oral presentations and written essays.
3. Acknowledge the feasibility of discovering new, important scientific data by simply observing living organisms; and accept that there is much more remaining to understand in biological phenomena than there are known.
4. Explain the terms and classifications used in the history of protist research, and assess the validity of information to infer phylogenetic and taxonomic relationships between protist groups.
5. Explain the hypotheses and evidence for the origin of eukaryotes.
6. Appreciate the diversity and beauty of protists.
7. Describe and compare the major examples, morphological features, and behaviors of protist groups such as Amoebozoans, Opisthokonts, Excavates, Archaeplastids, Rhizarians, and “Chromists” (Cryptomonads and Haptophytes, Heterokonts, Dinoflagellates, Apicomplexans, Ciliates), including an in-depth discussion of “Chromists,” one of the most controversial topics in current protistology.

More detailed objectives will be provided in each unit.

Textbooks and Additional Resources:

No textbook. Course materials and readings will be provided on the course website in Canvas (canvas.ubc.ca).

Evaluation:

Assessment	Weight
Final	~44%
Wikipedia Project	~22%
Lab Exam	~11%
Lab Reports	~22%

Wikipedia project: During this course, students will participate in a multi-year project that aims to increase the amount of protistological information available on Wikipedia. Each student will propose one or more pages for Wikipedia that may or may not end up being published, and this will represent about 22% (2/9) of the final mark of the course. Students may choose to write brand new page(s) in Wikipedia, or to rewrite and expand on existing ones, for a total of 10 pages (double-spaced, font size 12, not including the reference list). The Wikipedia pages would ideally include (if applicable): introduction, etymology, history of knowledge, habitat and ecology, description of the organism, fossil history, practical importance, list of species, bibliography, external links, and scientific classification.

Schedule of Topics:

Lecture Schedule (subject to change):

Topics covered:

- History of Protistology
- Origin of Eukaryotes
- Protist Diversity
- Amoebozoans
- Opisthokonts
- Excavates
- Archaeplastids
- Hacrobians
- Radiolarians
- Froams and Cercozoans
- Stramenopiles Non-Photosynthetic
- Ochrophytes
- Dinoflagellates
- Apicomplexans
- Ciliates

Lab Schedule (subject to change):

Lab	Topic
1	Amoebozoans
2	Metamonads
3	Euglenozoans
4	Archaeplastids
5	Rhizarians and Oomycetes
6	Ochrophytes
7	Dinoflagellates
8	Apicomplexans
9	Ciliates

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 ae 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.