

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

BIOL 344 – Human Heredity and Evolution

General Course Syllabus (as of September 2019)

About the Course:

Course Description: A course that relates genetic and evolutionary concepts to humans. Primarily for upper-level students in the Faculty of Arts. Credit will be granted for only one of BIOL 121 or BIOL 344. Not open to students in the Life Sciences.

Course Format: Lecture and Tutorial

Credits: 3

Prerequisites: none

Course Learning Objectives:

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

- Define key terminology in human heredity and evolution.
- Apply concepts of gene transmission and population genetics to describe, diagram, and predict the outcomes of a genetic cross (e.g. given parental genotypes/phenotypes and modes of inheritance, predict the probability of traits in their offspring).
- Describe how mechanisms such as linkage, recombination, and mutations contribute to genetic variation and evolution.
- Explain how human examples of disease and character inheritance are a result of cellular and gene inheritance mechanisms.
- Explain how genetic techniques are employed in modern technologies such as DNA fingerprinting and medicine.

Textbooks and Additional Resources:

Textbook: Core Genetics by C. Berezowsky and A. Griffiths. Freeman publishing. Other materials will be provided on the course website on Canvas (canvas.ubc.ca).

Evaluation:

Assessment	Weight
Presentation	25%
Midterm	25%
Final	50%

Student presentations: During the last several weeks of term, students will make a 10-15 minute in-class presentation on some aspect of genetics that they have personally researched.

Assignments: One assignment may be given each week for the first eight weeks of term. There will be mainly problems and cases in genetics, of the type that will be on exams.

Schedule of Topics:

Tentative list of topics covered:

1. Transmission genetics
2. Human Genes
3. Genes and cells
4. Chromosome aberrations
5. Genetic technologies
6. Mutations and cancer
7. Evolution
8. Population genetics

Course Policies:

- Tutorials are an integral part of instruction in this course, and attendance is required. The purpose of tutorials is to discuss the problem assignments, lectures and supplemental material.

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](#).