

BISC 300: Evolution Spring 2014 Course Syllabus

Instructor: Nicole Tunbridge (ndtunbri@sfu.ca)
Phone: 778-782-3193
Office Hours: Thursday 12:30-1:30 & Friday 2:00-3:00 in room B9234

Teaching Assistants: Tanya Stemberger (tanya_stemberger@sfu.ca)
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Prerequisite: BISC 202. Recommended: BISC 204. Students with credit for BISC 400 may not take BISC 300 for further credit.

Course description: The phenomenon of organic evolution and the major forces leading to changes in allele frequencies over time. Topics include population and quantitative genetics, adaptation, speciation, the origin of life, and the major evolutionary trends over geological time.

Text: Freeman, S. & J. C. Herron. 2014. Evolutionary Analysis, 5th edition.
A few copies of this text will be on reserve in the library. The 4th ed. of the textbook is also acceptable, though it will be your responsibility to be sure you access any missing content through the reserve copies of the 5th ed.

Course Website: <https://canvas.sfu.ca/>

Canvas will be used to post lecture slides, lecture recordings, assignments, and other material relevant to the course. Grades will be released through Canvas in a confidential manner.

Lectures: Mon/Wed/Fri 12:30-1:20 C9002

Tutorials:	D101	Monday	1:30-2:20	AQ5017
	D102	Monday	2:30-3:20	AQ5017
	D104	Wednesday	1:30-2:20	AQ5030
	D105	Wednesday	2:30-3:20	AQ5004
	D106	Friday	11:30-12:20	RCB7101
	D107	Friday	1:30-2:20	TASC2-8070

Please Note: Tutorials will begin in the SECOND week of classes, Jan.13-17th.

Grade distribution: Midterm Exam 1: 20%
Midterm Exam 2: 20%
Tutorials & Assignments: 20%
Final Exam: 40%

SFU's Code of Academic Integrity: see also <http://www.sfu.ca/policies/gazette/student/s10-01.html>

All members of the University community share the responsibility for the academic standards and reputation of the University. Academic honesty is a cornerstone of the development and acquisition of knowledge. Academic honesty is a condition of continued membership in the university community. Academic dishonesty, like other forms of dishonesty, includes misrepresentation with intent to deceive or without regard to the source or the accuracy of statements or findings. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University; it is furthermore unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University.

Outline of Topics (Tentative):

Date	Topic	Reading	Tutorial Topics & Exam Dates
Week 1 Jan.6-10	Introduction Hardy-Weinberg Equilibrium	Ch. 1-3 Ch. 6.1	No Tutorials
Week 2 Jan.13-17	Deviations from HWE: Mutations, Selection & Migration	Ch. 5, 6, & 7.1	Problem Set 1: HWE & Mutation
Week 3 Jan.20-24	Deviations Cont'd: Genetic Drift & Non-Random Mating Linkage & Sex	Ch. 7 (Not section 7.3) Ch. 8	Problem Set 2: Deviations from HWE
Week 4 Jan.27-31	Quantitative Genetics	Ch. 9	Problem Set 3: Quantitative Genetics
Week 5 Feb.3-7	Adaptation	Ch. 10	No Tutorials Midterm#1: Wed., Feb.5th
Feb.10-14	Study Break		No class or tutorials
Week 6 Feb.17-21	Sexual Selection	Ch. 11	Annotated Bibliographies: Peer Review Session
Week 7 Feb.24-28	Cooperation	Ch. 12	Presentation Tips Annotated Bibliographies Due in tutorial
Week 8 Mar. 3-7	Life History Speciation	Ch.13 Ch.16	Problem Set 4: Altruism, Kin & Sexual Selection
Week 9 Mar. 10-14	Speciation Cont'd Extinction	Ch.16 Ch. 18.4	Student Presentations Midterm#2: Wed, Mar.12
Week 10 Mar. 17-21	Phylogenies	Ch. 4	Student Presentations
Week 11 Mar. 24-28	Origins of Life	Ch. 17	Problem Set 5: Phylogenies
Week 12 Mar.31- Apr.4	Evolution and Development Human Health	Ch.19 Ch.14	Student Presentations
Week 13 April 7-11	Molecular Evolution Human Evolution	Ch. 14.1 & 7.3 Ch. 20	No Tutorials
	Final Exam	Location TBA	Sunday, April 13 12-3pm

- *If you anticipate missing an exam, you **must** seek and obtain permission from the instructor. It is in your best interest to do this **before** the exam, official documentation will be required.*
- *Students with disabilities who require special considerations should contact the Centre for Students with Disabilities (csd_office@sfu.ca)*