

BISC-300, Evolution, Fall 2020

Lecture:	Mon,Wed,Fri	12:30-13:20	Remote*
Tutorial:	Mon (D101)	14:30-15:20	Remote
	Mon (D103)	15:30-16:20	Remote
	Mon (D104)	15:30-16:20	Remote
	Fri (D106)	14:30-15:20	Remote

* lectures are asynchronous; they will be recorded and posted prior to the scheduled meeting time.

Instructor: Dr. Leithen M’Gonigle
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Teaching assistant: Elijah Reyes
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Office Hours: By appointment

Pre-requisites: BISC 202 with a grade of C- or better. Students with credit for BISC 400 may not take this course for further credit.

Textbook: Evolutionary Analysis (5th Edition) by Jon C. Herron and Scott Freeman.

Course Description: The phenomenon of organic evolution, and the major forces leading to changes in allele frequencies over time, i.e. natural selection and genetic drift. Topics include adaptation, speciation, the origin of life, and the major evolutionary trends over geological time.

Zoom: You will need to set up a Zoom account if you have not done so already. SFU has a Zoom site license for all students, staff, and faculty. You will need to install Zoom on whatever device you plan to use for tutorial and office hour attendance. Click [here](#) for more info.

Grade Breakdown:

Quizzes (to be held in tutorial; best 7 of 8)	30%
Learning objectives	10%
Participation/attendance in tutorials	10%
Textbook entry assignment (due Oct 16)	12.5%
Podcast assignment (due Nov 1)	12.5%
Argumentation assignment (due Nov 27)	25%

Letter Grade Distribution:

≤ 50	50–	55–	60–	65–	70–	75–	80–	85–	90–	95–
F	D	C-	C	C+	B-	B	B+	A-	A	A+

Final grades may be curved in a fair and impartial manner, with distribution reflecting the performance and effort of the class.

General:

- Quizzes are closed book, closed notes, unless instructed otherwise.
- No makeup assignments or quizzes will be given.

Course Schedule *Note: this outline is tentative and will be updated as we progress; highlighted dates indicate assignment due dates.*

Dates	Content	Reading	Tutorial Topic
Sept 11	Introduction		No tutorial
Sept 14,16,18	Natural Selection Evolutionary genetics	1.1–1.3, 3.2–3.4 6.1, 6.4	Overview of assignments
Sept 21,23,25	Mutation, Migration Drift, Inbreeding	5.1–5.4 7.1,7.2,7.4	Quiz 1
Sept 28,30 Oct 2	Phylogenetics	4.1–4.4	Quiz 2
Oct 5,7,9	Neutral theory Sex and recombination	7.3	Quiz 3
Oct 14,16	Sex and recombination	8.1,8.3	
Oct 19,21,23	Quantitative genetics Adaptation	9.1–9.6 10.2–10.4,10.6–10.7	Quiz 4
Oct 26,28,30	Sexual selection	11.1–11.4	DMap overview with Joan Sharp
Nov 2,4,6	Cooperation / Conflict	12.1–12.5	Quiz 5
Nov 9,13	Life-history evolution	13.1–13.4	Quiz 6
Nov 16,18,20	Genome evolution Speciation	15.1–15.4 16.1–16.2	
Nov 23,25,27	Speciation (cont) Origins	16.3–16.4 17.1–17.4	Quiz 7
Nov 30 Dec 2,4	Origins (cont) Human evolution		Quiz 8
Dec 7	Wrap-up		

Quiz Schedule

Quiz	D101 D103 D104	D106	Material cut-off date*	Lectures
1	Sept 21	Sept 25	Sept 18	01–03
2	Sept 28	Oct 2	Sept 25	04–07
3	Oct 5	Oct 9	Oct 2	08–09
4	Oct 19	Oct 23	Oct 16	10–13
5	Nov 2	Nov 6	Oct 30	14–18a
6	Nov 9	Nov 13	Nov 6	18b–20
7	Nov 23	Nov 27	Nov 20	21–25
8 [†]	Nov 30	Dec 4	Nov 27	24–29

* Note: cut-off dates are approximate. † Lectures 24 & 25 are relevant for both quizzes 7 & 8.