

BIOLOGY 3FF3 Evolution

Time Period: Term 1, 2006

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Objectives: this course provides for students an opportunity to survey the major theoretical concepts and empirical observations in evolutionary biology.

Textbook: Freeman, S. and J. C. Herron. 2003. *Evolutionary Analysis* (3rd edition), Prentice Hall, New York.

Topics: course content will cover material that is contained in the textbook and, so, could include:

INTRODUCTORY MATERIAL

A Case for Evolutionary Thinking: Understanding HIV

The Evidence for Evolution

Darwinian Natural Selection

MECHANISMS OF EVOLUTIONARY CHANGE

Mutation and Genetic Variation

Mendelian Genetics in Populations I: Selection and Mutation as Mechanisms of Evolution

Mendelian Genetics in Populations II: Migration, Genetic Drift, and Nonrandom Mating

Evolution at Multiple Loci: Linkage and Sex

Evolution at Multiple Loci: Quantitative Genetics

ADAPTATION

Studying Adaptation: Evolutionary Analysis of Form and Function

Sexual Selection

Kin Selection and Social Behaviour

Aging and Other Life History Characters

Darwinian Medicine

THE HISTORY OF LIFE

Reconstructing Evolutionary Trees

Mechanisms of Speciation

The Origins of Life and Precambrian Evolution

The Cambrian Explosion and Beyond

Development and Evolution
Human Evolution.

Internet Site: a WebCT URI will be established to provide a 'course-information repository' Internet site.

Lectures: lectures will be delivered on Mondays and Wednesdays, between 1130 and 1220 and Fridays between 1330 and 1420 in JHE 376. Material presented during lectures will be made available electronically at the WebCT course Internet site as .pdf files from Microsoft © PowerPoint presentations.

Tutorials: 12 sections are available:

T01	We	0930-1020	ABB 162	Maria	abouchm
T02	Mo	1230-1320	T13 102	Jason	mitakija
T03	Tu	1330-1420	T13 123	Danya	konradd
T04	Fr	1430-1520	JHE A113	Iqbal	setiadmi
T05	Tu	1330-1420	BSB 122	Mirella	younem3
T06	Tu	1030-1120	HH 102	Alex	pontefaj
T07	We	1030-1120	JHE A113	Maria	
T08	Th	1030-1120	BSB B154B	Iqbal	
T09	Mo	1230-1320	HH 102	Alex	
T10	We	1030-1120	BSB 105	Jason	
T11	Mo	1530-1620	BSB 105	Mirella	
T12	Mo	1430-1520	T13 107	Danya	

Tutorials will involve informal (enjoyable) activities, which could include discussions, practical exercises, or presentations.

Evaluation: a 0-100 scale will be implemented for grading. The final score will be calculated as a sum over

Tutorial Assignments (best 10 @ 2 points each)	20
Weekly Exercises (best 10 @ 3 points each)	30
Final Examination (1 @ 50 points)	50.

Group, problem-based learning is encouraged in tutorials and with tutorial assignments and weekly exercises.

All administrative issues should be brought to a teaching assistant's attention.

Yellow Card System: Students will be allotted virtually one yellow card at course initiation. If a student is unable to submit material for a tutorial assignment by the prescribed deadline, then the yellow

card will be redeemed (and no mark will be recorded). Students who retain their yellow card may exchange it one-to-one for a perfect evaluation (*i.e.*, the yellow card may replace any tutorial assignment score). Yellow cards are non-transferable.

The yellow card system is implemented to recognise that sometimes circumstances conspire beyond predictable control (e.g., a pregnant dog goes into labour the night before an assignment is due) ... 'stuff happens!' Yellow cards allow students to miss one assignment without penalty and teaching assistants to be efficient (*i.e.*, ruthless) in processing assignments.

Academic Integrity: please visit the URI

http://www.mcmaster.ca/academicintegrity/instructors/proc_forms/AD_CourseOutlines.pdf
for details about the academic integrity policy for McMaster University.