**BIOL 323 - Evolutionary Biology**

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**Course Description**

*The Official Version:* Mechanisms and processes of evolution of biological organisms. Discussion of evolutionary principles from Darwinism to molecular evolution. 3.0 Credit Hours: 2.0 Lecture hours, 1.0 Lab hour.

*My 2¢:-* The course’s title is actually redundant because the ability to evolve is what defines biological systems, so there is no such thing as non-evolutionary biology. Hopefully we all have heard of evolution before; in this course I will attempt to review the principles of evolution, and highlight the implications to other areas of life (that is, biology).

“There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.” (Last sentence of “The origin”. Darwin 1859)

*My philosophy.-* A university course should be a joyful, fruitful and challenging exchange of ideas. I will do everything I can to make it so, within the constraints of the system, and I hope you will do likewise. It will require a high level of diligence, hopefully competence and eventually achievement.

This is a third year course, so the ability to memorize vast quantities of information will only get you half way there. Whenever possible I will emphasize comprehending concepts, not memorizing facts. You must know the facts and understand the concepts such that you are able to recognize them in different situations, and apply them in new and unexpected ways. You will be tested on your ability to extrapolate, integrate, estimate, conceptualize and hypothesize.

**Schedule:**

<table>
<thead>
<tr>
<th>Lectures</th>
<th>MWF</th>
<th>2:30 pm - 3:20 pm</th>
<th>Building 8-164</th>
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<tbody>
<tr>
<td>Tutorials</td>
<td>F</td>
<td>3:30 pm - 4:20 pm</td>
<td>Building 8-164</td>
</tr>
<tr>
<td>Final Exam</td>
<td>TBA</td>
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Consider lectures to be a scheduled, moderated, conversation between me and you (singular you), during which I will be the moderator and I will be doing most of the talking (but not ALL, please participate). Disruptive behaviour on any type (repeated tardiness, cells phones, noise,
side conversations, 3 course meals, paper airplanes, etc.) will not be tolerated. This is completely unnecessary, right?

**Resources**

**Primary Textbook**


**Other Interesting Books**


Darwin, C. 1859. The Origin of Species by Means of Natural Selection ([electronic version](https://www.gutenberg.org/etext/42)). *The greatest idea of all time! Detailed and exhaustive work, first documenting the fact of evolution and then proposing a mechanism.*


Dawkins, R.. 1978. The selfish gene. Oxford University Press, NY. *Presents the argument that the gene, not the individual, should be considered as the unit of selection.*


Ridley M. 1996. The origin of virtue. Viking Penguin. A different Ridley than the textbook’s, but also a gifted writer. Here he examines human behaviour from an evolutionary perspective.


Stebbins, G. L. 1982. Darwin to DNA, molecules to humanity. W. H. Freeman & Company. San Francisco. I do not really like the title, it implies humanity is the ultimate product of evolution, but it is a good book nonetheless.

Web sites

Lozano@UNBC
Classroom success

Text web site
George A. Lozano

Grading and Exams

Exams will cover all previously covered material, not just the material covered since the previous exam, or the last month, or the last week. Except as dictated by university or departmental polices, there shall be no make-up exams; after all this is biology, not cosmetology.

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<thead>
<tr>
<th>EVALUATION</th>
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<tbody>
<tr>
<td>Test 1</td>
<td>15</td>
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<td>Test 2</td>
<td>20</td>
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<tr>
<td>Final Exam</td>
<td>35</td>
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<tr>
<td>Total Lectures</td>
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<td>Group summaries</td>
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<td>Individual reports</td>
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<td>Total Tutorials</td>
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Academic Honesty.- Please check UNBC’s official Undergraduate Regulations and Policies, particularly section IV-44.

Etc...

Check the web for lectures, tutorial schedules, etc.