

## Dakota College at Bottineau Course Syllabus

Course Prefix/Number/Title: BIOL 150 General Biology I

Number of Credits: 4 semester credits

Course Description: Introduction to cellular and molecular biology, genetics, evolution, and ecology.

Prerequisites: none

Course Objectives: Demonstrate an understanding and proficiency with the following concepts:

1. Cell structure and function
2. Mendelian genetics and recombinant DNA technology
3. Evolution
4. The scientific method
5. Ecology

Instructor: Lura

Office: NSC 114

Office Hours: MWF 10:00-11:00

Phone: (701) 228-5472

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Lecture/Lab Schedule: Fall semester

Textbook(s): Starr, C., C. Evers, and R. Taggart. 2006. Biology – the unity and diversity of life.  
11<sup>th</sup> Edition.

Lura, C.L. 2009. Biology 120 Lab Manual.

Course Requirements:	4 Hour Exams @ 100 pts. ea.	400 pts.
	Lec assign/quizzes	100 pts.
	2 Lab Exams @ 50 pts. ea.	100 pts.
	10 Lab Quizzes	<u>100 pts.</u>
	<b>TOTAL POINTS</b>	<b>700</b>

A = 100-90%

B = 89-80%

C = 79-70%

D = 69-60%

F = below 60%

**Tentative Course Outline:****BIOLOGY 120 TENTATIVE SYLLABUS  
FALL 2009**

<b>DATE</b>	<b>TOPIC</b>	<b>READING ASSIGN.</b>
Aug. 26-28	Science, Scientific Method, Chemistry of Life	Chapter 1,2
Aug 31- Sept 4	Chemistry cont'd., Cell Structure and Function <b>LAB:</b> Chemistry of Life	2,3,4
Sept 7-11	<b>Monday September 7: Labor Day</b> Cell Structure and Function cont'd., <b>LAB:</b> Microscopy, Eukaryote Cell Structure and Function	4
Sept 14-18	Cell structure and function cont'd., <b>FRIDAY SEPTEMBER 18: HOUR EXAM I</b> <b>LAB:</b> Cells: diversity and phylogeny	4
Sept 21-25	Membranes, Enzymes, and Metabolism <b>LAB:</b> Enzymes	5,6
Sept 28-Oct 2	Photosynthesis and Respiration <b>LAB:</b> Photosynthesis	7,8
Oct 5-9	Respiration cont'd., DNA <b>LAB:</b> Respiration	8,13
Oct 12-16	Mitosis and Meiosis <b>FRIDAY OCTOBER 16: HOUR EXAM II</b> <b>LAB: LAB MIDTERM</b>	9,10,12
Oct 19-23	Nucleic Acids, Protein Synthesis <b>LAB:</b> Mitosis and Meiosis	13,14
Oct 26-30	Gene Expression & Regulation, Inheritance DNA Technology, Genetic Engineering <b>LAB:</b> Inheritance and Probability	15,16,11
Nov 2-6	Hardy-Weinberg, Natural Selection <b>LAB:</b> Hardy-Weinberg	17,18
Nov 9-13	Speciation and Phylogeny <b>Wednesday November 11: Veteran's Day</b> <b>LAB:</b> Island Biogeography and Evolution	18,19
Nov 16-20	Macroevolution <b>FRIDAY NOVEMBER 20: HOUR EXAM III</b> <b>LAB:</b> Macroevolution	19,20

Nov 23-27	Populations and Communities <b>Thursday &amp; Friday November 26-27: Thanksgiving Break</b> <b>LAB:</b> Sampling Populations and Communities	45,46
Nov 30-Dec 4	Ecosystems- energy flow & biogeochemical cycles <b>LAB:</b> Ecosystem Modeling	47
Dec 7-11	Biosphere <b>LAB: LAB FINAL</b>	48
Dec 14	Summary and Future Considerations	

**\*\*\*\*\*FINAL EXAMS DECEMBER 16-18\*\*\*\*\***

#### General Education Goals/Objectives:

Goal 1: Explains the interrelationships between humans and their environment and the role of science in their lives

Goal 2: Demonstrates knowledge and application of technology

#### Relationship to Campus Theme:

Class announcement/discussion on news items about technological developments in biology and how that influences the discipline as well as the societal aspects.

DNA analysis, genetic engineering, and DNA fingerprinting covered in class

Knowledge on cell structure and function related to microscope development discussed in class

Interject technological developments and how they influence scientific development and societal issues.

Portion of lecture (and full lab) dedicated to computer modeling of populations or ecosystems.

**Classroom Policies:** Regular attendance and participation in lab and lecture is expected.  
All make-up exams will include a significant essay/short answer component and must be made up within one week of the students return to class unless prior arrangements have been made.

**Academic Integrity:** Cheating on a test, quiz, or other assessment results in zero points for the assessment.

**Disabilities and Special Needs:** Any accommodations due to a learning disability must come through the MSU-B Learning Center. If you have a diagnosed learning disability, you need to contact the Learning Center in Thatcher 1104 or phone (701) 228-5477.