

# LIFE 102 (S-01) Attributes of Living Systems: Spring 2013

## Class location: C-101 Plant Science Building (8:00-8:50 A.M.) MWF

**Instructor: Dr. Lou Bjostad**  
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**Required Text:** *Biology* (9<sup>th</sup> Ed.) by Campbell and Reece

**Required Lab Manual:** *Laboratory Manual for LIFE102 – Attributes of Living Systems* (Weedman; Cache House)

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 \*The following outline is subject to change without prior notice. Class attendance is essential to receive all material

Date	Class Topic	Chapter	Laboratory for the Week	Exercises in Lab Manual
Jan 23	Introduction, Exploring Life	1	<b>NO LABS THIS WEEK</b>	
Jan 25	Atoms and Molecules	2		
Jan 28	Water and the Environment	3	Introduction/Cell Structure and Organization	Ex. 1
Jan 30	Carbon and Life	4		
Feb 1	Macromolecules	5		
Feb 4	Macromolecules	5	<b>Quiz 1 + Assignment 1</b> Scientific Method	Ex. 2
Feb 6	Cell Structure	6		
Feb 8	Cell Structure	6		
Feb 11	Membrane Structure	7	<b>Quiz 2 + Assignment 2</b> Diffusion and Osmosis	Ex. 3
Feb 13	Membrane Structure	7		
Feb 15	Membrane Structure	7		
<b>Feb 18</b>	<b>EXAM 1: Chapters 1-7</b>		<b>Quiz 3 + Assignment 3</b> Enzyme Activity and Specificity	Ex. 4
Feb 20	Metabolism	8		
Feb 22	Metabolism	8		
Feb 25	Metabolism	8	<b>Quiz 4 + Assignment 4</b> <b>Assign Poster Topic</b> Cellular Respiration and Fermentation	Ex. 5
Feb 27	Cellular Respiration	9		
Mar 1	Cellular Respiration	9		
Mar 4	Cellular Respiration	9	<b>Quiz 5 + Assignment 5</b> Photosynthesis	Ex. 6
Mar 6	Photosynthesis	10		
Mar 8	Photosynthesis	10		

Date	Class Topic	Chapter	Laboratory for the Week	Exercises in Lab Manual
Mar 11	Cell Communication	11	<b>Quiz 6 + Assignment 6</b> Mitosis and Meiosis	Ex. 7
Mar 13	Cell Communication	11		
<b>Mar 15</b>	<b>EXAM 2: Chapters 8-11</b>			
Mar 18-22	SPRING BREAK – NO CLASS		<b>NO LABS</b>	
Mar 25	The Cell Cycle	12	<b>Quiz 7 + Assignment 7</b> Genetics: Mendelian Inheritance	Ex. 8
Mar 27	Meiosis	13		
Mar 29	Meiosis	13		
Apr 1	Mendelian Genetics	14	<b>Quiz 8 + Assignment 8</b> Human Genetics <b>Oral/Poster Presentation Due!</b>	Ex. 9
Apr 3	Mendelian Genetics	14		
Apr 5	Chromosomes	15		
Apr 8	Chromosomes	15	<b>Quiz 9 + Assignment 9</b> Molecular Biology I (Genetic Transformation)	Ex. 10
Apr 10	Molecular Basis of Inheritance	16		
Apr 12	Molecular Basis of Inheritance	16		
Apr 15	From Gene to Protein	17	<b>Quiz 10 + Assignment 10</b> Molecular Biology II (Restriction Analysis) <b>Lab report: Title, Intro, Materials/Methods with citations due</b>	Ex. 11
Apr 17	From Gene to Protein	17		
<b>Apr 19</b>	<b>EXAM 3: Chapters 12-17</b>			
Apr 22	Regulation of Gene Expression	18	<b>Quiz 11 + Assignment 11</b> Genetically Modified Organisms	Ex. 12
Apr 24	Regulation of Gene Expression	18		
Apr 26	Viruses	19		
Apr 29	Biotechnology	20	Population Genetics + Electrophoresis <b>LAB REPORTS DUE!</b>	Ex. 13
May 1	Biotechnology	20		
May 3	Genomes and their Evolution	21		
May 6	Descent with Modification	22	<b>Quiz 12 + Assignment 12</b> (Note: quiz covers exercises 12, 13, 14) Evolution	Ex. 14
May 8	Evolution of Populations	23		
May 10	Origin of Species	24		
<b>May 16</b>	<b>Final Exam: Chapters 18-24</b> <b>11:50-1:50pm, Plant Sciences C-101</b>			

**IT IS IMPORTANT TO NOTE THAT THERE ARE 4 LECTURE SECTIONS FOR THIS COURSE. EACH SECTION HAS DIFFERENT INSTRUCTORS, GRADING POLICIES, AND COURSE SYLLABI. LECTURE SECTIONS ARE NOT INTERCHANGABLE! THEREFORE YOU "SHOULD" ATTEND YOUR SCHEDULED LECTURE.**

## WARNING!

This is a high-paced course and will require you to stay on top of the material. Do not fall behind! Your life will be much simpler if you do the recommended readings prior to lecture. This way you're more familiar with the material, you'll understand it better the first time around, you'll get more out of it, and thus not have to study as hard come exam-time because you got it the first time! If you fall behind or do not understand something, come see me! Don't allow despair and frustration to set in. It's my job to make sure you learn the material as long as you provide the effort and determination. Also, note topics to be covered are listed in the course outline (see above). Most topics will be covered in sequence, although some may be emphasized more than others, thus specific lecture dates and time devoted to each topic is subject to change.

## LABORATORY ATTENDANCE POLICY

Laboratory attendance is mandatory. If you miss more than two laboratories, you will receive a grade of 0% in the laboratory. That means even if you brilliantly achieve 100% on all four exams, you will be stuck with a 'C' for the course. Your laboratory instructor will discuss laboratory grading policies with you.

### RamCT (<http://ramct.colostate.edu>)

The course homepage is on RamCT and contains all of the information for LIFE 102 along with student grades. It is frequently updated with new links and should be checked on a regular basis. Class announcements will be made on the homepage, generally in text boxes near the top. RamCT email may also be used to send out important announcements. Students are responsible for monitoring their course progress on RamCT. Each student is responsible for making sure they are able to access RamCT and understand how and where material is located within the homepage. If you have problems contact the teaching assistant or check <http://help.ramct.colostate.edu> ASAP. If you feel there may be a discrepancy with the grade book you have 1 week from the *date the exam was given* to discuss the issue with the teaching assistant.

### EXAM FORMAT:

Each exam will consist of 50 questions in a scantron format. Exam question structure may include multiple choice, matching, and identification of structures or events on diagrams.

### EXAM MAKE-UP POLICY

**There will be no make-up exams except for medical reasons or due to family hardship.** If you miss an exam, you will need to provide documentation or a written statement from your physician. If your excuse is satisfactory, you will be permitted to take an oral exam that I will administer in my office at an agreed upon time and date, but within one week of the missed exam.

**GRADING SCALE:** Each of the four exams will count 100 points. Please note that the 4<sup>th</sup> exam (final exam) is NOT cumulative, and will only cover the material following the third exam. The following grading scale will be used for each exam.

A	>95 percent
A-	90-95
B+	85-89
B	80-84
B-	75-79
C+	70-74
C	65-69
D	60-64
F	<60

- \* If you miss an exam, you will receive a zero (0) for that exam.
- \* The lecture portion of the class will comprise **75%** of your final grade:
- \* Your lab portion of the course will be **25%** of your final grade in this course.

## CALCULATION OF

**FINAL GRADE:**  $0.75 \times (\text{your lecture average on a 100 point scale})$   
+  $0.25 \times (\text{your laboratory average on a 100 point scale})$

**ACADEMIC DISHONESTY**

Academic dishonesty, such as plagiarism, cheating, or fabrication of information, is a violation of the regulations of the University and will not be tolerated. I will adhere to the CSU policies on academic integrity and classroom behavior as described in the General Catalog for 2011-2012. The requirements for academic integrity are discussed in section 1.6 Policies and Guiding Principles (page 7) and can be accessed at <http://catalog.colostate.edu/FrontPDF/1.6POLICIES1112f.pdf>.

**CHEATING**

There is a ZERO-TOLERANCE policy for cheating. "Cheating includes using unauthorized sources of information and providing or receiving unauthorized assistance on any form of academic work. Examples include copying the work of another student on an exam, problem set, or quiz; taking an exam or completing homework for another student; possessing unauthorized notes, study sheets, answer codes, programmed calculators, or other materials during an exam; and falsifying exams or other graded paper results." (CSU Policies and Guiding Principles, 2011).

**PLAGIARISM:**

We take the issue of plagiarism very seriously in this class. "Plagiarism includes the copying of language, structure, ideas, or thoughts of another, and representing them as one's own without proper acknowledgment. Examples include a submission of purchased research papers as one's own work; paraphrasing and/or quoting material without properly documenting the source" (CSU Policies and Guiding Principles, 2011).

Academic dishonesty will result in a failing grade (grade of F) for the course and will be reported to the Office of Conflict Resolution and Student Conduct Services.