

**Bio 101 Biological Science (4 credits)**

Fall 2001 Instructor: Dr. J. Yates Science Building Rm 205  
(Lecture MWF 11:00 Rm 327) (Lab **Tues 8:30, Tues 11:00** Rm 108)  
Office Hours: Posted in Rm 205 (and by appointment)

**Text:** Biology 6<sup>th</sup> Ed. (Raven & Johnson)

**Lab Manual:** Bio 101 Lab Manual (Jackson & Yates)

**Supplies Required for Lecture:** Scantron Sheets (in Bookstore)

**Organization of the Course:** The course is divided into 5 parts. Each part will be followed by a test. A description of the chapters to be covered is given below (this is a tentative listing and may change slightly) Students are expected to read the appropriate chapter before it is covered in lecture.

**Goals and Student Learning Objectives:** The goal of this course is to introduce students to the underlying principles governing the science of Biology. Special emphasis will be placed on the basic processes and components of cells in living organisms. The following topics will be covered:

- |   |                                       |
|---|---------------------------------------|
| 1. The chemistry of organisms                         | 2. The molecules found in cells       |
| 3. How life evolved on earth                          | 4. The structure of cells             |
| 5. How things get into & out of cells                 | 6. How cells convert food into energy |
| 7. How sunlight is converted into energy              | 8. How cells reproduce                |
| 9. How traits are passed on from parents to offspring | 10. The structure of DNA              |
| 11. How DNA is copied                                 | 12. How genes function                |
| 13. How genes are controlled                          | 14. How genes change                  |
| 15. How genes affect large numbers of organisms       | 16. How organisms change traits       |
| 17. How new species are created                       |                                       |

**Grading policy:**

5 hourly tests	12% each (total = 60%)
Final exam	15%
Lab grade	25%

To successfully complete this course the student must demonstrate an understanding of cellular processes and components, and the interactions that occur between them. The student will be introduced to many topics that are covered more extensively in other Biology courses. It is expected that students receiving a satisfactory grade on the hourly tests, final exam, reading assignment and lab assignments will have mastered the topics described above and have a good basic understanding of biological systems at the cellular level.

**Assessment of Students:** Students will be assessed on their performance on: hourly tests, final exam, lab quizzes and write-ups.

**Statement to Disabled Students:** If you have a physical, psychological and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services 126 B&E (803) 641-3609 as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.

Reading Assignments and Testing Schedule (Tentative)					
Chapter	Chapter	Chapter	Chapter	Chapter	Chapter
1	4	8	11	14	20
2	5	9	12	15	21
3	6	10	13	18	
<b>Test #1</b>	<b>Test #2</b>	<b>Test #3</b>	<b>Test #4</b>		<b>Test #5</b>

# Bio 101 Lab Schedule Fall 2001

## Supplies etc.

Pencil      **Textbook**      Ruler      Floppy Disk

## Lab Manual

Biology 101 Laboratory manual 2<sup>nd</sup> Ed. (Jackson & Yates)

## Course Outline

Each lab exercise is divided up into two parts. One-half of the lab periods will be spent doing the indicated exercises (Investigations) and gathering data, the other half will be spent writing-up the results. A quiz will be given on the weeks when you are writing up the labs (indicated in bold). You will be graded on the lab write-ups (12.5%) and the quizzes (12.5%).

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Lab #	Dates	Topics
1	8/21& 8/22	No lab
2	8/28 & 8/29	Investigation #1 Measurement Techniques
<b>3</b>	<b>9/4 &amp; 9/5</b>	Write up-previous lab
4	9/11 & 9/12	Investigation #2 Organic Molecules
<b>5</b>	<b>9/18 &amp; 9/19</b>	Write up-previous lab
6	9/25 & 9/26	Investigation #3 Cells & Microscopy
<b>7</b>	<b>10/2 &amp; 10/3</b>	Write up-previous lab
8	10/9 & 10/10	No lab ( <i>Fall Break</i> )
9	10/16 & 10/17	Investigation #4 Enzymes
<b>10</b>	<b>10/23 &amp; 10/24</b>	Write up-previous lab
11	10/30 & 10/31	Investigation #5 Photosynthesis
<b>12</b>	<b>11/6 &amp; 11/7</b>	Write up-previous lab
13	11/13 & 11/14	Investigation (#6) #7 & #8
14	11/20 & 11/21	No lab ( <i>Thanksgiving</i> )
<b>15</b>	<b>11/27 &amp; 11/28</b>	Write up-previous lab

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***Quizzes will be given on the dates shown in bold***

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The lab write-ups **must conform to the following format:**

Names – Title - Summary

Include the names of both lab partners

Each lab group must come up with it's own title

Explain what you were trying to do in the lab

Results

Organize and explain all of your data

Conclusions

Explain what the data means and whether the general concepts are supported

