## SYLLABUS Introductory Biology

(BIOL 102) Spring, 2006

### I. GENERAL INFORMATION

**Course description**: This is the second course in a two-semester introduction to biology. The course has four major themes:

- The chemistry of life
- Structure, diversity, and functions of cells
- The diversity of life, including diversity in form and physiology, emphasizing plants.
- The interactions among living and nonliving components of ecosystems.

It is expected that students entering this course are familiar with the concepts and information presented in the first semester course, BIOL 101, although this is not a formal prerequisite. *Please note*: although this course carries the "SP" designation, it is intended primarily for students majoring in Biology or another science. Students who are taking this course to fulfill their distribution requirements and who are interested in ecology, evolution, and conservation biology may be better served by Biodiversity (BIOL 104).

#### **Instructors**:

Deborah Robertson, Lasry 231, <a href="mailto:debrobertson@clarku.edu">debrobertson@clarku.edu</a> tel: 7515 Office hours: Monday 2:00-4:00, Thursday 10:00-11:00\*

David Hibbett, Lasry 232, <a href="mailto:dhibbett@clarku.edu">dhibbett@clarku.edu</a> tel: 7332. Office hours: Thursday 1:00-3:00\* Nirvana Filoramo (lab coordinator), Lasry 330, <a href="mailto:nfiloramo@clarku.edu">nfiloramo@clarku.edu</a> tel:7661 Office hours: Tuesday 10 AM – 12 PM\*

\*and by appointment

Lecture times: Mon., Wed., Fri., 10:00-10:50, J217

Laboratory: Lasry 151

**Text**: *Biology, Seventh edition*, by Campbell and Reece. Published by Benjamin Cummings; ISBN: 0-8053-6624-5 (if you purchase a used text, be sure to get the seventh edition).

**Course web site:** <a href="http://blackboard.clarku.edu">http://blackboard.clarku.edu</a> Check the web site frequently for review materials, announcements, laboratory assignments, and links to relevant web resources

Email: Your @clarku.edu address is your official email address for this course.

## **II. COURSE POLICIES AND SUGGESTIONS** (very important—read carefully!):

**Readings and attendance**: The reading assignments are meant to supplement, not duplicate, the lectures. Not everything that is discussed in the lectures will be found in the text. Also, the assigned pages will include some material that is not covered in lecture, and for which you will not be held responsible. Attendance in lectures will not be recorded. Nevertheless, it is critical that you come to class and take careful notes, which should be your primary resource when studying for the exams.

**Office hours and appointments**: We will be available in our offices during the hours listed above. In addition, you may make appointments to see us at other times. We will be happy to discuss any aspects of the course with you, as well as general issues related to the biology program, career options, graduate school, internships and independent research opportunities, etc.

**Grades**: Your grade will be based on 800 points, distributed as follows:

| • | Hour exam 1 (Feb. 10)                 | 100 points |
|---|---------------------------------------|------------|
| • | Hour exam 2 (Mar. 13)                 | 100 points |
| • | Hour exam 3 (Apr. 5)                  | 100 points |
| • | Hour exam 4 (May 1)                   | 100 points |
| • | Final exam (comprehensive)            | 150 points |
| • | Laboratory attendance and assignments | 250 points |
| • | Total                                 | 800 points |

**Extra credit**: No extra credit will be offered under any circumstances. It is not fair to the class to let any individual earn extra credit. Please do not ask for extra credit assignments (i.e., optional essays, retakes on exams, extra lab work, etc).

Missed exams and laboratories: Absences from exams and laboratories will be excused only in the case of serious health problems or other sudden emergencies. Documentation of the emergency will be required before any make-up exams can be scheduled. If an emergency arises, contact the instructors or the Dean of Students office as soon as possible, preferably before the exam is scheduled to take place. Please note that we will not reschedule exams for family vacations or sports activities, or because of commitments in other courses. If you are planning (or think someone else may be planning) a vacation, or if you are involved with sports, please inform your family and/or coaches of the exam dates (Feb. 10, Mar. 13, Apr. 5, and May 1. Final exam: May 5, 10:00-10:50) and make sure they know you will not be available on those dates. Check the dates of exams, papers, and presentations in your other courses and plan accordingly.

Academic dishonesty: Academic dishonesty includes any effort to circumvent the evaluation process of the course in an attempt to improve your grade ("cheating"). Academic dishonesty includes, but is not limited to: unauthorized examination of another student's notes, lab write-ups, or exam answers; misrepresentation of the reason for the absence from a laboratory or exam; alteration of an exam submitted for a regrade; and submission of another person's work as your own. To discourage academic dishonesty, we routinely xerox exams before returning them, and we encourage students to report academic dishonesty (anonymity will be protected). Cases of academic dishonesty will be reported to the College Board for disciplinary action. Cheating poisons the atmosphere in a class, it demeans both the cheater and the other students, and it rarely results in an improved final grade. Please do not even consider it as an option.

Classroom etiquette: The lecture begins at 10:00. Arrive a minute or two ahead of this time so that we can begin promptly. If you must be late, enter the classroom by the back door (accessible from the second floor). Please turn off your cell phone / pager prior to the start of class. If you have a question during class, please by all means address it to the lecturer. If you missed something, the chances are that many of your classmates did also—you will do everyone a favor by asking for clarification. Please do not leave trash behind in the classroom.

III. FINAL EXAM: FRIDAY MAY 5, 10:00-10:50, JOHNSON AUDITORIUM

IV. STUDY QUESTIONS AND OTHER REVIEW MATERIALS will be posted on BlackBoard.

# V. TENTATIVE LECTURE SCHEDULE AND READING ASSIGNMENTS:

(Note: this schedule is subject to change.)

DLR lectures from January 18 to March 3, DSH lectures from March 15 to April 28.

|      | DATE |   | Торіс                                       | READINGS       |
|------|------|---|---|----------------|
|      |      |   |   | (Chapter/Unit) |
| Jan  | 18   | W | Introduction to the course                  |                |
|      | 20   | F | Chemical context of life (atoms and bonds)  | 2/1            |
|      | 23   | M | Water and Carbon                            | 3,4/1          |
|      | 25   | W | Macromolecules                              | 5/1            |
|      | 27   | F | Macromolecules                              |                |
|      | 30   | M | Tour of the cell                            | 6/2            |
| Feb  | 1    | W | Membrane Structure and Function             | 7/2            |
|      | 3    | F | Metabolism                                  | 8/2            |
|      | 6    | M | Cellular Respiration                        | 9/2            |
|      | 8    | W | Photosynthesis                              | 10/2           |
|      | 10   | F | Exam 1                                      |                |
|      | 13   | M | Cell:Cell Communication                     |                |
|      | 15   | W | Phylogenies and the History of Life         | 25,26/4,5      |
|      | 17   | F | The Tree of Life                            | 25,26/4,5      |
|      | 20   | M | Prokaryotes I                               | 27/5           |
|      | 22   | W | Prokaryotes II                              | 27/5           |
|      | 24   | F | Evolution of the eukaryotic cell            | 26/5           |
|      | 27   | M | Non-photosynthetic protists                 | 28/5           |
| Mar. | 1    | W | Photosynthetic Protists (red & green algae) | 28/5           |
|      | 3    | F | Photosynthetic Protists (chromalveolates)   | 28/5           |
|      | 13   | M | Exam 2                                      |                |
|      | 15   | W | Plant Diversity 1                           | 29/5           |
|      | 17   | F | Plant Diversity 2                           | 29/5           |
|      | 20   | M | Plant Diversity 3                           | 30/5           |
|      | 22   | W | Plant structure, growth, and development    | 35/6           |
|      | 24   | F | Transport in vascular plants                | 36/6           |
|      | 27   | M | Plant nutrition                             | 37/6           |
|      | 29   | W | Angiosperm reproduction and biotechnology   | 38/6           |
|      | 31   | F | Fungi                                       | 31/5           |
| Apr. | 3    | M | Intro to Animal Diversity                   | 32/5           |
| -    | 5    | W | Exam 3                                      |                |
|      | 7    | F | Invertebrates                               | 33/5           |
|      | 10   | M | Vertebrates                                 | 34/5           |
|      | 12   | W | Biomechanics. Guest lecture from Physics    |                |
|      | 14   | F | Introduction to Ecology                     | 50/8           |
|      | 17   | M | Community Ecology                           | 53/8           |
|      | 19   | W | Symbiosis                                   | 53/8           |
|      | 21   | F | Ecosystems 1                                | 54/8           |
|      | 24   | M | Ecosystems 2                                | 54/8           |
|      | 26   | W | Climate change. Guest lecture from Physics  | 3 5            |
|      | 28   | F | TBA   |                |