**BIOL 101: Principles of Biology**
**Syllabus**
**Spring Quarter 2007**
Call #'s 01068 - 01075, 5 credit hours

**Instructor**: Dr. Stefan Gleissberg
**Teaching Assistant**: TBA

### Course Description and Requirements:
This course covers the principles of cell biology, physiology, ecology, genetics, and evolution and is designed for non-science majors. Credit for this course is not allowed if the student has had or is taking BIOS 170, PBIO 110, or PBIO 114.

### Class Times
Lectures: TWThF, 9:10 - 10 AM Bentley Hall 140
Labs: Porter Hall 300

### Assessment and Grading:

| | | |
|---|---|---|
| First Exam - 100 points | 90-92%, 93% and above | A-, A |
| Second Exam - 100 points | 80-82%, 83-87%, 88-89% | B-, B, B+ |
| Final Exam - 100 points | 70-72%, 73-77%, 78-79% | C-, C, C+ |
| Laboratory - 100 points | 60-62%, 63-67%, 68-69% | D-, D, D+ |
| Total: 400 points | below 59 % | F |

Exams will be based upon material covered in class lectures as well as in the assigned readings. Example questions will be provided in the lecture before exams. Also, if the instructor feels that the class is not reading the assigned material, then pop quizzes will be given in class and will also count toward the final course grade. The final exam will emphasize the last third of the course, but will also include previous material.

Students must pass the laboratory (minimum 60%) in order to pass the class even if the student has a passing grade in the lecture. A separate laboratory syllabus will be provided to you at your first laboratory meeting.

Make up examinations will be considered only by written request to the instructor. Your request should include your name, course number, day and time of the missed class, the reason for your absence, and why you think that you should be allowed to take a make up exam or pop quiz.

### Course Materials:
Textbook: Bioinquiry, 3rd edition 2006, by Nancy L. Pruitt and Larry S. Underwood, published by Wiley & Sons (required)
Laboratory Manual: Biology 101 Laboratory Guide and Workbook, 4th ed. (2005) Ivan. K. Smith and Z. Rinkes, published by Wiley & Sons (required)
Blackboard http://blackboard.ohiou.edu/

### Office Hours:
By appointment, Porter Hall Room 500
email: gleissbe@ohio.edu (preferred), or office phone: 593-2549

### Attendance Policy:
Although attendance records will not be maintained for the lecture portion of this course, regular attendance is strongly recommended as examinations will be based on the material covered in the lectures in addition to the course textbook.

### Academic Conduct and Class Etiquette:
The penalty for course-related academic dishonesty (i.e., cheating on exams, plagiarism, etc.) will be failure of the entire course. Disturbance of the lecture, i.e. by talking or allowing electronic devices to sound, will not be tolerated and will result in appropriate sanctions.

**Course Lecture Schedule** (subject to changes)

| *Week* | *Date* | *Day* | *Topic* |
|---|---|---|---|
| 1 | Mar 27 | Tues | Syllabus & Beginning Discussions |
| | Mar 28 | Wed | Scientific Method |
| | Mar 29 | Thurs | Characteristics of life, biological disclplines |
| | Mar 30 | Fri | Evolution–natural selection, speciation |
| 2 | Apr 3 | Tues | Diversity of living organisms, earth history |
| | Apr 4 | Wed | Classification of Organisms |
| | Apr 5 | Thurs | Evolution of major lineages I |
| | Apr 6 | Fri | Evolution of major lineages II |
| 3 | Apr 10 | Tues | Pro-, Eukaryotic Cells, Endosymbiotic Theory, Viruses |
| | Apr 11 | Wed | Cells—Plasma Membrane, Diffusion & Osmosis |
| | Apr 12 | Thurs | Cell Structure, Cytoskeleton, Organelles. Plant and animal cells |
| | Apr 13 | Fri | **Exam I** |
| 4 | Apr 17 | Tues | Cell Cycle & Chromosomes |
| | Apr 18 | Wed | Mitosis in Plant & Animal Cells |
| | Apr 19 | Thurs | Meiosis |
| | Apr 20 | Fri | Development and life cycles |
| 5 | Apr 24 | Tues | DNA Structure and Function, Replication |
| | Apr 25 | Wed | Transcription and Protein Synthesis |
| | Apr 26 | Thurs | Mutations and phenotypes |
| | Apr 27 | Fri | Mendelian Genetics I |
| 6 | May 1 | Tues | Mendelian Genetics II |
| | May 2 | Wed | Characterizing Genetic Variation in Populations |
| | May 3 | Thurs | Review |
| | May 4 | Fri | **Exam II** |
| 7 | May 8 | Tues | Bioenergetics, thermodynamics |
| | May 9 | Wed | Carbohydrates & Lipids |
| | May 10 | Thurs | Proteins |
| | May 11 | Fri | Enzymes |
| 8 | May 15 | Tues | Respiration |
| | May 16 | Wed | Glycolysis |
| | May 17 | Thurs | Krebs cycle |
| | May 18 | Fri | Electron Transport |
| 9 | May 22 | Tues | Review |
| | May 23 | Wed | Photosynthesis – light-dependent reactions |
| | May 24 | Thurs | Photosynthesis – light-independent reactions |
| | May 25 | Fri | Plants and their environment |
| 10 | May 29 | Tues | Soil biology (DeForest guest appearance) |
| | May 30 | Wed | Animals and their environment |
| | May 31 | Thurs | Global issues in ecology |
| | Jun 1 | Fri | Review |
| 11 | Jun 6 | Wed | **Final Exam** |