



**DIVISION OF ARTS AND SCIENCES
DEPARTMENT OF NATURAL SCIENCES
COURSE SYLLABUS**

I. Course Information

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|----------------------|-----------------------------|
| COURSE TITLE | Principles of Biology I Lab |
| COURSE NUMBER | BSC 1010L |
| PREREQUISITES | None |
| COREQUISITES | BSC 1010 |
| CREDIT HOURS | 1 |
| CONTACT HOURS | 30 |

II. Course Method This is a traditional course, designed to meet face to face in D-109 on Thursdays from 2-3:45pm for the entire fall term (August 25 – December 8, 2010)

III. Instructor Sherri Hitz
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Cell # 305-731-9045
Office: C-211 (phone 305-809-3195)
Office Hours: Thursdays 3:45-4:45pm (in D-109)

IV. Description A laboratory overview of the structural, ultrastructural, chemical, genetic, developmental and physiological realms of living organisms.

V. College-Level Competencies Florida Keys Community College graduates who complete the core curriculum possess the knowledge, skills and values associated with college-educated individuals. Our graduates demonstrate mastery of competencies integrated within the academic disciplines, such as the ability to effectively communicate, seek creative solutions to problems, exhibit cultural awareness, and command basic technological skills.

1. **Communication:** Comprehend & articulate effectively – written & oral communication
2. **Critical thinking:** Demonstrate mastery of problem-solving skills in the discipline
3. **Diversity:** Interpret and evaluate societal and ethical issues, problems & values
4. **Technology:** Utilize technology effectively

VI. Course Calendar

The Course Calendar provides the lecture schedule, assigned reading in the textbook and student assessments that comprise this course on a weekly basis. Pay close attention to the “Student Assessment” column, as it lists all exams and graded assignments with due dates: missing a class does not exempt you from assignments or exams. There are a total of 1000 points available in this course, but they are not evenly distributed by week. Please see the course policies below for more information.

N.B.: The course schedule is subject to change to meet the needs of the course and its students. If you know in advance you are going to miss a lab, you may attend the Wednesday 7-8:45pm lab instead of (i.e., the night before) your Thursday lab. Otherwise, labs cannot be made up.

| Competency | Week | Learning Outcomes | Learning Activities | Student Assessments | Points |
|------------|--|--|---|---|--------------------|
| 1, 2 | <i>Week 1: August 25</i> | 1. Learn lab rules 2. Practice microscopy | 1. Introduction 2. Microscopy Practice | Lab Manual Part 1 DUE: October 6 | |
| 1, 2 | <i>Week 2: September 1</i> | 1. Review basic chemistry 2. Learn how to sample environment for microbes | 1. "Everything but the kitchen sink" Chemistry 2. Prokaryotes Part 1 | Lab Manual Part 2 DUE: October 6 | |
| 1, 2 | <i>Week 3: September 8</i> | 1. Learn to Gram Stain and ID bacteria 2. Learn to use oil-immersion microscopy | Prokaryotes Part 2 | Lab Manual Part 3 DUE: October 6 | |
| 1, 2 | <i>Week 4: September 15</i> | 1. Understand how cytoskeleton, cell membrane and cytosol function together 2. Learn to prepare wet mounts of living protists | Cell Anatomy & Physiology I: Cytoskeleton | Lab Manual Part 4 DUE: October 6 | |
| 1, 2 | <i>Week 5: September 22</i> | 1. Learn to design experiments 2. Compare plant and animal cells and their responses to osmosis | Cell Anatomy & Physiology II: Cell Walls and Osmosis | Lab Manual Part 5 DUE: October 6 | |
| 1, 2 | <i>Week 6: September 29</i> | 1. Learn to design experiments 2. Compare two critical biochemical reactions | Photosynthesis & Cell Respiration | Lab Manual Part 6 DUE: October 6 | |
| 1, 2 | <i>Week 7: October 6</i> | Midterm Exam Lab Manuals Due | | Midterm Exam Turn in Lab Manuals | 200 200 |
| 1, 2 | <i>Week 8: October 13</i> | ID stages of the cell cycle | Cell Cycle & Mitosis | Lab Manual Part 7 DUE: December 8 | |
| 1, 2 | <i>Week 9: October 20</i> | Describe the human genome | Human Genome Project Part 1 | Lab Manual Part 8 DUE: December 8 | |
| 1, 2 | <i>Week 10: October 27</i> | 1. Describe the human genome 2. Learn to extract DNA | Human Genome Project Part 2 | Lab Manual Part 9 DUE: December 8 | |
| 1, 2 | <i>Week 11: November 3</i> | Use an online database to find gene loci on chromosomes | Exploring the Human Genome | Lab Manual Part 10 DUE: December 8 | |
| 1, 2 | <i>Week 12: November 10</i> | 1. ID cells in various stages of meiosis. 2. ID chromosomal abnormalities | Meiosis and Karyotypes | Lab Manual Part 11 DUE: December 8 | |
| 1, 2 | <i>Week 13: November 17</i> | 1. Use phenotype to infer genotype 2. Perform Punnett Square analyses | Punnett Squares | Lab Manual Part 12 DUE: December 8 | |
| | <i>Week 14: November 24</i> | <i>NO CLASS: Happy Thanksgiving!</i> | | | |
| 1, 2 | <i>Week 15: December 1</i> | Contrast Mendelian and non-Mendelian inheritance | Mendelian and Non-Mendelian Inheritance | Lab Manual Part 13 DUE: December 8 | |
| 1, 2 | <i>Week 16: December 8</i> | Final Exam Final Lab Manuals Due | | Final Exam Turn in Lab Manuals | 200 200 |

VII. Materials

There is no lab manual to be purchased. Instead, you need to get a folder or 3-ring binder to keep all your lab handouts and notes in. You will assemble your lab manuals by adding components for each major topic as I hand them out to you (usually one per week). You should also include any notes you take *in lab* (not in lecture) to your lab manuals. You will turn in your lab manuals for a midterm and a final grade. They will be graded on completeness, organization, neatness and overall quality of work.

All required lab supplies and equipment (including safety supplies, when required) will be provided.

VIII. FKCC Standard Grading Scale

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|----|-----------|
| A: | 90 - 100% |
| B: | 80 - 90% |
| C: | 70 - 80% |
| D: | 60 - 70% |
| F: | Below 60% |

IX. Grade Determination & Course Policies

| | |
|--------------|-----------------------------------|
| 20 % | Midterm Lab Manual @ 200 points |
| 20 % | Final Lab Manual @ 200 points |
| 20 % | Midterm @ 200 total points |
| 20 % | Final Practical Exam @ 200 points |
| 20 % | Participation @ 200 points |
| | |
| 100 % | Final Grade (1000 points) |

Laboratory Policies

Your safety in the lab is of primary importance in everything we do. All students are expected to follow all lab safety guidelines at all times while in the lab. In addition, the following lab rules apply:

- **No eating or drinking in the lab (not even water!).**
- **Wash your hands before you leave** the lab—every time you leave!
- **Leave the lab as you found it:** all equipment clean and properly stored; all used glass and trash in their respective containers; all chemicals capped and returned to the front desk.
- No cell phone usage (put the phone on vibrate and take calls outside if you need to take a call).

The exams will be practical exams, which cannot be made up for any reason; however, students with documented emergencies can take a makeup essay exam for an equivalent number of points.

Class participation includes attendance, adherence to lab safety guidelines and rules, as well as participation in lab activities and group discussions. Extra credit may be available in this category. Arriving late, leaving early, using a cell phone, as well as any other disruption of class will result in loss of points.

Students who wish to withdraw from the class or change their status must do so according to FKCC's published guidelines and within published deadlines, available in the academic calendar at fkcc.edu.

FKCC Policies

Withdrawal

- Students may withdraw without academic penalty from any course by the established deadline published in the College's calendar. This will result in a grade of 'W' for the course and will not count against the student's GPA.
- Students will be permitted a maximum of two withdrawals per course. Upon the third attempt, the student WILL NOT be permitted to withdraw in accordance with State of Florida regulations and will receive an earned grade for that course.
- It is the responsibility of the student wishing to withdraw from the course to do so by the date published in the College Academic Calendar. **For Fall 2011, the last day to withdraw and receive a "W" grade is November 7th.** Students who abandon the course or do not withdraw themselves by the published deadline are subject to receiving a grade of F.
- An instructor may withdraw a student from courses for excessive absences and/or non-attendance up to the 70% point in the semester.

Academic Honesty & Plagiarism

- You are responsible for understanding and avoiding plagiarism (presentation of another person's work—in any format—as if it were your own). Plagiarism is a serious form of fraud and will not be tolerated. It is the student's responsibility to review the College's policy on Academic Honesty.
- Students are expected to respect and uphold the standards of honesty in submitting written work to instructors. **The first instance of academic dishonesty (including plagiarism) will earn a grade of zero on the assignment; a second instance of academic dishonesty will earn a final course grade of F and will be reported to the College.**
- Collaboration and discussion is encouraged in all course aspects *other than* completion of student assessments (exams, homework, projects). In order to assess individual student performance in the course, I must be able to see your work alone on your assignments. **If I receive copied student work, all students whose work matches will receive a zero for the assignment.**

Special Needs

If you have any special needs or requirements pertaining to this course, please discuss them with the instructor early in the term. If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need assistance, please notify the Office for Students with Disabilities at 305-809-3504 via email at: joanne.dinkel@fkcc.edu or the course instructor immediately. Reasonable efforts will be made to accommodate your special needs.

Sexual Predators

Federal and State law requires a person designated as a "sexual predator or offender" to register with the Florida Department of Law Enforcement (FDLE). The FDLE then is required to notify the local law enforcement agency where the registrant resides, attends or is employed by an institution of higher learning. Information regarding sexual predators or offenders attending or employed by an institution of higher learning may be obtained from the local law enforcement agency with jurisdiction for the particular campus, by calling the FDLE hotline (1-888-FL-PREDATOR) or (1-888-357-7332), or by visiting the FDLE website at www.fdle.state.fl.us/sexual_predators. If there are questions or concerns regarding personal safety, please contact the Campus Security Officer on your campus.

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