I. Course Information

**COURSE NUMBER**  BSC 1010
**COURSE TITLE**  Principles of Biology I
**PREREQUISITES**  None
**CREDIT HOURS**  3.0
**CONTACT HOURS**  45

II. Course Method

This is a traditional course, designed to meet face to face in D-102 on Tuesdays from 2-4:45pm for the entire fall term (Aug. 24 – Dec. 7, 2010)

III. Instructor

Sherri Hitz  
sherri.hitz@fkcc.edu  
Cell # 305-731-9045  
Office: C-223 (Office phone # 305-809-3195)  
Office Hours: Tuesdays 4:45-5:45 pm

IV. Description

An 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 and articulate effectively – written and oral communication
2. **Critical thinking:** Demonstrate mastery of problem-solving skills in the discipline
3. **Diversity:** Interpret and evaluate societal and ethical issues, problems and 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.

Please note: The course schedule is subject to change to meet the needs of the course and its students. If you miss a class, it is your responsibility to contact me to find out what you may have missed.
<table>
<thead>
<tr>
<th>Competency</th>
<th>Week</th>
<th>Learning Outcomes</th>
<th>Learning Activities</th>
<th>Student Assessments</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2</td>
<td>Week 1: August 24</td>
<td>1. Understand the unifying themes of biology 2. Know the scientific method 3. Describe atoms, molecules and chemical bonding</td>
<td>Textbook Reading Chapters 1+2</td>
<td></td>
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<tr>
<td>1, 2, 4</td>
<td>Week 2: August 31</td>
<td>1. Describe the unique properties of water and its importance to life 2. Understand why carbon is the building block of life 3. Describe the major classes of biomolecules</td>
<td>Textbook Reading Chapters 3-5</td>
<td>MB #1 Due: September 7</td>
<td>25</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 3: September 7</td>
<td>1. Compare and contrast prokaryotic vs eukaryotic cells 2. Describe the principal components of cells</td>
<td>Textbook Reading Chapter 6</td>
<td>MB #2 Due: September 14</td>
<td>25</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 4: September 14</td>
<td>1. Describe the cell membrane and transport 2. Describe cell-cell communication</td>
<td>Textbook Reading Chapters 7+11</td>
<td>MB #3 Due: September 21</td>
<td>25</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 5: September 21</td>
<td>Understand metabolism and energy transformations</td>
<td>Textbook Reading Chapter 8</td>
<td>MB #4 Due: September 28</td>
<td>25</td>
</tr>
<tr>
<td>1, 2</td>
<td>Week 6: September 28</td>
<td>Exam 1</td>
<td></td>
<td>Exam #1</td>
<td>150</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 7: October 5</td>
<td>Describe the processes of cell respiration + photosynthesis</td>
<td>Textbook Reading Chapters 9+10</td>
<td>MB #5 Due: October 12</td>
<td>25</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 8: October 12</td>
<td>Describe the cell cycle, its control and loss of control</td>
<td>Textbook Reading Chapter 12</td>
<td>MB #6 Due: October 19</td>
<td>200</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 9: October 19</td>
<td>1. Describe DNA and chromosome structure and function 2. Describe DNA replication and mutations 3. Describe the human genome</td>
<td>Textbook Reading Chapters 15, 16 +21</td>
<td>MB #7 Due: October 26</td>
<td>25</td>
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<tr>
<td>1, 2, 4</td>
<td>Week 10: October 26</td>
<td>Understand gene expression and its regulation</td>
<td>Textbook Reading Chapters 17+18</td>
<td>MB #8 Due: November 2</td>
<td>25</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 11: November 2</td>
<td>Understand epigenetics</td>
<td>Watch “The Ghost in Your Genes”</td>
<td>Exam #2</td>
<td>150</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 12: November 9</td>
<td>1. Describe meiosis and its importance in sexual reproduction 2. Compare and contrast mitosis + meiosis</td>
<td>Textbook Reading Chapter 13</td>
<td>MB #9 Due: November 16</td>
<td>25</td>
</tr>
<tr>
<td>1, 2, 4</td>
<td>Week 13: November 16</td>
<td>1. Do Punnett Square analyses 2. Understand Mendelian vs non-Mendelian inheritance</td>
<td>Textbook Reading Chapters 14+20</td>
<td>MB #10 Due: November 30</td>
<td>25</td>
</tr>
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</table>

**November 23 NO CLASS**

<table>
<thead>
<tr>
<th>Competency</th>
<th>Week</th>
<th>Learning Outcomes</th>
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<th>Student Assessments</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 4</td>
<td>Week 14: November 30</td>
<td>Final Exam Review</td>
<td>Final Exam Review</td>
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<tr>
<td>1, 2</td>
<td>Week 15: December 7</td>
<td>Cumulative Final Exam</td>
<td></td>
<td>Final Exam</td>
<td>250</td>
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</tbody>
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MB = MasteringBiology. Students must purchase access (See VII. Materials section below for information) to masteringbiology.com in order to access student support materials and numbered homework assignments.
VII. Materials

**REQUIRED TEXTBOOK**  
Benjamin Cummings

**REQUIRED ONLINE ACCESS**  
http://www.masteringbiology.com (course ID: HITZBIO1)

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**ISBN Print Textbook + Mastering Biology access**  
978-0-32-154325-7

NOTE: This package includes the print version of our textbook and an access code card for our course website, which will both be shipped to you from the bookstore.

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**ISBN e-Text + Mastering Biology access**  
978-0-32-163393-4

NOTE: This package is fully electronic and includes an access code card for our course website and for the full eText of our textbook. This is the most environmentally-friendly option and saves you some money too!

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VIII. FKCC Grading Scale

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

IX. Grade Determination & Course Policies

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>25%</td>
<td>10 MasteringBiology Assignments @ 25 points each</td>
</tr>
<tr>
<td>20%</td>
<td>Class Participation @ 200 points</td>
</tr>
<tr>
<td>30%</td>
<td>Exam #1 and 2 @ 150 points each</td>
</tr>
<tr>
<td>25%</td>
<td>Comprehensive Final Exam @ 250 points</td>
</tr>
<tr>
<td><strong>100%</strong></td>
<td>Final Grade (1000 total points)</td>
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</table>

**Exams**

- Exams will be given at the start of class and must be completed within a time limit (TBA). All exams will be closed book/notes. The use of electronic devices is strictly prohibited during exams.
- Makeup exams may be offered to students with emergencies, but only if they can provide acceptable documentation of the emergency (e.g., hospital admit slip, etc.). The instructor reserves the right to change the format of any makeup exams (e.g., to essay questions).
- The final exam cannot be made up for any reason.

**Reading Assignments and Homework**

- To succeed in this course, you should do all assigned textbook readings and review class notes frequently.
- Homework will all be submitted online, via the MasteringBiology website, and is due by the start of class on the due date.
- Late homework is not accepted.
Participation

- Students earn points for each class they attend and participate in. Arriving late, leaving early, cell phone and non-class computer usage, as well as any other disruption of class will result in loss of points.
- Unexcused absences will result in a loss of participation points; excused absences (i.e., those with acceptable documentation of an emergency) will not result in point loss.
- Please note that the instructor may withdraw a student from a course for excessive absences (see FKCC Policies below). For our purposes, “excessive absences” is defined as 3 or more unexcused absences.

FKCC Policies

Withdrawal

1. 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.
2. 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.
3. 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. Students who abandon the course or do not withdraw themselves by the published deadline are subject to receiving a grade of F.
4. 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

1. 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.

2. 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. It is the student’s responsibility to review the College’s policy on Academic Honesty.

3. 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.