Welcome to Biology 1406! Please read the following information. Return the Agreement (attached) and Lab Safety Contract by the deadline. **SIGNED by Tuesday, September 20th**

**CONTACT INFORMATION**
Classroom: E121  
Email: camille.merck@hccs.edu  
Phone: (281) 261-9239 ext. 3928  
Office Hours: Monday-Friday, 10:05am – 10:50am and 2:25pm – 3:10pm (by appointment); Monday – Thursday 3:00pm – 4:30pm (no appointment necessary); Friday 3:00pm – 4:15pm (by appointment)

**COURSE INFORMATION**
Course Title: Biol.1406; General Biology I  
Credit Hours: 4  
Class Time: M-F 12:30pm – 1:30pm OR M-F 1:30pm – 2:30pm and M-TH 3:00pm – 4:30pm  
Text Book: Campbell BIOLOGY: 10th Edition by Jane B. Reece et al. HCC custom edition available at the bookstore as volume 1. (REQUIRED)  
Laboratory Manual: Biology 1406, Laboratory manual. HCCS-Southwest, Dept. of Life Sciences. (REQUIRED)

**COURSE DESCRIPTION**
Discussions focus on biological chemistry, biological processes, cellular morphology, metabolism, genetics and molecular biology. This is a core curriculum course, and cannot be used in conjunction with BIOL 1308. **This course is designed for Science Majors.**

**COURSE GOAL:**
To help the student in becoming a scientifically aware individual and to prepare the student for advanced course works in biology.

**COURSE PREREQUISITE:**
One year of high school biology/high school chemistry recommended. Must be placed into college level reading and writing.

**COURSE OBJECTIVES:**
1. To establish an understanding of the major historical events in biology and their impact on science.  
2. To describe basic cell structure, biochemistry, metabolism, nutrition, reproduction, and genetics.  
3. To demonstrate knowledge of the basic principles of cellular inheritance.  
4. To demonstrate knowledge of the basic principles of molecular genetic technology.  
5. To demonstrate skill in basic laboratory methodology, such as microscopy, and the careful analysis of laboratory data and results.
**STUDENT LEARNING OUTCOMES:**

"The following Student Learning Outcomes with their associated assessment criteria are not meant to be all inclusive, and are meant to be used along with all other course learning outcomes and assessment devices, listed under Course Objectives, in the determination of the student's final course grade. Completion of the specific Student Learning Outcomes listed below, at any assessment grading level, does NOT and will NOT guarantee the student that final course grade at the end of the semester!"

**PROGRAM LEVEL STUDENT LEARNING OUTCOMES:**

Program SLO #1

Will display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells and organisms.

Program SLO #2

Will integrate factual and conceptual information into an understanding of scientific concepts by written, oral, and/or visual communication. This may include successful completion if a course-specific research project or a case study module.

Program SLO #3

Will demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques.

Program SLO #4

Will apply principles of the scientific method to problems in the collection, recording, quantitative measurement, analysis and reporting of scientific data.

**STUDENT LEARNING OUTCOMES FOR 1406:**

SLO1: The student will be able to recognize the basic structure and describe the function of eukaryotic cellular organelles and cell systems.

SLO2: Given a DNA or RNA base sequence, the student will be able to deduce:

a. the sequence of the complementary DNA strand
b. the sequence of the complementary messenger RNA strand
c. complementary codons and/or anticodons
d. the proper amino acid sequence in a peptide by using a supplied table of genetic code.

SLO3: The student will be able to explain the synthesis and properties of

a. carbohydrates
b. lipids
c. proteins
d. nucleic acids

SLO4: The student will be able to devise an experiment containing the proper experimental test points along with proper positive and negative controls.

SLO5: The student will exhibit competence with bringing the bright field microscope into focus.

SLO6: The student will develop the habit of reliable attendance by being absent from class no more than four times per semester.

SLO7: The student will demonstrate punctuality in the submission of class assignments on their due date.
CLASS SCHEDULE:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics Covered</th>
<th>Assigned Readings</th>
<th>Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction: Themes in the Study of Life; The Chemical Context of Life; Water &amp; Life</td>
<td>Ch. 1, 2, &amp; 3</td>
<td>1</td>
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<tr>
<td>2</td>
<td><strong>Lecture Exam 1 (Ch. 1 to 3)</strong> Carbon and the Molecular Diversity of Life;</td>
<td>Ch. 4 &amp; 5</td>
<td>2, 3</td>
</tr>
<tr>
<td>3</td>
<td><strong>Lecture Exam 2 (Ch. 4 to 6)</strong> A Tour of the Cell</td>
<td>Ch. 6</td>
<td>4</td>
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<td>4</td>
<td><strong>Lecture Exam 3 (Ch. 7 to 9)</strong> Membrane Structure and Function</td>
<td>Ch. 7</td>
<td>5</td>
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<tr>
<td>5</td>
<td>An Introduction to Metabolism; Cellular Respiration and Fermentation</td>
<td>Ch. 8 &amp; 9</td>
<td>6</td>
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<tr>
<td>6</td>
<td><strong>Lecture Exam 4 (Ch. 10 to 12)</strong> Mendel and the Gene Idea; The Chromosomal Basis of Inheritance</td>
<td>Ch. 14 &amp; 15</td>
<td>10</td>
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<tr>
<td>7</td>
<td><strong>Laboratory Exam 1</strong> Cell Communication; The Cell Cycle; Meiosis and Sexual Life Cycles</td>
<td>Ch. 12 &amp; 13</td>
<td>8, 9</td>
</tr>
<tr>
<td>8</td>
<td><strong>Lecture Exam 5 (Ch. 13 to 16)</strong> From Gene to Protein</td>
<td>Ch. 16 &amp; 17</td>
<td>11</td>
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<tr>
<td>9</td>
<td><strong>Lecture Exam 6 (Ch. 17 to 20)</strong> Final Exam</td>
<td>Ch. 18</td>
<td>12</td>
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<tr>
<td>10</td>
<td>Viruses; Biotechnology</td>
<td>Ch. 19 &amp; 20</td>
<td>12, 13</td>
</tr>
<tr>
<td>11</td>
<td><strong>Laboratory Exam 2</strong></td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>Final Exam</td>
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EXAMS:
There will be 6 lecture exams and a final exam. Lecture exams will consist of multiple-choice questions. Out of the 6 lecture exams only the highest 5 will be counted towards the final grade. They will cover material we cover in class, important concepts and discussion from the text book as well as figures from the text book. You will get a maximum of one hour or one and a half-hour period to complete your lecture exams. The final exam will be comprehensive (it will cover all the chapters). This is a departmental final that all students are required to take. No cell phones are allowed in use at any time in the classroom as it disturbs the class. Audible cell phone ringing may result in your removal from class that day. Cell phone use during examination will be considered cheating and will result in course failure.

MAKE-UP EXAMS:
There will be no make-up exams, and final exams and laboratory exams are mandatory. One lecture exam out of the six will be dropped for the final computation. If you miss one lecture exam, it will be counted as a dropped exam. Please note: All students are required to take the final exam. Failure to take the final exam will result in an “F” grade.
ONLINE HOMEWORK ASSIGNMENTS:
There will be mandatory online homework assignments on the Mastering Biology site (www.masteringbiology.com). The course ID for your course will be listed on my “Learning Web.” Each student is responsible for registering on the Mastering Biology website using an access code. The access code comes with the new book. The information regarding the access code will be given to you. The homework assignments will be graded and will contribute to 10% of the final grade. The due dates for the assignments will not be extended. Please read the instructions regarding mastering biology on the learning web before you start completing the assignments. Assignments of this nature are not optional.

QUIZZES:
Quizzes may be accessible through the Mastering Biology site (www.masteringbiology.com) or may be given during class. Although more than 10 quizzes may be given during the semester, only the highest 10 will be considered toward the final grade. Due dates for quizzes assigned through Mastering Biology will not be extended.

LABORATORY POLICY:
Lab safety will be reviewed on the first day of lab. Experiments will be performed in groups. Each student should arrive at the lab on time, with his or her lab manual. Each student is responsible for completing the lab reports at the end of each lab.

GRADE DETERMINATION:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Total Points</th>
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<tbody>
<tr>
<td>Exams</td>
<td>5 @ 100 pts.</td>
<td>500</td>
</tr>
<tr>
<td>Laboratory Exams</td>
<td>2 @ 100 pts.</td>
<td>200</td>
</tr>
<tr>
<td>Laboratory Reports</td>
<td>10 @ 10 pts.</td>
<td>100</td>
</tr>
<tr>
<td>Homework Assignments (Mastering Biology)</td>
<td>100 pts.</td>
<td>100</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10 @ 10 pts.</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200 pts.</td>
<td>200</td>
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<td><strong>Total Points</strong></td>
<td><strong>1,200</strong></td>
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A = 90-100% (1,080 – 1,200 pts.)
B = 80-89% (960 – 1,079 pts.)
C = 70-79% (840 – 959 pts.)
D = 60-69% (720 – 839 pts.)
F = Below 60% (≤719 pts.)

ACADEMIC HONESTY:
Students are expected to comply with stated policies in HCCS student handbook concerning academic honesty. Cheating will not be tolerated. There will be no talking, looking on other people’s papers or in any way try to cheat on any examination. This can lead to expulsion from Houston Community College. This is your official warning! Your first offense will be your last in my class.
IMPORTANT NOTICE:
A student who repeats a course three times or more may soon face significant tuition/fee increases at HCC and other public colleges and universities. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test-taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available. Beginning in fall 2007, the Texas Legislature passed a law limiting first time entering freshmen to no more than SIX total course withdrawals throughout their educational career in obtaining a certificate and/or degree.

TUTORING:
The college will provide tutoring for the students. More information will be available later. You can check the tutoring and open lab schedule at http://learning.swc.hccs.edu.

INSTRUCTOR REQUIREMENTS:
Basic Requirements
Students should be on time for class and be prepared with required materials including textbook and lab manual. Full class attendance is required including lecture and lab portions. Full attention during lecture and lab is required. There is no use of any electronic devices during the class period unless approved by your instructor. Students are expected to conduct themselves as adults. This includes courteous and respectful behavior towards the instructor and classmates. Disruptive behavior or any behavior that interferes with any educational activity being performed by the instructor will not be allowed. Additionally, no student may interfere with his/her fellow students’ right to pursue their academic goals to the fullest in an atmosphere appropriate to a community of scholars. Disruptive behavior may result in removal from the class.

Operating Guidelines
1. You are spending a good deal of time, energy and money on this course – please, make the most of your investment! There is a school-mandated attendance requirement for this course (please see the “Classroom Evaluation” section for a description). If you’re still struggling with certain aspect of the course, please make an effort to see me and I will gladly make time to help you work through the material or assign you a tutor.
2. Assignments not turned in on time will be docked 10% of their final value for each class day that they are late. There will be NO makeup labs.
3. My purpose in this class is to act as your guide through this subject material. I also must make sure that your grade in this class indicates your mastery of the subject material required by this college. I am not here to spoon-feed you. It takes approximately 2-3 hours of study time for each hour of class time to master the material. This class will have over 96 contact hours (4 hr. credit) compared to 48 contact hours that comprise the normal class (3 hr. credit). The class and study time necessary to succeed in this class will be close to 300 hours (20 hours per week)!
4. Please do not talk during class. If you feel the need to discuss something with a classmate, please do so outside. I will not be offended if you need to take an important conversation outside briefly so as not to distract your classmates. No cell phones on in class. Please turn them off or on vibrate.
Attendance

Attendance at lecture is importance since most exam material will come from the lecture notes. Students are expected to attend classes regularly and on time. Latecomers distract the class and are not appreciated. Students are responsible for materials covered during their absences. Class attendance is checked daily by instructors. **A student may be dropped from a course for excessive absences after the student has accumulated absences in excess of 12.5% of the hours of instruction (including lecture and laboratory time). Note that 12.5% is approximately 4 classes or labs for a 4-semester hour course.** If circumstances significantly prevent you from attending classes, please inform me. It is the responsibility of each student to amend their professional/personal schedule to meet the class schedule. If you wish to drop the course, it is your responsibility to go online and do it. I will not drop students for non-attendance.

Phones/Electronic Devices

Absolutely no phone or other electronic devices are to be used during class (lecture and lab). This includes making or taking a call, reviewing messages, texting, playing games, checking email, surfing the web, or anything that involves a phone or other electronic device. If your work or family situation requires that you be available via phone, your phone can be on vibrate mode and you can take the call during our regular scheduled breaks or you can exit the class to review the call. Notify your friends, family, employers, and anyone else who regularly contacts you that you will be in class and that you should be contacted only when necessary. The taking of calls during class is not only disruptive but it is also discourteous to classmates and the instructor.

Last Day for Administrative and Student Withdrawals

Refer to the syllabus for the last date. I urge any student who is contemplating withdrawing from the class to see me first! You may be doing better than you think. Either way, I want to be accessible and supportive. I do not believe in "weed out" classes, and I consider you to be much more than just a name or number! Note my office hours above. If you need assistance I’m here to help. It is the student’s responsibility to withdraw from the class before the last day of withdrawal. The instructor cannot give a “W” after the withdrawal date. Abandoning the course or failing to formally drop, will result in a grade being given based on the work completed for the entire course (including missed exams).

To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor will “alert” you that you might fail a class because of excessive absences and/or poor academic performance. The counselors with work with you to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.

Disability Support Services (DSS)

Any Student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations should inform the instructor within one week of the first class session and must contact the Counselor at 713-718 7889, or contact the DSS office for assistance. At Southwest College, contact Dr. Becky Hauri, 713-718-7909.

EGLS3 Evaluation for Greater Learning Student Survey System

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for the continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.
<table>
<thead>
<tr>
<th>Performance Factors</th>
<th>F</th>
<th>D</th>
<th>Rating Scale</th>
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<tbody>
<tr>
<td>1) The student will be able to recognize the basic structure and describe the function of eukaryotic cellular organelles and cell systems.</td>
<td>Unable to demonstrate knowledge of shape, structure, or function of most eukaryotic cellular organelles. Unable to correlate organelles with their cell systems.</td>
<td>Occasionally able to demonstrate knowledge of shape and structure, or function of a few eukaryotic cellular organelles and cell systems.</td>
<td>Consistently able to demonstrate knowledge of shape and structure, or function of most eukaryotic cellular organelles and cell systems.</td>
</tr>
<tr>
<td>2) Given a DNA or RNA base sequence, the student will be able to deduce: a. the sequence of the complementary DNA strand b. the sequence of the complementary messenger RNA strand c. complementary codons and/or anticodons d. the proper amino acid sequence in a peptide by using a supplied table of genetic code.</td>
<td>Unable to demonstrate knowledge of base pairing rules for DNA only. Unable to demonstrate the ability to perform replication and transcription and translation, by scenario.</td>
<td>Able to demonstrate knowledge of base pairing rules for DNA only. Able to demonstrate the ability to perform replication by scenario. Unable to demonstrate the ability to perform transcription or translation, by scenario.</td>
<td>Able to demonstrate knowledge of base pairing rules for both DNA and RNA. Able to demonstrate the ability to perform replication and transcription OR translation, by scenario.</td>
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<tr>
<td>Performance Factors</td>
<td>Rating Scale</td>
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<tr>
<td>3] The student will be able to explain the synthesis and properties of</td>
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<td></td>
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<tr>
<td>a. carbohydrates</td>
<td>F</td>
<td>D</td>
<td>C</td>
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<tr>
<td>b. lipids</td>
<td>Unable to explain both the synthesis of polymers and the properties of any one class of biological macromolecules.</td>
<td>Able to explain the synthesis of polymers, and the properties of any one class of biological macromolecules.</td>
<td>Able to explain the synthesis of polymers, and the properties of any two classes of biological macromolecules.</td>
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<tr>
<td>c. proteins</td>
<td>Consistently cannot differentiate between appropriate and inappropriate experimental design, in practice or by scenario.</td>
<td>Occasionally differentiates between appropriate and inappropriate experimental design, but needs direction to proceed to next step.</td>
<td>Consistently differentiates between appropriate and inappropriate experimental design, but needs direction to proceed to next step.</td>
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<td>d. nucleic acids</td>
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<td>4] The student will be able to devise an experiment containing the proper experimental test points along with proper positive and negative controls.</td>
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<tr>
<td>Performance Factors</td>
<td>F</td>
<td>D</td>
<td>Rating Scale</td>
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<td>5) The student will exhibit competence with bringing the brightfield microscope into focus.</td>
<td>Consistently unable to find the specimen on the microscope slide, and consistently unable to focus without the instructor’s help.</td>
<td>Occasionally able to find the specimen on the microscope slide, but consistently unable to focus without the instructor’s help.</td>
<td>Occasionally able to find the specimen on the microscope slide, and occasionally able to focus without the instructor’s help.</td>
</tr>
<tr>
<td>6) The student will develop the habit of reliable attendance by being absent from class no more than four times per semester.</td>
<td>Is absent frequently enough to interfere with instruction and the completion of the course objectives, and/or is frequently not where he/she is expected to be. Infractions the HCC attendance policies.</td>
<td>When absent, is never aware of the schedule for the day upon return, and must be reminded or encouraged to complete objectives missed during the absence. Is occasionally not where he/she is expected to be.</td>
<td>When absent, is only occasionally unaware of the schedule for the day upon return. Completes objectives missed during the absence only with the help of the instructor and/or classmates, and is where he/she is expected to be at all times.</td>
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<tr>
<td>7) The student will demonstrate punctuality in the submission of class assignments on their due date.</td>
<td>Is tardy at turn-in frequently enough to interfere with class instruction. Submits assignments two or more weeks late, or ignores assignments.</td>
<td>Is tardy at turn-in frequently enough to interfere with class instruction or submits assignments no more than one week late.</td>
<td>Is occasionally a few minutes late for assignment turn-in. Submits assignments no more than one day late.</td>
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</tbody>
</table>
Fall 2016 BIOL 1406 Class Agreement  
DUE: TUESDAY, SEPTEMBER 20th

Please review over the attached material In order to ensure the safety and fair treatment of all students, as well as to secure the best possible educational experience for everyone, it is my expectation that all classroom policies and procedures are adhered to by every student in my class at all times.

By signing this agreement you acknowledge that you have read the preceding documentation and that understand and agree to the commitment necessary to be successful in this course (300+ HOURS OF STUDY: 12 Weeks@25 hr./week). Please provide your most current contact information, and sign below indicating you have reviewed all of our classroom policies, procedures, and expectations. Feel free to contact me with any questions.

Warm Regards,

Camille Merck, MS  
camille.merck@hccs.edu

STUDENTS:  
I have read the syllabus for Biology 1406. I am aware of the effort and time commitment necessary to succeed in this Science Majors course.

Name (Printed):  ________________________________________________

Signature:  _____________________________________________________ Date:  ______________

Email Address:  __________________________________________________

Phone Number:  __________________________________________________