**BIO 101-Section 060M**  
**General Biology I, Lecture**  
**Summer 2014**

**Meeting Time:** TWR 8:00-10:25 am  
**Class Location:** MP-0327  
**Instructor:** Vashti C. Bryant, Ph.D.  
**Faculty Office:** Parrish Hall, Room 213  
**E-mail:** vbryant@nvcc.edu  
**Telephone:** 703-530-3059  
**Office hours:** TW 1:30-2:45 pm; R 1:30 pm-2:30 pm (by appointment)

**Required Materials** *(available in the bookstore)*  

Student Access Kit for Mastering Biology ([www.masteringbio.com](http://www.masteringbio.com)). Course name is: BIO 101 General Biology I-Section 060M. Course ID is: VCBRYANTSUMMER2014060M.

*Please note that Mastering Biology is required. Textbooks bought new from the campus bookstore include a free subscription to Mastering Biology. You can choose to purchase Mastering Biology with an e-book as well. Used textbooks and new ones bought online may not have a Mastering Biology access code---one may need to be purchased at masteringbio.com.*

**Course Description and Goals**

**Course description:**  
Explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles. Introduces the diversity of living organisms, their structure, function, and evolution. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

**Course purpose:**  
This course is to provide students with an opportunity to acquire fundamental knowledge of the principles and living systems and their applications to everyday life. This course is designed for both science and non-science majors. The course may serve as a prerequisite for advanced biology courses, a laboratory science graduation requirement, or as transfer...
credit for a four-year institution. BIO 101 is a prerequisite for BIO 102. BIO 102 may be
taken without BIO 101 with Division approval.

**Entry level competencies:**
The student should be able to read and express him/herself both orally and in writing on a
college freshman level as measured by a college English competency examination.
Prerequisite is placement into ENG 111.

**Course objectives:**
Upon completion of this course, the student will be able to:

- Describe the fundamental importance of evolution as a unifying concept in
  biology.
- Describe the major taxonomic groups of living organisms.
- Apply the scientific method to investigate elementary problems.
- Diagram and describe the atomic structure of biologically important elements.
- Explain the principles of chemical bonding and apply those principles to the
  formation and properties of both inorganic and organic molecules.
- Describe the structure and function of enzymes and their roles in metabolic
  pathways.
- Diagram a typical plant, animal, and prokaryotic cell and label the component
  parts of each and explain their function.
- Describe the processes by which materials move across the membrane and
  within the cell.
- Describe the main phases of cell division and relate these to the formation of
  new cells.
- Apply the basic principles of inheritance and probability to the solution of
  genetic problems.
- Describe the molecular aspects of the storage, expression, and transmission of
  genetic information.
- Describe the recent developments in genetics and relate these to human welfare.
- State the Hardy-Weinberg Law and discuss its relevance to evolution.
- Describe the main features of the modern theory of evolution.

**Course Policies**

**Attendance:**
Class will begin promptly. Please show respect by arriving on time. A sign-in sheet will be
available each class period to record your presence. Students are expected to attend all
scheduled class meetings in a timely AND professional manner. Attendance not only means
being physically present, but also conducting one’s self in a manner appropriate for college
level learning. Inappropriate and/or disruptive behavior may result in suspension from
class and/or academic dismissal. Questions and discussion are highly encouraged, but
please be respectful of your instructor and classmates. It is considered academically
dishonest to sign the attendance sheet for someone else.
**Roles and Responsibilities:**

**Instructor:** The instructor is here to *guide* your learning of Biology. This is primarily a lecture course. To facilitate the absorption of the lecture material, lectures will be presented in modular form and supplemented with short videos, discussion, group work, and concept checks. Due to time constraints in class, lectures will be mainly used to highlight some of the difficult concepts from each chapter.

**Student:** It is the student’s role to be a proactive participant in her/his learning process. This requires completing the assigned readings before class, adhering to the attendance policy, asking questions, participating in discussion, completing all assignments, and studying Biology on a regular basis throughout the course. **All information presented in class and the assigned readings (even if not lectured on) is fair game for exams.**

**Communication:**

**Course information:** All class announcements and updates to the syllabus will be communicated through NOVA’s email and Blackboard systems. You are strongly advised to check these systems regularly.

**Contacting the instructor:** The best method to contact Dr. Bryant is via email. Personal email addresses should NOT be used to communicate course information. Email messages may be replied to within one working day. Please do not expect answers to emails on the weekends or after 6pm during the week. Another way to contact the instructor is to leave a voicemail but responses may be delayed due to Dr. Bryant’s out of office schedule. You are also welcome to stop by during Dr. Bryant’s office hours, but without an appointment there is a possibility she will be busy with other meetings or tasks. If the posted hours are not amenable to your schedule, please contact Dr. Bryant and another time can be set up to accommodate your needs.

**Cell phones:**

Cell phones, beepers, pagers, and other electronic devices should be silenced before entering the classroom. No calls or texts should be answered during lecture. Failure to adhere to this policy will affect your grade. Laptops and smart devices will be allowed for course related activities ONLY (no Facebook, Twitter, chat, etc.), but not during exams. If an electronic device is heard during an examination, you will lose ten percentage points from your test grade per violation.

**Academic dishonesty:**

Academic dishonesty cannot be condoned. When such misconduct is established as having occurred, it subjects you to possible disciplinary actions ranging from admonition to dismissal, along with any grade penalty the instructor might, in appropriate cases, impose. Procedural safeguards of due process and appeal are available to you in disciplinary matters.

No form of academic dishonesty will be tolerated. This includes but is not limited to sharing information during homework assignments and quizzes, plagiarizing (including from the web), and not fully participating in any group activities or assignments. If you are suspected of cheating on an exam, you will immediately be asked to leave the room. On the
first offense of cheating, you will receive a zero on the assignment/exam. On the second offense, you will fail the course. There are no exceptions to these rules. You will also be reported to the Dean of Student Services who may enforce further consequences. Please refer to the Student Handbook for further information.

Course withdrawal:
The last day to withdraw with tuition refund (Census Date) is July 7th. The last day to withdraw without a grade penalty is July 25th. Please contact Dr. Bryant as soon as you begin considering this as an option. If you do not attend consistently you may be forcibly withdrawn or receive a grade of “F”; however you are ultimately responsible for withdrawing yourself from the course.

Special needs and other accommodations:
If you have any type of disability, health condition, or personal circumstance that may hinder your success in this course, please notify the instructor at the beginning of the semester. All information is confidential and will remain a private matter between you and the instructor. You should contact the Counseling and Specialized Services Unit which will help arrange special accommodations for you. Accommodations cannot be made without proper documentation.

Inclement weather:
On days where classes are cancelled due to inclement weather or other emergencies, please read the chapter to be discussed – we will do a short review at the beginning of the next class but we will keep moving! Also, be sure to check Blackboard for any additional information or alternative assignments posted by the instructor.

Assessment

A combination of in-class activities, homework assignments, and quizzes will be used to assess student achievement throughout the course.

Syllabus quiz:
One quiz will be administered through Blackboard to assess your knowledge about the course information presented in the syllabus. You may use a hard copy or electronic copy of the syllabus to answer the questions. The quiz will be timed, so it will be useful to read through the syllabus before beginning the quiz.

Introduction to Mastering Biology module:
An introductory module explaining how to use the program should be completed through your Mastering Biology access. Completion of this module will provide up to five points of your course grade.

In-class activities:
Students will be expected to participate in various in-class activities that may involve completing short assignments, working in a group, making a presentation, etc. These activities will not occur during every lecture period, and not all will be announced ahead of
time. If you are absent during an in-class activity, you will not be allowed to make it up.

**Homework assignments:**
Students will be expected to complete all homework assignments on the masteringbio.com website. All assignments must be completed by 11:59 pm on the due date for credit. No late assignments will be accepted. IF you are encountering problems with Mastering Biology, you must contact Dr. Bryant at least two days BEFORE the assignment is due.

**Quizzes:**
Five quizzes will be administered throughout this course. Quiz questions may be presented in various formats such as multiple choice, short answer, matching, or essay. All quizzes will start at the beginning of class and last about 45 minutes. If you are late, you will not be allowed any extra time to take the quiz. To avoid unexpected traffic delays, you should allow additional commuting time to arrive on time to class. If you know you will be absent on a quiz day, please arrange to take the quiz early (no more than one week before the scheduled exam). No make-up quizzes will be given after the originally scheduled time. IF an electronic device is heard during a quiz, ten percentage points will be deducted from your quiz grade per event. Students will not be permitted to leave the room (i.e. to use the restroom, get a drink of water, etc.) during a quiz, so please plan ahead. Your lowest quiz score will be excluded when computing the final course grade.

**Group project:**
Groups of 3-4 students will submit a 5-page paper on a topic relevant to the course material. Each group will also give a 15-20 minute presentation on the topic during the last week of the course. All students are expected to fully contribute to their group’s efforts to complete this assignment.

**Final exam:**
A cumulative final exam will be administered at the end of the course. Some questions may be taken from any of the course’s quizzes, homework assignments, and/or in-class activities. All students are required to take the final exam.

**Grading and Calculating the Final Course Grade**

A total of 1000 points will be used to determine the final BIO 101 grade, 750 of which will be earned in the lecture section. The other 250 points (or 25%) will be earned during lab*. The distribution of lecture grades is as follows:

- Syllabus quiz: 5 points
- Introduction to Mastering Biology: 5 points
- Group project: 40 points
- In-class activities: 100 points
- Homework: 250 points
- Quizzes: 200 points
- Final exam: 150 points
A letter grade will be reported according to the following grading scale:

A = 90 – 100%
B = 80 – 89%
C = 70 – 79%
D = 60 – 69%
F = Below 60%

*Please note that if you miss more than 2 labs, you will receive a grade of “F” for the course.
## Tentative Class Schedule and Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>DUE (11:59 pm)</th>
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<tbody>
<tr>
<td>1-June 29th</td>
<td>Course Introduction</td>
<td>Chapter 2 (Sections 2.1-2.14)</td>
<td>Chapter 3 (Sections 3.1-3.9, 3.11-3.15)</td>
<td>Syllabus Quiz: July 2nd</td>
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<td>Chapter 1</td>
<td>Chapter 5 (Sections 5.10-5.11)</td>
<td>Chapter 5 (Sections 5.13-5.16)</td>
<td>Intro to MB: July 3rd</td>
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<td>Chapter 10 (Sections 10.2-10.3)</td>
<td>Homework #1: July 5th</td>
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<td>2-July 6th</td>
<td><strong>QUIZ #1</strong></td>
<td>Chapter 5 (Sections 5.1-5.6, 5.8-5.9)</td>
<td>Chapter 6 (Sections 6.1-6.10, 6.12-6.13)</td>
<td>Homework #2: July 12th</td>
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<td>Chapter 4</td>
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<td>Chapter 5 (Section 5.12)</td>
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<td>Chapter 7 (Sections 7.1-7.2, 7.4-7.10, 7.12)</td>
<td>Baptist Church</td>
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<td>4-July 20th</td>
<td><strong>QUIZ #3</strong></td>
<td>Chapter 11 (Sections 11.12-11.17)</td>
<td>Chapter 13</td>
<td>Homework #4: July 26th</td>
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<td>Chapter 10 (Sections 10.4-10.16)</td>
<td>Chapter 12 (Sections 12.1-12.2, 12.6-12.21)</td>
<td>Chapter 14</td>
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<td>Chapter 11 (Sections 11.1-11.7)</td>
<td>Baptist Church</td>
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<td>5-July 27th</td>
<td><strong>QUIZ #4</strong></td>
<td>Chapter 17</td>
<td>Chapter 18</td>
<td>Homework #5: Aug 2nd</td>
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<td>Chapter 15</td>
<td>Baptist Church</td>
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<td>Chapter 16</td>
<td>Baptist Church</td>
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<tr>
<td>6-Aug 3rd</td>
<td><strong>QUIZ #5</strong></td>
<td>Group Presentations</td>
<td><strong>Final Exam</strong></td>
<td>Group Paper: Aug 5th</td>
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<td>Chapter 19</td>
<td>Final Exam Review</td>
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*Keep this syllabus for reference throughout the semester.*