

SURVEY OF BIOLOGY

BIOL 1120 – Section 901

Syllabus for Spring Semester 2013

GENERAL COURSE INFORMATION

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(Please use Blackboard email only while class is in session)
- Phone:** 419.530.2065 (Biol. Sci. Dept.)
- Hours:** **Tuesdays and Thursdays:** 8:00 p.m. - Biology 1120
Blackboard Chat Room (Other Times by Appointment)
- Text:** Hoefnagels, Marielle. 2013. *BIOLOGY: The Essentials* (First Edition) McGraw Hill, Inc. ISBN: 9780077491024 (Loose Leaf) or 9700078096921 (Paperback). Access to a text is required.

COURSE OVERVIEW

The distance learning section of Biology 1120 begins on January 7, 2013 and ends on May 3, 2013. During that period of time the class may be completed from any location in the world providing you have access to the required textbook, an adequate computer and a reliable internet connection. The text I have selected for the course is the first edition of a current state-of-the-art product for non-science majors entitled *BIOLOGY: The Essentials* authored by Marielle Hoefnagels and published by McGraw Hill, Inc. The less-expensive loose leaf edition is stocked at the University of Toledo's Bookstore on the Bancroft Campus, and may be purchased in person, online at www.utoledo.Bkstore.com or by phone (419.530.2516). I have been assured that all orders placed electronically or by phone are shipped within 1-2 days from the time they are received. You may, of course, choose to obtain your text from other booksellers. It is marketed by the Student Bookstore on Bancroft Street adjacent to campus. It is also available from a number of online booksellers. In addition, you may choose to purchase an electronic version of the text. For information on this option I recommend that you visit <http://www.coursesmart.com/>. You may search for your text on that site using the ISBN

listed above. Be sure to read the information presented on the site before making your decision to purchase an electronic text. Finally, you may consider a variety of rental arrangements which are now available from a number of sources. Regardless of where you purchase your text or which format you choose, **please make sure it is available for your use by the beginning of class on January 7th.**

All components of this course will be delivered using Blackboard 9.1, a comprehensive web-based Course Management System that is hosted by UT's Learning Ventures Division. The Blackboard 9.1 based website for BIOL 1120 may be accessed on January 7th by logging onto www.dl.utoledo.edu. When the page opens, navigate to the pull down menu for "select a system", click on <Blackboard 9 (9.1) All terms>, enter your UTAD username and password in the appropriate boxes, and click on <2013:1 Spring, BIOL 1120:901 Survey of Biology>. Once you have successfully reached the course site, navigate to the <Course Menu> and click on the link to <Start Here>. Study the Syllabus, review the **Frequently Asked Questions**, and begin the class.

During the semester you may communicate with both your classmates and me by using the Blackboard e-mail system, the course bulletin board and the chat rooms. **To help assure a successful experience, I am asking you to check the course announcements and your e-mail at least once each day after the class begins.** If you are new to online classes, the UT Learning Ventures Home Page contains a wide variety of resources to help you navigate Blackboard 9.1. If you experience technical difficulties with any aspect of the Blackboard system, feel free to contact the Learning Ventures Help Desk at 419-530-8836, or on the division's website.

COURSE PERSPECTIVES AND LEARNING OUTCOMES

Perspectives: Biology 1120, *Survey of Biology*, is a basic, introductory level course for non-science majors. It is included in the University of Toledo's Core Curriculum which consists of a menu of courses designed to facilitate student achievement of defined competencies. The primary competency addressed by *Survey of Biology* is **Scientific and Quantitative Reasoning and Literacy**, which requires that students demonstrate the capacity to apply mathematical reasoning and scientific inquiry to diverse problems. A secondary but no less important competency addressed by the course is **Critical and Integrative thinking**. It requires that students be able to integrate reasoning, questioning, and analysis across traditional boundaries of viewpoint, practice and discipline. There are no required science pre-requisites for this course. Further, it is designed to be a **survey course** – that is, to provide an opportunity for participants to develop the foregoing core competencies while acquiring an overview and understanding of traditionally important areas of biology.

Learning Outcomes: Students who successfully complete this course will have explored and should be able to demonstrate a basic understanding of: (1) The nature of science, how scientific methodology is applied, and how scientific knowledge differs from other kinds of knowledge, (2) the properties and characteristics of living organisms and how they are studied, (3) the basic principles of chemistry that are necessary for the study and understanding of living organisms, (4) modern ideas about the structure and

function of cells, (5) basic principles of genetics and their relevance in modern medicine and ethical decision making, (6) evolution and ideas about the origin of life that have emerged from the applications of scientific methodology, (7) the diversity of animal life on the earth, (8) animal structure and function with emphasis on the human organ systems, and (9) selected issues in ecology and environmental biology with a special emphasis on how humans have impacted our biosphere. Please note that elaborations of these very broad learning outcomes have been crafted for each chapter, and may be viewed on our course website by clicking the <Learning Resources> button on your Course Menu followed by <Chapter Learning Tools><Desired Chapter> and finally <Learning Outcomes>. A master list of the learning outcomes for all thirty chapters of our text may be accessed by clicking the <Learning Outcomes> button in your course menu followed by <Learning Outcomes (Chapters 1-30)>. In order to accomplish these broad learning outcomes and their elaborations with a minimum of difficulty, certain requirements must be met. **First**, assigned readings and associated learning activities must be completed according to the schedule presented later in this syllabus. As you journey through the assigned materials please keep in mind that you are not expected to assimilate every fact that you encounter. But, it is important that you develop an understanding and appreciation for some of the really fascinating and interesting things that applications of scientific methodology have revealed about living organisms. **Second**, you must demonstrate that you have achieved the learning outcomes for these assignments by earning adequate scores on the chapter homework assignments and quizzes scheduled during the semester. Specific information about these instruments is presented in the next section.

ASSESSMENT

Grades in this course will be based on your performance on 15 weekly quizzes and 28 weekly pre-quiz homework assignments.

Weekly Quizzes may cover either one or two assigned chapters and will be valued at 50 points each. Scheduled quizzes can be accessed in the quiz room during any 100 minute period of your choice from Friday at 9:00 a.m. until the following Monday at 7:30 a.m. **They must be completed and submitted for grading by no later than 9:00 a.m.** Specific instructions for completing the quizzes will be provided early each week on the Blackboard Announcement tool. Because of the nature of this course, all quizzes are open book. However, they are not intended to be collaborative exercises, and each of you may be asked to affirm in writing that work submitted for a grade is wholly your own. Each quiz may include a variety of question formats including but not limited to multiple choice, matching, fill-in-the-blank, single-sentence definitions or explanations, comparing and contrasting terms, short essays, problems to solve and experiments to interpret. The dates and assigned chapters for each of the quizzes are listed in the schedule presented on the last pages of this syllabus. Answer keys for quizzes as well as corrected copies of the actual quizzes you submit will be accessible in the <My Grades> area of the course menu after I announce that the results have been released. This will occur typically within 24 hours from the time a quiz is submitted. Errors in grading or challenges to the questions must be brought to my attention via e-mail no later than one

week following the release of a score. After that period of time has elapsed, I will assume that there is no problem and the recorded score and its associated grade will stand.

Pre-Quiz Homework Assignments are valued at 10 points each, and will cover material drawn from one assigned chapter in the textbook. They are designed to help you assess your preparation for the weekly quizzes, and should be attempted only after you have made significant progress with your study of a chapter. The assignments scheduled for a specific chapter can be accessed by clicking on <Learning Resources> in the Course Menu, selecting the<Desired Chapter> and navigating to <Pre-Quiz Homework Assignment>. They will be posted at 9:00 a.m. each Friday of the semester, and must be completed and submitted during any 40 minute period of your choice between that time and 9:00 a.m on the following Friday. Each assignment will contain 20 questions and may be attempted up to three times. Completed assignments will be computer graded and you will receive immediate knowledge of results following submission of your answers. Only the highest score earned from up to three attempts on a given assignment will be recorded and counted toward course grades. Homework assignments will utilize a variety of question formats including but not limited to multiple choice, matching or fill-in-the-blank.

During this semester 750 points may be earned on quizzes, and 270 points on pre-quiz homework assignments for a total of 1020 points. Grade equivalents for earned points are listed in the table below. Depending on overall class performance, the breakpoints for the various grade categories **may** be lowered at the conclusion of the semester. However, they will never be raised. Further, if the mean score on individual quizzes is not within a range that I consider reasonable for a class of this nature, I will make appropriate adjustments. .

BIOLOGY 1120 – TABLE OF SUGGESTED GRADE EQUIVALENCIES*

<u>Percent of Total Pts.</u>	<u>Grade</u>	<u>Percent of Total Pts.</u>	<u>Grade</u>
90-100	A	70-74	C
88-89	A-	68-69	C-
85-87	B+	65-67	D+
80-84	B	60-64	D
78-79	B-	58-59	D-
75-77	C+	Below 58	F

*Values in this table are subject to change after end-of-semester adjustments are made

You may estimate your grade anytime during the semester by adding up the points you have earned on quizzes and pre-quiz homework assignments, dividing that number by the number of points possible up to that time in the semester, multiplying the resulting decimal by 100 and finding the grade equivalency for that percentage in the table above. Please note that grades of incomplete (I) will be assigned by this instructor only in extraordinary cases when unforeseen circumstances prevent a student from completing the requirements of the course within the normal dates of enrollment.

PREPARING FOR QUIZZES

As a rule of thumb, I recommend that you prepare for Biology 1120 quizzes in exactly the same manner as you would for face-to-face classes that do not allow open book testing. Normally you will be required to complete a quiz and submit it for grading in a 100 minute period. That does not allow sufficient time to rush through the assigned chapters in search of a correct answer. Further, many of the test items presented will require some level of analysis and the integration of concepts from different areas of the various chapters. **So, heavy dependence on the text or other materials to compensate for a lack of preparation and learning is not a good way to assure success.** Finally, while everyone learns in different ways and with different levels of efficiency, I recommend that preparation for quizzes include **but not be limited** to the following activities:

1. **Two (2) thorough readings of each assigned chapter.** It is a good idea to begin your reading by looking over the **Learning Outline** that appears on the opening page of each chapter. This helps establish perspective and focuses your reading effort. Before proceeding into the body of the chapter, be sure to study the **learning outcomes** provided by your author. They may be accessed from the Course Menu by clicking on <Learning Resources>, <Chapter Learning Tools>, <Desired Chapter> and finally <Learning Outcomes>. These learning outcomes are extremely important because they define the goals that you should seek to achieve by studying the chapter contents. Furthermore, the quizzes and homework assignments given throughout the semester will contain questions that are keyed to these outcomes as well as the factual material that you must assimilate in order to achieve them. A complete list of learning outcomes for the entire text may be accessed from the Course Menu by clicking <Learning Resources><Learning Outcomes (Chapters 1-30)>.
2. **Paying close attention to the chapter illustrations and their captions.** You will quickly discover that your authors have done an excellent job of integrating the text material with the illustration program. This approach will be especially valuable for visual learners.
3. **Integrating PowerPoint lectures with your reading:** Lecture PowerPoint presentations for each chapter may be accessed from the course menu by clicking on <Learning Resources><Chapter Learning Tools> and the <Desired Chapter>. **Note: these are large files and sometimes take a minute or more to open.** Also, they require that you have MS PowerPoint installed on your computer. Consult the Learning Ventures Help Desk if you need a free download copy of PowerPoint Viewer in order to use these files. If you wish, you may download these lectures onto your computer and save them for viewing offline. **Note:** Throughout these PowerPoint presentations you will encounter slides that contain numbered “Clicker Questions” followed by slides containing “Answers to Clicker Questions”.

While these questions and their answers are useful in preparing for our quizzes, they are designed to be used with clickers in the face-to-face classes for this course, but they are not used in the distance learning environment.

4. **Integrating Chapter assignments with Animations:** Many of the biological processes and phenomena described in the various chapters of your text have been transcribed into useful animation PowerPoint presentations. The animation of otherwise static text figures greatly enhances their learning value. Animations may be accessed from the course menu by clicking on <Learning Resources><Chapter Learning Tools> <Desired Chapter><Animations>. In general the files associated with these links are even larger than those of the PowerPoint Lectures, and may take a bit longer to load. If you encounter difficulty in getting the slides to open properly, you may wish to download them onto your desktop and open them from there. Also, keep in mind that for the slides to run properly and display the animations your machine must be in “Slide Show” mode.
5. **Making use of chapter summaries for review.** These may be accessed at the conclusion of each chapter in your text.
6. **Making “Self-Testing” a major part of your study plan.** Self-testing should include but not be limited to:
 - a. Working through the “**Mastering Concepts**” boxes that appear throughout the assigned chapters in your text. Answers for these questions may be accessed from the Course Menu by clicking <Learning Resources><Chapter Learning Tools><Desired Chapter><Answer Keys>.
 - b. Answering the questions that appear in the “**Multiple Choice Questions**” area at the conclusions of the chapters in the text. The answers to the majority of these questions are provided in Appendix A at the end of your book.
 - c. Working through the “**Write it Out**” and “**Pull it Together**” exercises that appear at the chapter conclusions. Answers to the questions presented in these exercises may be accessed from the Course Menu by clicking on <Learning Resources><Chapter Learning Tools><Desired Chapter><Answer Keys>
 - d. Conscientiously and carefully completing the “**Pre-Quiz Homework Assignments**” that are keyed to the assigned chapters of your text. By way of review these may be accessed from the Course Menu by clicking on <Learning Resources> followed by <Chapter Learning Tools> <Desired Chapter><Pre-Quiz Homework Assignments>. After you complete these homework sets be sure to submit your work for scoring so you will see the results of your efforts and learn by your mistakes. Keep in mind that the points generated by completing these assignments will count toward your final course grade.

- e. Crafting your own quizzes and answering the questions for review. If this is done conscientiously you will address any topic I might include on a quiz.
7. **Asking questions.**
Questions about course content may be posted on the bulletin board or through e-mail correspondence with your instructor or classmates, and participating in group study sessions that evolve in the chat rooms.

RETAKEING QUIZZES

In general, I do not permit the retaking of a quiz except in very rare instances where technical problems are encountered that prevent its completion or submission. In these cases, if I am made aware of a problem before a quiz is due, and verify from my login register that there was a glitch or technical problem with Blackboard, I will reset the quiz and allow you to start over with a newly generated version. If I hear about the problem after the quiz is due, and verify from my login register that there was a problem with Blackboard, I will permit you to take a make-up quiz at its scheduled time. This policy has proven fair and useful in the past, and I anticipate that situations will arise in which it is beneficial to many of you during the current semester.

MAKING-UP MISSED WORK

Quizzes: While I believe that the posted schedule of quizzes for this semester is sufficiently flexible to accommodate most of your needs, I am well aware that family, work and health issues sometimes make it difficult to complete assigned work in a timely fashion. When these issues arise and you are unable to take a quiz at the scheduled time, there may be an opportunity for you to make-up the work. Specifically, make-ups will be administered according to the following guidelines: (1) Make-ups for missed quizzes will be available over the three day end-of-week quiz period following that during which the original quiz was scheduled (See the schedule of reading assignments and quizzes in the table below). They will be accessible only to those who did not submit the originally scheduled quiz. If you have already taken a quiz, Blackboard will not permit you to logon to the make-up. (2) Make-ups will be posted in the quiz room at 9:00 a.m. on Fridays and will be available until 7:30 a.m. the following Monday—just like our regularly scheduled end-of-week quizzes. **THIS MEANS THAT THOSE OF YOU TAKING A MAKE-UP WILL HAVE TO COMPLETE MORE THAN ONE QUIZ IN A SINGLE END-OF-WEEK PERIOD.** (3) Make-up quizzes will be identical to the regularly scheduled ones with respect to the length of time allowed for completion, number of questions included, point values of questions, databases used as sources for questions and any adjustments applied by the instructor to earned scores of students taking the originally scheduled quiz. (4) **The maximum number of make-up quizzes that are permitted during a given semester is two (2).** This number may be exceeded only if you have technical difficulties or other very extenuating circumstances **and** obtain my approval. It is your

responsibility to keep track of the number of make-ups that you have taken. (6)
Following each regularly scheduled quiz of the semester I will notify by Blackboard email all students who are eligible to take the make-up, and provide instructions for accessing the make up work.

Pre-Quiz Assignments: Each of the pre-quiz assignments in this course is posted for a full calendar week, and hopefully it can be completed at times that are accessible for you. For that reason I have not developed a formal schedule of make-ups. In the event that scheduled assignments are missed, leave me a note on Blackboard email and I will try to accommodate your needs for making up the work.

**BIOLOGY 1120 (Distance Learning Section)
Schedule of Assignments and Quizzes
Spring Semester 2013**

Week/ Beginning (mm/dd)	Reading Assignments and Major Topics	Pre-Quiz Homework Assignments	Quizzes Available
1 (01/07)	Syllabus, FAQ's, and UT Academic Dishonesty Policy Chapter 1: Nature of science and the study of life	Chapter 1 Posted: First day of course Due: 01/11 at 9:00 a.m.	Quiz #1 Posted: 01/11 at 9:00 a.m. Due: 01/14 at 9:00 a.m.
2 (01/14)	Chapter 2: Introduction to the chemistry of life	Chapter 2 Posted: 01/11 at 9:00 a.m. Due: 01/18 at 9:00 a.m.	Quizzes #2 & #1 – Make-up* Posted: 01/18 at 9:00 a.m. Due: 01/21 at 9:00 a.m.
3 (01/21)	Chapter 3: Overview of cell structure and function Chapter 4: Energy processing in living organisms	Chapters 3 and 4 Posted: 01/18 at 9:00 a.m. Due: 01/25 at 9:00 a.m.	Quizzes #3 & #2 – Make-up* Posted: 01/25 at 9:00 a.m. Due: 01/28 at 9:00 a.m.
4 (01/28)	Chapter 5: Energy Harvesting In Plants: Photosynthesis. Chapter 6: Energy Release In Living Organisms.	Chapters 5 and 6 Posted: 01/25 at 9:00 a.m. Due: 02/01 at 9:00 a.m.	Quizzes #4 & #3 – Make-up* Posted: 02/01 at 9:00 a.m. Due: 02/04 at 9:00 a.m.
5 (02/04)	Chapter 7: DNA Structure And Gene Function. Chapter 8: DNA Replication And Cell Division	Chapters 7 and 8 Posted: 02/01 at 9:00 a.m. Due: 02/08 at 9:00 a.m.	Quizzes #5 & #4 – Make-up* Posted: 02/08 at 9:00 a.m. Due: 02/11 at 9:00 a.m.
6 (02/11)	Chapter 9: Sexual Reproduction and Meiosis Chapter 10: Patterns of Inheritance	Chapters 9 and 10 Posted: 02/08 at 9:00 a.m. Due: 02/15 at 9:00 a.m.	Quizzes #6 & #5 – Make-up* Posted: 02/15 at 9:00 a.m. Due: 02/18 at 9:00 a.m.
7 (02/18)	Chapter 11: DNA Technology Chapter 12: Forces of Evolutionary Change	Chapters 11 and 12 Posted: 02/15 at 9:00 a.m. Due: 02/22 at 9:00 a.m.	Quizzes #7 and #6 – Make-up* Posted: 02/22 at 9:00 a.m. Due: 02/25 at 9:00 a.m.
8 (02/25)	Chapter 13 : Evidences for Evolution Chapter 14: Speciation and Extinction	Chapters 13 and 14 Posted: 02/22 at 9:00 a.m. Due: 03/01 at 9:00 a.m.	Quizzes #8 and #7 – Make-up* Posted: 02/28 (Thurs) at 9:00 a.m. Due: 03/04 at 9:00 a.m.
9 (03/04)	SPRING BREAK		
10 (03/11)	Chapter 15: Evolution and Diversity of Microbial Life. Chapter 17: Evolution and Diversity of Animals	Chapters 15 and 17 Posted: 03/01 at 9:00 a.m. Due: 03/15 at 9:00 a.m.	Quizzes #9 and #8 – Make-up* Posted: 03/15 at 9:00 a.m. Due: 03/18 at 9:00 a.m.

**BIOLOGY 1120 (Distance Learning Section)
Schedule of Assignments and Quizzes
Spring Semester 2013 (Continued)**

Week/ Beginning (mm/dd)	Reading Assignments and Topics	Pre-Quiz Homework Assignments	Quizzes
11 (03/18)	Chapter 18: Population Ecology Chapter 19: Communities and Ecosystems	Chapters 18 and 19 Posted: 03/15 at 9:00 a.m. Due: 03/22 at 9:00 a.m.	Quizzes #10 and #9 – Make-up* Posted: 03/15 at 9:00 a.m. Due: 03/18 at 9:00 a.m.
12 (03/25)	Chapter 20: Preserving Biodiversity Chapter 21: Plant Form and Function	Chapters 20 and 21 Posted: 03/22 at 9:00 a.m. Due: 03/29 at 9:00 a.m.	Quizzes #11 and #10 Make-up* Posted: 03/29 at 9:00 a.m. Due: 04/01 at 9:00 a.m.
13 (04/01)	Chapter 23: Animal Tissues and Organ Systems Chapter 24: The Nervous System and Senses	Chapters 23 and 24 Posted: 03/29 at 9:00 a.m. Due: 04/05 at 9:00 a.m.	Quizzes #12 and #11 Make-up* Posted: 04/05 at 9:00 a.m. Due: 04/08 at 9:00 a.m.
14 (04/08)	Chapter 25: The Endocrine System Chapter 26: The Skeletal and Muscular System	Chapters 25 and 26 Posted: 04/05 at 9:00 a.m. Due: 04/12 at 9:00 a.m.	Quizzes #13 and #12 Make-up* Posted: 04/12 at 9:00 a.m. Due: 04/15 at 9:00 a.m.
15 (04/15)	Chapter 27: The Circulatory and Respiratory Systems Chapter 28: Regulating Temperature, Nutrients, and Body Fluids	Chapters 27 and 28 Posted: 04/12 at 9:00 a.m. Due: 04/19 at 9:00 a.m.	Quizzes #14 and #13 Make-up* Posted: 04/19 at 9:00 a.m. Due: 04/22 at 9:00 a.m.
16 (04/22)	Chapter 30: Animal Reproduction and Development	Chapter 30 Posted: 04/19 at 9:00 a.m. Due: 04/26 at 9:00 a.m.	Quizzes #15** and #14 Make-up* Posted: 04/26 at 9:00 a.m. Due: 04/29 at 9:00 a.m.

*See guidelines for making-up missed work

**The Make-up for Quiz #15 will be posted from Monday 04/29 at 10 a.m. until Wednesday 05/01 at 9 a.m.

WLB/s

December 18, 2012