

**Biology 111, Introductory Biology I**  
**Lecture/Lab Syllabus, Fall 2013**  
**Sections 562-573**  
**MWF 1:50-2:40, HELD 200**

Lecture Professor: Dr. Wei Wan E-mail: wwan@mail.bio.tamu.edu

Office: HELD 320 Phone: 845-7707 Office Hours: MWF 10:00-11:00 AM

**Course Description:** Biology 111 is the first half of an introductory two-semester survey of contemporary biology that covers the chemical basis of life, structure and biology of the cell, molecular biology and genetics. Course includes laboratory that reinforces and provides supplemental information related to the lecture topics. Biology 111 is the first course in a rigorous two-course series for life science majors and other students intending to pursue a career in biomedical sciences. It is not designed as a course for students who just need to fulfill the science course requirement in the core curriculum. BIOL 101, BIOL 107, and BIOL 113 may be more suitable for non-science majors. If you have any question about which biology course you should take, please see your academic advisor.

**Course Objectives:** Biology 111 is a 4-credit hour course that consists of 150 minutes of lecture and 170 minutes of lab each week. Students are expected to attend both lecture and lab where they will be introduced to the fundamentals of biological structure and function. Upon completion of Biology 111 students should be able to demonstrate a basic grasp of the major themes of Biology including the importance of water, carbon, and macromolecules to life on Earth. Students should be able to discuss basic cell structure and describe significant processes that occur in the cell such as membrane function, cellular respiration, photosynthesis, communication and cell division. Finally the successful student will be able to demonstrate an understanding of the processes and relationships of genetics, inheritance, protein synthesis, the regulation of gene expression, and the role of biotechnology in molecular genetics, the study of viruses, and the evolution of genomes.

**Texts/Materials:** Texts are on reserve in the Evan's library annex, 4<sup>th</sup> floor.

- *Campbell Biology* (9<sup>th</sup> edition) by Reece, et al. - **required**.
- *Biology 111 Laboratory Manual* 8th ed. (2014) by Tonna Harris-Haller - **required**
- Campbell Biology Website - recommended. Subscription is included with a new text, or may be purchased online at <http://masteringbiology.com>.

**General Information:**

***Lower Division Biology Instruction Office:*** Administrative questions pertaining to Biology 111 may be referred to 315 Heldenfels (HELD), Mon. through Fri. 8 am to 5 pm, 845-4651, e-mail: [introbio@bio.tamu.edu](mailto:introbio@bio.tamu.edu)

***Webpage:*** The Lower Division Instruction webpage at <http://www.bio.tamu.edu/ldi/> has contact information for faculty, teaching assistants and staff, as well as exam challenge forms and scantron grade check request forms.

***eCampus:*** Grade information and materials posted by faculty may be located on the course eCampus site. To access eCampus:

- Logon to <http://ecampus.tamu.edu/>
- Choose the **TAMU (Net ID) logon** option
- Logon with your Net ID and password
- Choose the Biol 111 course list link

**Release of Grades:** The Family Educational Rights and Privacy Act (FERPA) prohibits faculty and staff from posting grades to unsecured websites, or reporting grades by e-mail or telephone. Individual grade information is available via eCampus.

**Absence Policy:** The Lower Division Program **does not** accept the Texas A&M University Explanatory Statement of Absence Form as an adequate verification for an absence. Students who miss class and want to make up one or more missed assignments must provide verification for the reason of the absence (see Student Rules 7, Attendance <http://student-rules.tamu.edu/rule07>). Prior notification of absence is expected whenever possible (Student rule 7.3).

For an absence due to illness or injury, you must notify your instructor within two working days of the absence. Additionally, you must provide, within one week, written and signed evidence of consultation with a medical professional confirming that the injury or illness was serious enough to justify the absence. Submitted evidence will be verified prior to approval of any makeup.

**Make up Exams:** Will be given **only** in the event of an authorized university approved absence (see Absence Policy). The exam may be essay and will be given **only** with the permission of the instructor. Obtain a signed authorization form from your instructor and bring it to 315 HELD to register for a make up test. You may not take a make up to improve a test score.

**Scantron Grade Checks:** If you think that your posted exam grade is incorrect, you may have your scantron rechecked. Submit grade check requests at <http://www.bio.tamu.edu/ldi/>. You will be notified via e-mail when the results are ready. Bring your student I.D. to 315 HELD to pickup your grade check.

**Course Grade:** Designation of letter grades should be expected to be determined as follows:

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F ≤ 59%

Some downward adjustment of letter grade cutoffs (i.e. curve) may be applied dependent on the class numerical grade distribution and the instructor's judgment. Final lab totals may be subject to statistical normalization. **Grades are awarded only on the basis of your performance in the class.**

The course percentage is 75% lecture and 25% laboratory. Calculate your course percentage as follows:

Lecture Percentage = total lecture points/450 × 100

Lab Percentage = total lab points/450 × 100

Course Percentage = (Lecture Percentage × 0.75) + (Laboratory Percentage × 0.25)

**Q-Drop:** Friday, November 15<sup>th</sup> (5:00 pm) is the deadline for dropping a course with no penalty (Q grade). If you have any question as to whether or not to Q-drop, see your instructor before this date. After this date you must take a letter grade or negotiate a W (withdrawal) or NG (no grade) through your academic dean (see Student rule 10.3).

**Academic Integrity: An Aggie does not lie, cheat or steal or tolerate those who do."**

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.

Academic misconduct involves any of the following offenses: cheating, fabrication, falsification, multiple/duplicate submissions, plagiarism and complicity in any of these offenses. **All incidents of academic dishonesty will be referred to the Biology Lower Division Program, are subject to academic penalties, and will be reported to the Texas A&M Honors System Office** <http://aggiehonor.tamu.edu/>.

**Copyright:** The materials used in this course are copyrighted. This includes, but is not limited to syllabi, lecture notes, quizzes, exams, lab problems, in-class materials, review sheets and problem sets. You do not have the right to copy or provide course materials to others without the permission of the instructor.

**Americans with Disabilities Act (ADA) Policy Statement:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall, room B118 or call 845-1637 (website <http://disability.tamu.edu/>).

**Lecture Information:**

**Lecture Exams:** There will be three 100 point lecture exams and one 150 point final exam. Each lecture exam will have 40 multiple-choice questions worth 2.5 points each. The final exam is cumulative and will have 60 multiple-choice questions worth 2.5 points each (for a total of 150 points). Exams cover both lecture material and text assignments. For each exam, you are required to bring a #2 pencil and your TAMU student I.D. Failure to provide positive identification will result in a score of zero for the exam. Your instructor may permit a non-programmable calculator for specified exams. A purse may be carried to your desk but must be closed and left on the floor. No other items will be permitted at your desk.

***Lecture Exam Schedule:***

Lecture Exam	Date	Exam Time	Location
Exam 1 (100 points)	Wed., Sept. 18	1:50-2:40	HELD 200
Exam 2 (100 points)	Wed., Oct. 16	1:50-2:40	HELD 200
Exam 3 (100 points)	Wed., Nov. 13	1:50-2:40	HELD 200
Final Exam (150 points)	Tues., Dec. 10	3:30-5:30	HELD 200

**Exam Challenges:** After each lecture exam, a copy of the key will be posted on eCampus. If you think there is an error in the key, submit an Exam Challenge Form at: <http://www.bio.tamu.edu/ldi/> within 24 hours. Give referenced support as to why an alternative answer choice should be accepted. **Note:** Final exams will not be returned or posted, and have no challenge period.

**Rescheduling Exams:** Lecture exams must be taken with your registered section. A grade of ZERO will be given for any exam taken out-of-section. A final exam may be rescheduled provided you show proof of three or more final exams scheduled for the same day. Make arrangements for an alternate final exam time in 315 HELD during the last week of class.

***Make up Exam Schedule:*** See Make up Exams (previous Page)

Lecture Make up Exam	Date	Time	Location
Exam 1	October 3	5:30-6:30 p.m.	Held 105
Exam 2	October 31	5:30-6:30 p.m.	Held 105
Exam 3	November 21	5:30-6:30 p.m.	Held 105

## BIOLOGY 111 LECTURE SCHEDULE

### TOPIC

### CHAPTER

#### **INTRODUCTION**

Introduction: Themes in the Study of Life Ch. 1

#### **THE CHEMISTRY OF LIFE**

The Chemical Context of Life Ch. 2

Water and Life Ch. 3

Carbon and Molecular Diversity of Life Ch. 4

The Structure and Function of Large Biological Molecules Ch. 5

#### **THE CELL**

A Tour of the Cell Ch. 6

Membrane Structure & Function Ch. 7

An Introduction to Metabolism Ch. 8

Cellular Respiration and Fermentation Ch. 9

Photosynthesis Ch. 10

Cell Communication Ch. 11

The Cell Cycle Ch. 12

#### **GENETICS**

Meiosis and Sexual Life Cycles Ch. 13

Mendel and the Gene Idea Ch. 14

The Chromosomal Basis of Inheritance Ch. 15

The Molecular Basis of Inheritance Ch. 16

From Gene to Protein Ch. 17

Regulation of Gene Expression Ch. 18

Viruses Ch. 19

Biotechnology Ch. 20

Genomes and their Evolution Ch. 21

## Lab Information:

Lab Instructor: \_\_\_\_\_ E-mail: \_\_\_\_\_

Section: \_\_\_\_\_ Office: **HELD 317 E** Office Hours: \_\_\_\_\_ Phone: **845-4653**

### ***Lab Safety:***

- You will be required to sign a Safety Agreement indicating that you have read, understood, and agree to follow the safety regulations required for this course. If not presented to you during registration, please do the following:
  - A. Log on to the Howdy Portal, select My Record
  - B. Find the registration box link to LSA (lab safety acknowledgement)
  - C. Read the LSA and then agree to it
- Eating, drinking, and use of tobacco products are prohibited in the laboratory.
- University safety regulations require closed-toe shoes in the laboratory. You will be refused admittance to the lab if you wear sandals or open-toed shoes.
- Safety goggles are required. Bring safety goggles to all labs.

***Lab Exams:*** There will be two 100 point practical exams. Each practical exam will have 25 stations with 1 to 4 questions per station for a total of 100 points per exam. The second practical exam is **not** comprehensive.

***Quizzes:*** There will be nine 15-point quizzes. These may be a combination of written and practical questions and will cover the current week's lab (80%) and the previous week's lab (20%).

***Assignments:*** There will be **8** homework assignments worth a total of 90 points. Two points are automatically deducted for late assignments, and an additional point is deducted for each additional day overdue. Late homework may be logged in at HELD 317 E. Should HELD 317 E be closed, late homework may be logged in at HELD 315.

***Participation Points:*** Each TA will award a maximum of 25 points based upon cooperation, class participation, adherence to safety procedures, attendance, and cleanup.

***Bonus Points:*** **There are no bonus point opportunities in lab!**

***Regrading:*** Is at the discretion of the lab instructor. Any re-grade will be for the entire exam or assignment, so the score may go up, go down, or remain unchanged. Requests for re-grading must be initiated within two weeks of the assignment being returned to the student and must be completed before the last official day of classes.

***Lab Rescheduling:*** A verifiable university approved excuse is required before a student may be rescheduled into another lab section during the same week, if space permits. To reschedule a missed lab during the same week lab is missed, bring written verifiable evidence of a university excused absence to 315 HELD as early as possible. There will be **NO** make up labs. If you miss a lab for a university approved reason and cannot be rescheduled, then you must contact your lab instructor within two working days after the lab to make arrangements for a make up quiz or assignment. Failing to contact your instructor in a timely manner will result in a zero for the missed assignment.

***Makeups:*** Lab makeup assignments are restricted to students with approved absences (see Student rule 7) and must be scheduled by the student within two weeks of the end of the absence. Note: Rule 7.1.6.3 "An absence for a non acute medical service does not constitute an excused absence". A non acute medical excuse will not be accepted as a valid reason to miss a practical exam.

## **Laboratory Assignments:**

**Work individually:** All laboratory assignments are individual projects. You may not work together on written assignments without the permission of your lab instructor.

**Plagiarism and Proper Citation:** Copying from texts, lab manuals, internet sources, or other students without proper credit is plagiarism and will be considered cheating. If you quote from another source, you must credit that source in your text and properly cite the reference in a literature cited section. The following is an example of a proper citation:

Reece, et al. 2011. Biology, 9th ed., Pearson/Benjamin Cummings Publishing Co., pg. 146.

**Assignment 1 - Termite Behavior (5 pts).** Present a short, in-class presentation of the termite behavior experiment with special reference to how the experiment followed the scientific method.

**Assignment 2 – Properties of water (10 pts).** Write a one-page report describing the plasmolysis experiment (rather than the starch/amylase experiment as stated on p. 35 of the manual) and its results. Submit the text via Turn-it-in.com, print the receipt, and attach the originality report to your paper when you submit to your instructor.

**Assignment 3 – Enzymes Lab Report (25 pts).** Work Independently! Write a lab report that includes all the sections of Appendix B, p. 241. Use the data referred to on page 71. Attach the first page of Appendix B to your report. Make sure all tables and graphs are properly labeled and titled. Submit the text to Turn-it-in.com, print the receipt, and attach to the report and submit to your lab instructor.

**Assignment 4 – Cells in-class summary questions (5 pts).** Write a practical exam question for each lab objective. Practical questions **require** a setup as part of the question. The setup must be from the lab exercise (equipment, specimens, slides, diagrams, graphs, models, text illustrations etc). Avoid written multiple choice options, yes/no, male/female, true/false, or either/or answers.

For each question include:

Your name:

Setup

Question

Answer

Objective

Example

Student X

3 slides **A-** Bacteria, **B-** Cyanobacteria, **C-** green algae

Which represents an organism most likely formed via one or more endosymbiotic events?

C- green algae

Differentiate between prokaryotic and eukaryotic cells.

**Assignment 5 – Cellular Metabolism (5 pts).** Work individually! Complete Table 6-2 on page 103 and answer all questions in the left column on page 104. Properly label Table 6-2. Turn in the assignment to your instructor before you leave class.

**Assignment 6- Photosynthesis (10 pts).** Work Independently! See page 127 for instructions. Write an abstract and graph the results of the light wavelength and action spectra measurements. Attach data Tables 7-4, and 7-6. (Omit Table 7-3.) Label and title each graph. Note: an abstract is a short, one or two paragraph summary statement of the experiment and its results. Be sure to include a statement of the hypothesis and whether the results supported or refuted the hypothesis. Submit the text via Turn-it-in.com and print the receipt. Attach the receipt to your graphs and abstract and turn in the assignment to your instructor

**Assignment 7 – Forensic Biology (25 pts).** Work individually! Follow the guidelines in Appendix B (p. 241) to write a scientific lab report over the forensic investigation done in this lab. Attach appropriate data tables, graphs, and photographs. Label and title all tables and graphs. Describe how variables were controlled. Describe the results and discuss whether the evidence exonerates or focuses attention on one of the suspects. Attach the cover sheet from Appendix B for grading. Submit the text via Turn-it-in.com, print the receipt, and attach it to your report when you submit it.

**Assignment 8-Photosynthesis(5pts).** At the beginning of class submit a flowchart outlining the steps to be

taken from DNA extractions through PCR.

**Student Support:**

***Help desk:*** Students needing individual assistance will find a Teaching Assistant in 317 E HELD. Check the schedule posted outside of 317 E HELD – phone 845-4653.

***Biology Image Library:*** Images of lab slides and specimens are available online via the TAMU Biology Images Library at <http://biologyimages.tamu.edu/>. Images are taken offline prior to the beginning of each practical exam week.

1<sup>st</sup> Exam Review: Username: Biology 111      Password: Biology 111      Goes offline: M, Oct. 7, 7:45 a.m.

2<sup>nd</sup> Exam Review: Username: Biology 111-2nd      Password: Biology 111      Goes offline: M, Nov. 18, 7:45a.m.

***Problems:*** Courtesy dictates that you first discuss any problem with your laboratory instructor. If the problem has not been resolved, please contact Mr. Chris Lee (Teaching Coordinator) at 458-3399 (or by e-mail at [clee@mail.bio.tamu.edu](mailto:clee@mail.bio.tamu.edu)) to make an appointment to discuss the situation.

**BIOLOGY 111 LABORATORY SCHEDULE**  
**Fall 2013**

<b><u>LAB MANUAL CHAPTER</u></b>	<b><u>DATES</u></b>	<b><u>ASSIGNMENT DUE</u></b>
Ch. 1 - The Discovery Process	Aug. 26-29	Assignment 1 (in-class)
Ch. 2 - The Properties of Water, <b>Quiz 1</b>	Sept. 2-5	
Ch. 3 - Biomolecules, <b>Quiz 2</b>	Sept. 9-12	Assignment 2 – submit Text turn-it-in.com
Ch. 4 - Enzymes - Protein Catalysts, <b>Quiz 3</b>	Sept. 16-19	
Ch. 5 - Cells - The Basic Unit of Life, <b>Quiz 4</b>	Sept. 23-26	Assignment 3 – submit text to turn-it-in.com Assignment 4 -(in-class)
Ch. 6 – Cellular Metabolism , <b>Quiz 5</b>	Sept. 30-Oct. 3	Assignment 5-(in class)
<b><i>LAB PRACTICAL EXAM I</i></b>	Oct. 7-10	
Ch. 7 – Photosynthesis	Oct. 14-17	
Ch. 8 – Cell Division, <b>Quiz 6</b>	Oct. 21-24	Assignment 6- submit text turn-it-in.com
Ch. 9 – Theory of Heredity, <b>Quiz 7</b>	Oct. 28-31	
Ch. 10 – Forensic Biology, <b>Quiz 8</b>	Nov. 4-7	
Ch. 11 – PCR and DNA Typing and, <b>Quiz 9</b> Ch. 12- Protein Synthesis	Nov. 11-14	Assignment 7 – Submit turn-it-in.com Assignment 8 (in-class)
<b><i>LAB PRACTICAL EXAM 2</i></b>	Nov. 18-21	
<b><i>Thanksgiving</i></b>	Nov. 25 –28	

\*Goggles are required every week.

\*Open-toed shoes are prohibited in lab. Must wear close-toe shoes.

**Lab Practical Make up Exam Schedule**

Lab Make up Exam 1

TBA

Lab Make up Exam 2

TBA