Syllabus for
BIO 111—Introductory Biology I Lecture
3.0 Credit Hours
Fall 2021

I. COURSE DESCRIPTION

An introduction to the study of general biology covering the scientific method, levels of organization, the cell, photosynthesis, respiration, classical and molecular genetics, and vertebrate anatomy and physiology. (Designed for biology majors and minors and pre-health professions majors. BIO 101 and BIO 111 may not both be taken for credit).
Corequisite: BIO 111 Lab and BIO 105 Lecture.

II. COURSE GOALS

This is one of four courses (in addition to BIO 111 Lab, 112 Lecture, and 112 Lab) comprising a sequence designed to serve as a comprehensive introduction to the study of biology. This series provides the biology major with the basic language and conceptual foundation upon which to build students' major leading to a career in biological or pre-professional health-related fields. These courses are prerequisites to all other biology courses from which biology and pre-professional health career majors make their choices depending upon individual goals, interests, and departmental requirements. Enrollment in a course commits a student to learning. The teacher for the course commits to helping the student learn. If both student and teacher are true to their commitments, teaching and learning will occur. The activities and situations that contribute to learning are simple and well known: repetition, concentration, association, small unit steps, use of a communication vehicle appropriate to the nature of the objective, and learning events sequenced to permit each one to complement or enhance the associated one. A concomitant requirement of Bio105 lecture will serve to expose students to key study habits, techniques, and styles. To pass Bio105 students will need to maintain attendance and complete all assignments or earn an 80% or higher on all Bio111 exams.

This course is designed to enable the student to do the following:

A. Develop substantial biology vocabulary.

B. Develop basic understanding of cell biology, genetics, and human systems necessary for success in advanced biology classes.

C. Develop basic understanding necessary for doing well on comprehensive exams, e.g. GRE, MCAT, etc.

III. STUDENT LEARNING OUTCOMES FOR THIS COURSE

A. Terminal Objectives

As a result of successfully completing this course, the student will be able to do the following:

1. Discuss the principles of life common to both plants and animals.
2. Describe and use the scientific method in problem-solving situations.
3. Describe the various structures and function of each level of organization.
4. Relate the principles of biology to problems in modern life within a Christian perspective.
5. Define the terms necessary to comprehend and discuss the biological concepts

presented in the course.

6. Exhibit a mature, responsible attitude toward his or her work by being prepared, present, and punctual for the training inherent in the discipline of science and in the development of consistent Christian character.
7. Relate the role of biology to modern scientific issues; e.g., energy, molecular biology, environmental pollution, world food problems, etc.
8. Read science periodicals with interest and understanding.
9. Express an appreciation for life, God's greatest creation.
10. Better appreciate, understand, and apply how to be a responsible steward of God's magnificent creation.

B. Unit Objectives

As listed in Course Calendar.

C. Objectives for Students in Teacher Preparation Program.

The Teacher Preparation Program meets the competency-based requirements established by the Oklahoma Commission on Teacher Preparation. This course meets the following competencies: Subject Competencies (SC) 7.b.1, 7.b.6, 7.b.7, 7.b.10.

This course is designed to help students meet subject competencies:

SC 7.b.1: Structure and function in living systems.
SC 7.b.6: The cell.
SC 7.b.7: The molecular basis of heredity.
SC 7.b.10: Matter, energy, and organization in living systems.

IV. TEXTBOOKS AND OTHER LEARNING RESOURCES

A. Required Textbooks:

Brooker, R.J., Widmaier, E.P., Graham, L.E., and Stiling, P.D. 2019. Biology, 5th edition. New York, NY, McGraw-Hill Companies, Inc.
9781260487855: CONNECT access card for Brooker, Biology, 5e (all digital option)
9781260692013: Brooker, Biology, 5e loose leaf book with CONNECT access card

B. Recommended Texts:

Lennox, John C. 2011. Seven Days That Divide the World: The Beginning According to Genesis and Science. Zondervan. ISBN 978-0-310-49217-7.

V. POLICIES AND PROCEDURES

A. University Policies and Procedures

1. Students and faculty at Oral Roberts University must adhere to all laws addressing the ethical use of others' materials, whether it is in the form of print, electronic, video, multimedia, or computer software. Plagiarism and other forms of cheating involve both lying and stealing and are violations of ORU's Honor Code: "I will not cheat or plagiarize; I will do my own academic work and will not inappropriately collaborate with other students on assignments." Plagiarism is usually defined as copying someone else's ideas, words, or sentence structure and submitting them as one's own. Other forms of academic dishonesty include (but are not limited to) the following:
    a. Submitting another's work as one's own or colluding with someone else and submitting that work as though it were his or hers;

b. Failing to meet group assignment or project requirements while claiming to have done so;
c. Failing to cite sources used in a paper;
d. Creating results for experiments, observations, interviews, or projects that were not done;
e. Receiving or giving unauthorized help on assignments.

By submitting an assignment in any form, the student gives permission for the assignment to be checked for plagiarism, either by submitting the work for electronic verification or by other means. Penalties for any of the above infractions may result in disciplinary action including failing the assignment or failing the course or expulsion from the University, as determined by department and University guidelines.

2. Final exams cannot be given before their scheduled times. Students need to check the final exam schedule before planning return flights or other events at the end of the semester.
3. Students are to be in compliance with University, school, and departmental policies regarding the Whole Person Assessment requirements. Students should consult the Whole Person Assessment handbooks for requirements regarding general education and the students' majors.
   a. The penalty for not submitting electronically or for incorrectly submitting an artifact is a zero for that assignment.
   b. By submitting an assignment, the student gives permission for the assignment to be assessed electronically.

B. Course Policies and Procedures
1. Attendance at each class or laboratory is mandatory. Excessive absences can reduce a student's grade or deny credit for the course.
2. Evaluation Policies and Procedures
   a. The **final exam** is a 200-point, two-hour, comprehensive final exam. It is administered during final exam week as scheduled by the Registrar's Office.
   b. **Exams** are given approximately every 3 weeks covering a unit or set of units of study as scheduled in the course calendar. There will be five 100-point exams composed mostly of objectives, recall-type questions but also with some synthesis. Make up exams must be legitimized with Administrative excuse or Medical note. Make up exams must be rescheduled by the student within one week of exam date.
   c. **Quizzes**: Eleven to 13 quizzes will be given during the course; however, only the top 10 quiz scores will be recorded.
   d. The course grade is determined from the following evaluation sources:

(1)	Final Exam	200 points
(2)	Five Exams @ 100 points each	500 points
(3)	LearnSmart Assignments	50 points
(4)	Tegrity Lectures	50 points
(5)	Quizzes – 10 @ 10 points each	100 points
	TOTAL POSSIBLE POINTS IN COURSE	900 points

e. The course letter grade is assigned as follows:

Letter Grade	Percentages
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	<60%

3. Honor Code: We believe students to be maturing young adults ready and able to assume those responsibilities for their own behavior. What a person learns is directly proportional to the effort expended. The grade one earns from the course may or may not reflect accurately how much that person has really learned, but it's the best measuring tool education possesses at the present time that is universally accepted and recognized. Grades earned, over the long haul, are less important than true learning. Therefore, since learning is the result of individual effort, we expect individualized work. In this course, academic honesty includes (1) being diligent in maintaining exam security; (2) being prompt and dependable; (3) being honest concerning class attendance; and (4) avoiding literary plagiarism. Dishonesty in any of the above specified points is in violation of the Honor Code and could incur the penalties as specified in the Student Handbook and/or department's statement.
4. Whole Person Assessment Requirements
   For non-Biology majors, the second homework assignment will be submitted as the Intellectually Alert Rubric: Global and Historical Perspectives (2C).
5. Attendance Policies and Procedures
   a. Class attendance is essential for a complete learning experience.
   b. The student may be excused for scheduled department events and/or university academic events. All requests must be submitted in writing and have either a chairman's or dean's signature.
   c. The student is allowed three absences for illness, emergencies, or for personal reasons. Thereafter each absence will result in a 2% reduction in the total semester points. Students who miss more than 9 class periods will automatically earn an "F" for the semester.
   d. Excused Absences: Absences may be excused by the Instructor, the Dean, or other Administrators for LEGITIMATE reasons (illness verified with a doctor's note). An "E" will be assigned for classes missed. **The absence(s) will not count against the student, but neither DOES IT EXCUSE the individual from knowing information missed nor from making appropriate, timely arrangements for exam/quiz makeup(s).** It is the student's responsibility to find out what was missed including a test or quiz. Failure to make proper arrangements for makeup(s) will result in a **late test fee** being assessed and points deducted (10% per day including weekends) until the test or quiz is made up.
   e. Unexcused Absences: Each student is allowed three unexcused absences. Sleeping in class = an absence. Students who carry on conversations, use cell phones, or laptops for non-class purposes during lecture distract others, and inhibit learning. **Makeup quizzes and exams will not be permitted for any unexcused absence or tardy.**
   f. Tardiness: For a mature individual, habitual, inexcusable tardiness is to be avoided. Three tardies equal one absence. **Tests and quizzes will not be given to individuals who arrive late to class**. Being tardy more than 10

minutes after class has started equals an unexcused absence for that day.

g. Late Work: The ORU catalog states that the "***privilege*** of making up assignments are between faculty and student." Thus, in this class a ***-10% per day late penalty*** will be assessed for unexcused late work. Furthermore, such assignments more than one week late will not be accepted and a zero will be assigned. .

VI. COURSE CALENDAR

Week	**Topics**	**Text**
1	Introduction	Syllabus
	Intro. to Biology	Ch 1
	Chemical Basis of Life I	Ch 2
2	Chemical Basis of Life I	Ch 2
	Chemical Basis of Life II	Ch 3
	Gen. Features of Cells	Ch 4
3	Gen. Features of Cells	Ch 4
	Membrane Struc., Syn, & Transport	Ch 5
4	**EXAM 1 (over Ch 1-5)**	
	Intro. to Energy, Enzymes & Metabolism	Ch 6
5	Cellular Respiration & Fermentation	Ch 7
	Photosynthesis	Ch 8
6	Photosynthesis	Ch 8
	EXAM 2 (over Ch 6, 7, 8)	
	Cell Communication	Ch 9
7	Multicellularity	Ch 10
	Nucleic Acid Struc., DNA Rep., & Chromo. Struc.	Ch 11
8	Nucleic Acid Struc., DNA Rep., & Chromo. Struc.	Ch 11
	Gene Expression	Ch 12
	Gene Regulation	Ch 13
9	**EXAM 3 (over Ch 9-13)**	
	Mutation, DNA Repair, & Cancer	Ch 15
	Eukaryotic Cell Cycle, Mitosis, Meiosis	Ch 16
10	Eukaryotic Cell Cycle, Mitosis, Meiosis	Ch 16
	Simple Patterns of Inheritance	Ch 17
	Genetics of Viruses and Bacteria	Ch 19
11	Genetics of Viruses and Bacteria	Ch 19
	EXAM 4 (over Ch 14, 15, 16, 18)	
12	Cells of the Nervous System	Ch 42
	Nutrition Animal Digestive Systems	Ch 46
13	Nutrition Animal Digestive Systems	Ch 46
	Circulatory Systems	Ch 48
14	Endocrine Systems	Ch 50
	Immune Systems	Ch 52
15	**EXAM 5 (over Ch 41, 45, 47, 50, 53)**	