

Wayland Baptist University
Division of Mathematics and Sciences

BIOL 1300 Life Science WBUonline Spring 2019

WAYLAND MISSION STATEMENT:

Wayland Baptist University exists to educate students in an academically challenging, learning-focused and distinctively Christian environment for professional success, lifelong learning and service to God and humankind.

Instructor:

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Plainview Campus

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CATALOG DESCRIPTION:

Life Science – A general Life Sciences course for non-science majors or minors that employs the scientific method to discover how living things are: organized, acquire materials & energy, respond to their environment, reproduce & develop, and adapt to their environment. Attention will be given to bio-ethical issues in contemporary biology.

PREREQUISITES:

none

TEXT:

Concepts of Biology - This a free open source textbook through [Openstax college](https://openstax.org/details/books/concepts-biology) (Rice University). You can view it online, on your mobile devices, download a PDF (for free), or request a hard copy for a minimal price. [<https://openstax.org/details/books/concepts-biology>]

COURSE WEBSITE:

A course website has been established on WBU's Blackboard server. Each student is REQUIRED to establish an active account for this website and to log on to Bb regularly for posted lecture notes, messages, assignments, and handouts. In addition, it is REQUIRED that each student activate their student email accounts – this is the official means of communication between faculty and students. If you require assistance in getting this done, please contact the IT department at itsupport@wbu.edu.

COURSE OUTCOME COMPETENCIES:

Upon successful completion of this course, students will be able to:

1. Explain how living organisms metabolize and self-perpetuate.
2. Describe cell structure and relate structure to function.
3. Compare and Contrast plants and animals in terms of morphology and physiology.
4. Analyze ecosystems with respect to biotic and abiotic homeostasis, populations, communities and habitat.
5. List and understand the basic classification of living organisms.

PARTICIPATION POLICY:

In accordance with university policy, attendance in this course will be documented through a student's active engagement in the classroom. Your attendance is based on on-line quizzes, discussion, assignments, essays or reports, on-line exams, and proctored exams. Your classmates will depend on you to help construct an understanding of the material in the discussion boards. It is essential that you be in the classroom several times a week to truly participate. Assignments must be submitted on time. **Any assignments accepted by the instructor after the due date will lose 10% of the grade per day (24hr period).** Submissions are time-stamped in Blackboard (discussion or assignments). **Exams and quizzes will not be reopened.** Students missing more than 25% of the classes may be dropped from the course.

- All times and due dates will be US Central Time

DISABILITY STATEMENT:

"In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291- 3765. Documentation of a disability must accompany any request for accommodations."

Elements of Success:

Life Science is made more challenging for some students because they do not recognize the level of effort necessary to succeed. Taking an on-line introductory course will require a firm commitment to learning and personal discipline in scheduling study and participation times. Although you will not be required to attend traditional lecture or laboratory sessions, you will be expected to understand through personal study the same concepts and terms required of students in the traditional lecture class. The advantage of an on-line course is the greater scheduling flexibility it affords the student, but if you are not attentive to course assignments this will probably be reflected in a lower grade for the course. So, given the nature of on-line learning and the demands of an introductory biology course, it would be wise to heed the following advice!

1. PARTICIPATE IN ALL CLASS DISCUSSIONS –

There will be many discussion topics and/or assignments posted on the course website. These are designed to help you focus on major terms and topics and to engage you in the learning process by sharing your discoveries and observations with your classmates and your professor. In order to effectively participate in on-line discussions, you will need to keep up with reading assignments. Your participation/discussion grade will be assigned based on the quality of your participation in posted discussion threads/blogs/wikis. (See rubric for details) Depending on the material being covered, you may need to respond actively and regularly several times per week. If you are not checking in regularly and making your presence/participation known by asking questions or adding something to the ongoing discussion as instructed in course materials, then you are not participating actively and your grade will reflect that.

2. DO NOT MISS DEADLINES FOR CHAPTER, LECTURE, OR PROCTORED EXAMS –

There will be several exams given during the course. Exam formats will vary. Two exam will be given in a proctored environment. You can do this onsite or remotely. **YOU MUST OBTAIN APPROVAL OF YOUR PROCTORS IN ADVANCE. Click on "services" at the top of Blackboard to view this.** MAKE UP EXAMS WILL BE GIVEN ONLY UNDER THE MOST EXTENUATING CIRCUMSTANCES.

3. READ AND STUDY ASSIGNED BOOK CHAPTERS AND UTILIZE THE SUPPLEMENTAL MATERIALS—

Even though the on-line format precludes traditional lecture presentation of course material, some lecture notes or voice over Power Point will be included. The notes will help guide your study of the textbook and related materials (i.e., readings and/or web links relevant to the topic covered). Effective preparation for lecture exams and participation in discussion sessions will require thorough attention to all assigned readings.

4. HERE IS THE BIG SECRET TO SUCCESS IN THIS COURSE –

Probably the most important hour of your effort in this course has nothing to do with biology. Before you do anything else, meticulously go through the syllabus, weekly course material folders, and schedule. Put ALL the due dates, quizzes and exams into your calendar. Set reminders for due dates well in advance of projects closing. Get familiar with all the projects and discussions and realistically plan how long it will take you to complete each assignment or discussion (some projects require many days worth of data collection, so plan accordingly).

COURSE EVALUATION AND GRADING:

The final grade in the course will be derived as follows:

- 21% Chapter quiz average. Two chapter quizzes will be dropped (including zeros).
- 15% Non-proctored “lecture exams”
- 18% **Proctored** midterm and final exam average.
- 21% Project grade average (3 projects during semester)
- 25% Discussion / participation grade

University grading system

A 90-100 B 80-89 C 70-79 D 60-69 F below 60 I incomplete W withdrawal

Exams:

Exam grades will comprise 57% of your final grade. Note: you can not pass the course by just taking the exams! A three-tiered approach will be followed to determine your exam grade.

| Type of Assessment | Grade percent | General description of each assessment |
|--------------------------|---------------|---|
| Chapter-Level Quiz | 21% | Chapter-level quizzes will not be timed and may be taken multiple times with notes and books. The two lowest chapter grades will be dropped. The remaining chapter grades will be averaged together for a Chapter-level grade. |
| *Timed Lecture Exams (3) | 15% | These exams will be comprised of 3-6 chapters of material. You may use notes and your text during the lecture exams. They will be timed, and may be taken only once. These three exams will be averaged together to attain a Lecture Exam grade. |
| Proctored Exams (2) | 18% | The midterm and final are proctored exams. These exams will consist of multiple choice, T/F, matching, labeling, short answer, and longer essay questions. No resources may be used. These two exams will be averaged to attain the proctored exam grade. |

Proctored Exam Requirements

WBUonline policy stipulates that STUDENTS must identify appropriate PROCTORS and that they MUST BE PRE-APPROVED BY WBUonline (NOT ME). Qualifications for acceptable proctors and procedures for getting them approved are posted on the WBUonline web page or by **clicking on “services” tab in Blackboard** (above the course) for details.

We do have a remote proctor service called **Examity** that uses a webcam, microphone and locked browser such as you might have on a laptop, or attached to a desktop. It and costs \$12 for the first hour and \$5 each additional hour up to four. The exam can be taken 24/7 during the available time. So you have some convenience of using your own computer and you set the time. It is video recorded and reviewed by several people. If you are interested in this service contact me.

Students MUST identify examination proctors IN ADVANCE and have them PRE-APPROVED by the THIRD WEEK of the semester.

Important Dates

| | |
|-----------|--|
| Feb -25 | Spring term begins |
| Mar 11-15 | Spring Break |
| Apr 26 | Last day to drop course w/ “W” (no tuition refund) |
| May 3 | Last day to drop course w/ “WP/WF” |
| May 18 | Last day of the term |

Class Schedule

This will give you an idea of the work and general topics during the 11 weeks. This schedule is subject to change if needed during the term. Weeks in this class, as far as course material goes, begin on Tuesdays so we can get a full weekend in a week of material.

Please refer to the detailed schedule document for actual dates for all assignments.

| Material Week (not week of the term) | Lecture topic | Reading Chapter | Notes and assignments | Due Dates |
|---|---|----------------------|---|--------------|
| Week 1 | Introduction, Atoms | 1 and 2.1 and 2.2 | SAAWOK Dependent and Independent Variables | |
| Week 2 | Biological Molecules, Cell structure, Cell transport | all of 2 | Diffusion and Osmosis | |
| | Lecture Exam 1 | | | |
| Week 3 | How Cells acquire Energy | 3 and 4 | Photosynthesis Aerobic Respiration | |
| Metabolism Project | Basal Metabolic Rate for you | | | |
| | Lecture Exam 2 | | Take it when you are ready | |
| Week 4 | Cell Cycle, Mitosis/Meiosis, Genetic terms | 6 and 7 | Cell division and Cancer | |

| Material Week (not week of the term) | Lecture topic | Reading Chapter | Notes and assignments | Due Dates |
|---|--|----------------------------|--|----------------------|
| Week 5 | Mendelian Genetics, DNA | 8 and 9 | Genetic and You | |
| Genome Project | Human Genome and Genes | | | |
| Week 6 | Proctored Midterm And Discussion on Biotechnology | | | |
| Week 7 | Transport and Maintenance | 16.3 | Heart and Respiratory | |
| Week 8 | Immune system | 17 | Immune system | |
| | Lecture exam 3 | | | |
| Week 9 | Communities, population, Biodiversity | 19, 20 | Human Population Ecology Climate Change | |
| Week 10 | Communities, population, Biodiversity | 20,21 | Same as above | |
| Ecology Project | Ecosystem analysis | | | |
| Week 11 | Human Impacts | supplements | | |
| | Proctored FINAL | | | |