

BIOLOGY 11B: Biology for Science Majors II

Spring 2020

Instructor: Ms. Smith Bush

Office Hours: Monday & Wednesday 3:00-5:00pp LFS 13; Online Friday 2:00pm-3:00pm via email.

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Lecture: Tuesday & Thursday 12:30-1:45 pm; LFS 11.

Lab: Tuesday & Thursday 2:00-4:50; LFS 11.

I. COURSE DESCRIPTION

A. Title: Biology 11B – Biology for Science Majors II

B. Prerequisite: BIOL 11A

C. Catalog Description: This course is the second-semester course of a two-semester sequence of general biology. Students will study the origins of life, the evolutionary history of biological diversity, plant form and function, animal form and function, and ecology. This course is intended for science majors and for pre-medical, pre-veterinarian, pre-dental, pre-optometry, and pre-pharmacy majors.

D. Course Outcomes

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

- A. evaluate the biological sciences through references to historical discoveries and recent contributions;**
- B. demonstrate knowledge of plant and animal taxonomies as they relate to evolutionary history;**
- C. compare and contrast functional systems of living organisms and identify how these systems work physiologically together to maintain homeostasis;**
- D. use inductive and deductive reasoning in any environmental or ecological issue;**
- E. evaluate scientific literature and current biological advances**

II. REQUIRED MATERIALS:

A. Required Texts:

Biology by Raven et al., 11th Edition, 2014 with access to the Learnsmart component of the textbook.

Biology: Laboratory Manual by Vodopich & Moore, 11th Edition 2014.

B. Required Equipment and Materials:

1. Active Learnsmart code.
2. Scantron form 886 E.

III. COURSE WORK AND EXAMS

A. Reading assignments: You are responsible for learning the material in the assigned readings regardless if it was discussed in lecture. If you have any problems understanding reading material, I encourage you to seek my assistance. It is encouraged that you read the material to be discussed for the day before the class meeting. Doing this will not only make you a more active participant in the entire learning process, it will greatly increase what you get out of the class.

B. Learnsmart assignments (10 pts. each): Each student will be required to purchase an active access code for the Learnsmart component of the textbook. I will assign a Learnsmart assignment for each chapter we cover in the class. You will have one week to complete each assignment.

C. Semester Project (100 pts.): A semester research project will be required. Students may be asked to incur the cost of photograph developing, gas and presentation materials. More on this later.

D. Field Trips: Field trips are required. Two major field trips will be required during the course. I am aware that you may have classes on the trip date so I will let you know some time in advance so that you may make the appropriate arrangements. Information and concepts discussed during these meetings are fair game on quizzes and exams. If a field trip cannot be made, prior notification is required and you will be responsible for making up the activity on your own.

E. Lecture/lab Exams: There will be 4 major exams worth 100 points each. Additionally, there will be one cumulative final exam worth 200 points. Exams will be multiple choice, short answer and essay. Exams will include information from lecture, Learnsmart, lab and your reading assignments. Additionally, lab exam material may include photographic slides or be of the practical type where questions and specimens are at various stations throughout the room. The lab portion of the exam will only be available during the scheduled exam time. Because of this fact, students are encouraged not to miss class exam days.

F. Labs (10 pts each): Laboratory work is a crucial component of this course. Do not treat laboratory material as separate material from the lecture component of the course. I have constructed this class so that the materials in these two components complement each other. Various points will be assigned for lab work. **Always bring lecture notes, textbook and lab notebook to laboratory sessions.**

I. Extra Credit: Up to 25 extra credit points will be assigned throughout the semester. ***If you have over four absences within the semester you will not be eligible for these points.***

IV. Class Disturbances: Disruptive behavior will result in removal of the student for up to 2 class meetings. Further disruptions will be handled by the college. Cell phones are not allowed to be on in the classroom during exams.

V. ATTENDANCE: You are expected to be on time for each laboratory and lecture session. Tardiness may be construed as an absence from the class. Be aware that 3 tardies = 1 absence. If you are late, it is your responsibility to see the instructor after class. This is very important because **if you miss more hours than this class meets in two weeks you will be dropped** unless your instructor has been informed of the extenuating circumstances causing your absences. Any missed lab counts for three hours absence. Attendance in this class is closely monitored due to safety issues. It is your responsibility to keep track of your absences/tardies.

VI. GRADING:

A.

90 – 100% =A, 80 – 89% =B, 70 – 79% =C, 60 – 69% =D, 59% and Below =F

At any point you can check your grades on our Canvas class site under gradebook. You are encouraged to check this site regularly and keep track of your own grades! Additionally, all handouts and class notes for our class will be available on this site.

| <u>Assignments</u> | <u>Points</u> |
|-------------------------------|---------------|
| Labs (26 @10)..... | 260 |
| Learnsmart (32 @ 10)..... | 320 |
| Exams (4 @ 100)..... | 400 |
| Final Exam (1 @ 200)..... | 200 |
| <u>Project (1 @ 100).....</u> | <u>100</u> |
| Total Points | 1280 |

B. Policy for missed exams. The lab practical portion of an exam cannot be made up due to the equipment, time, space availability, and the preparation needed to do so. You will not be able to earn these points if you need to make up an exam. It is highly recommended that you call before an absence! You have one week to make-up any missed lecture exam. After one week any missed grade may not be made up unless prior written arrangements have been made to ensure quality work and fairness to the instructor and the other students. ***Exams taken late will be docked 10% unless a medical excuse is provided.***

C. Policy for missed labs: If a lab is missed you will not be allowed to make it up. Attending the lab is mandatory. No points will be given for lab work if you were not present during the lab meeting.

VII. Other information:

A: Drops: You have until the 9th week of school to drop. If you elect to do so, be sure to drop yourself. Do not assume you have been automatically dropped. This is very important, as after the 9th week a grade must be given, by state law, whether you attend class or not.

B. Adds: If you are given an add slip, be sure to turn it into Student Services within two days of receipt. After this date, you will not be allowed to add the class with that add slip.

VIII. Academic Dishonesty :

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entire honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences. See college catalog for details.

VIII. If you have a verified need for an academic accommodation or material in alternate media (i.e. Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

VIV. Help: If you should have difficulty grasping the material presented during the course be sure to see your instructor at the first sign of trouble. Often, a few minutes can clear up many problems! If you are having trouble studying, perhaps you need a few study hints or a tutor at the Tutorial Center. Please come in for help!

Always keep in mind that this is a five-unit course. As a general rule, each hour of lecture requires two hours of additional study outside of the classroom each week. Each hour of lab requires one hour of study time, outside the laboratory each week. This equals twelve hours of study each week in order to pass this class. Do your planning accordingly.

Success comes before work only in the dictionary. Overall, I hope you have a fun semester and learn Biology along the way. Good Luck.

Biology 11B Lecture Outline

Spring 2020

| Week | Date | Topic | Chapter |
|------|------|---|---------|
| | | UNIT 1 | |
| 1 | 1/14 | The Diversity of Life | 26 |
| | 1/16 | Viruses | 27 |
| 2 | 1/21 | Prokaryotes | 28 |
| | 1/23 | Protists | 29 |
| 3 | 1/28 | Seedless Plant | 30 |
| | 1/30 | Seed Plants | 31 |
| 4 | 2/4 | Seed Plants | 31 |
| | 2/6 | Seed Plants | 31 |
| | | UNIT 2 | |
| 5 | 2/11 | Fungi | 32 |
| | 2/13 | Exam #1 Bacteria - Plants | |
| 6 | 2/18 | Presidents' Holiday | 33 |
| | 2/20 | Animal Diversity | 33 |
| 7 | 2/25 | Protostomes | 34 |
| | 2/27 | Deuterostomes | 35 |
| | | UNIT 3 | |
| 8 | 3/3 | Plant Form | 36 |
| | 3/5 | Transport in Plants | 37 |
| 9 | 3/10 | Exam #2 Animals & Fungi | |
| | 3/12 | Sensory Systems in Plants (<i>Last day to drop</i>) | 40 |
| 10 | 3/17 | Plant Reproduction | 41 |
| | | UNIT 4 | |
| 11 | 3/19 | Animal Body | 42 |
| | 3/24 | Nervous System | 43 |
| | 3/26 | Nervous System cont. | |
| 12 | 3/31 | Exam #3 Plant Anatomy & Physiology | |
| | 4/2 | Musculoskeletal System | 46 |
| | 4/7 | Spring Break | |
| | 4/9 | | |
| 13 | 4/14 | Respiratory System | 48 |
| | 4/16 | Circulatory System | 49 |
| 14 | 4/21 | Digestive System | 47 |
| | | UNIT 5 | |

| | | | |
|----|-------------|--|----|
| | 4/24 | Monterey Bay Trip | |
| 15 | 4/28 | Ecology of Individuals & Populations | 55 |
| | 4/30 | Exam #3 Animal Anatomy & Physiology | |
| 16 | 5/5 | Community Ecology | 56 |
| | 5/7 | Ecosystems | 57 |
| 17 | 5/12 | The Biosphere | 58 |
| | 5/14 | Conservation Biology | 59 |
| 18 | 5/19 | Final Exam - (Cummulative) Monday 12:30 | |

**Biology 11B Laboratory Schedule
Spring 2020**

Field trip schedule:

Monterey Bay Aquarium: 4/24/20

| Week | Date | Topic | Exercise |
|-------------|--------------|--|-----------------|
| 1 | 1/14 1/16 | Lab Safety & Microscopes Bacteria | 24 |
| 2 | 1/21 1/23 | Algae Protozoa & Slime Molds | 25 26 |
| 3 | 1/28 1/30 | Non-vascular Plants Seedless Vascular Plants | 28 29 |
| 4 | 2/4 2/6 | Gymnosperms Angiosperms | 30 31 |
| 5 | 2/11 2/13 | Fungi Exam #1 Bacteria - Plants | |
| 6 | 2/18 2/20 | Porifera & Cnideria Platyhelminthes & Nematoda | 36 37 |
| 7 | 2/25 2/27 | Mollusca & Annelida Arthropoda | 38 39 |
| 8 | 3/3 3/5 | Echinoderm & Chordata Plant Anatomy | 40 32 |
| 9 | 3/10 3/12 | Exam #2 Animals & Fungi Plant Physiology I | 33 |

| | | | |
|----|---------------------|---|----------|
| 10 | 3/17 3/19 | Plant Physiology II Animal Tissues | 34 41 |
| 11 | 3/24 3/26 | Sensory Muscle System | 46 42 |
| 12 | 3/31 4/2 | Exam #3 Plant Anatomy/Physiology Skeletal System | 43 |
| | 4/7 4/9 | Spring Break | |
| 13 | 4/14 4/16 | Respiratory System Circulatory System | 45 45 |
| 14 | 4/21 4/24 | Virtual Frog Monterey Bay Trip | |
| 15 | 4/28 4/30 | No lab due to fieldtrip Exam #4 Animal Anatomy & Physiology | |
| 16 | 5/5 5/7 | Demography Lab River Walk | |
| 17 | 5/12 5/14 | Carbon Footprint Lab River Lab | |