Biology 20

Semester 1 (2019/20) Course Outline

 

**Instructor**: Mr. Scott Allard

**Email**: sallard@rockyview.ab.ca

**Course Objectives:**

Biology 20 is a course where students will develop an interest in science by exploring and understanding the biological principles behind everyday events and commonplace technology. Students will collaborate and use scientific inquiry to seek and apply evidence to investigations and problems while modeling safe laboratory procedures. This course will also allow students to discover how biological applications impact society. Ultimately, students will be provided with opportunities to explore, analyze and appreciate the interrelationships among science, technology, society and the environment to develop an understanding that will affect their personal lives, careers, and futures.

**Textbook**:

Ritter, Bob, K L. Burley, and Douglas Fraser. *Biology: Alberta 20-30*. Toronto: Nelson, 2007.

**Assessment Breakdown:**

The student’s grade for Biology 20 will be calculated based on their achievement in Course Work, a Term Project, and a Final Exam. The assessment breakdown is illustrated below:

|  |  |  |
| --- | --- | --- |
| **Assessment** |  | **Overall Course Weighting** |
| **Course Work** | **Relative Weighting** | **70%** |
| Unit Exams | 40% |
| Assignments/Quizzes | 30% |
| **Final Exam** |  | **30%** |
| **Total** |  | **100%** |

**Students will receive a minimum of 5 days notice prior to the administration of a Unit Exam**

**Term Project**

Students will be required to complete a term project this semester that will be completed once the course work has commenced. It will be a group project that challenges students to work together and apply their knowledge from Biology 20.

**Final Exam**

The Final Exam for Biology 20 will consist of Multiple Choice and Long Answer style questions. It will be worth **30% of the Overall mark** for Biology 20.

**Topics Studied:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Topic** | **Time** | **Date Completed\*** |
| Unit A | Energy and Matter Exchange in the Biosphere* *Explain the constant flow of energy through the biosphere and ecosystems*
* *Explain the cycling of matter through the biosphere*
* *Explain the balance of energy and matter exchange in the biosphere, as open systems, and explain how this maintains equilibrium*
 | 13Days | May 22 |
| Unit B | Ecosystems and Population Change* *Explain that the biosphere is composed of ecosystems, each with distinctive biotic and abiotic characteristics*
* *Explain the mechanisms involved in the change of populations over time*
 | 14 Days | June 14 |
| Unit C | Photosynthesis and Cellular Respiration* *Relate photosynthesis to storage of energy in organic compounds*
* *Explain the role of cellular respiration in releasing potential energy from organic compounds*
 | 16 Days | Feb. 26 |
| Unit D | Human Systems* *Explain how the human digestive and respiratory systems exchange energy and matter within the environment*
* *Explain the role of the circulatory and defense systems in maintaining an internal equilibrium*
* *Explain the role of the excretory system in maintaining an internal equilibrium in humans through the exchange of energy and matter with the environment*
* *Explain the role of the motor system in the function of other body systems*
 | 40 Days | May 1 |

* All dates are subject to change. Any remaining time will be dedicated to in-class time for the Term Project and review for the Final Exam.

**EXPECTATIONS**

School is a place where all students have the right to learn. Students must be responsible not only for their own learning, but they must also be aware that they can have a profound effect on the learning of others.

1. Students are expected to show ***RESPECT*** for teachers, for the classroom and its contents, and for one another. Behavior that disrupts the learning of others is unacceptable and will be handled accordingly.
2. Arriving to class on time and prepared is critical. Please consult the list of required materials on the other side of this outline.
3. Assignments and homework are expected to be completed on time. Late assignments will have **50% deducted.**

**Mr. Allard’s Late Policy Rational:**

Late homework will always be accepted but with a ***deduction of 50%.*** Therefore, it is in your best interest to ensure your work is completed on time. A late assignment is defined as not handed in at the beginning of the class that it is due.

1. I return assignments ***back fast***, usually the following day, so that the students can see how they are doing on the concept that the assignment was designed to reinforce. I then incorporate going over the assignment and its correct answers as part of review so that we can build on that concept in the next lesson. By not having the assignment done the student will not have the necessary understanding to comprehend the next concept fully. By forcing the assignment in I am able to help them reinforce ideas and skills.

**B.** Most of my quizzes that occur at the end of the week come from assignments or homework and my policy does force students to indirectly study more than they would if there were no policy.

**C.** I always provide enough time to complete the assignment. If the student has some outstanding reason why the assignment could not be completed in time, I ask them to be advocates for themselves and explain their situation. If it seems valid then I provide them with an extension or defer the late mark deduction.

 **D.** The strongest reason why I have such a strong late policy is it is a true deterrent for copying assignments. Many students just wait for the teacher to return the assignments back to the class and then copy the answers of one of their peers. As this is very difficult to catch and is unfair to those who do their homework on their own and on time, I have come up with this very effective late policy.

1. Students are encouraged to ask for assistance from the teacher when they are experiencing difficulties. I am eager to spend time during lunch periods, before school, or after school with students who wish to obtain help on assignments, study advice, clarification of concepts, or further inquiry.
2. The science classroom must remain a safe and comfortable environment to learn in. Students will be expected to follow all safety procedures during class and laboratory activities. It is expected that students will help maintain a clean and orderly work environment as well.
3. Students are expected to follow all guidelines established in the Bow Valley High School Student Handbook.

**ABSENCE PROCEDURES**

Students that expect to be absent for long periods of time should consult the teacher in advance.

1. When you miss a regular class: **You are responsible** for obtaining missed work and assignments from classmates. Have **at least** 2 classmates that you can phone to get information from.
2. When you miss a quiz or graded activity: If the absence is excused, the assignment will not be counted and your mark will be unaffected. If the absence is unexcused, you will receive a mark of zero for the activity. Remember that you are still responsible for understanding the content of a missed lab or demonstration.
3. When you miss a unit test: If the absence is excused, you will be required to write the exam at an alternate time. This may include out of class time such as lunch hours. If the absence is unexcused, you will receive a mark of zero for the exam.

**EXAMS AND APPEALS**

Students and parents are entitled to appeal grades. Please consult the student handbook for appeal procedures.

Student Signature:

Please keep this outline at the front of your binder for easy reference. Have a great term!

Parent/Guardian Signature:

Please feel free to contact me directly at 932-9005.

REQUIRED MATERIALS:

1. 3-ring binder (2” is usually best suited for the class)
2. Duo tang folder or small binder (for portfolio)
3. Pencil &/or pen
4. Scientific calculator (graphing calculators are not required, but some students may find them beneficial)
5. Loose leaf paper
6. Textbook (to be provided at the beginning of the semester)

7. Laptop Computer

**Moodle and Power School**

The course outline and given assignments and there due dates will be posted on my **Moodle.** It is imperative that you access the Moodle on a regular basis, as it is the only way I use to communicate with you. Power School should also be access on a regular basis, as this allows you to see you current standing in the course, as well as it allows you to see what is missing, etc.