**Biology Syllabus 2020-21**

**Dr. Hahn**

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**COURSE DESCRIPTION**

Biology is the study of life and the various factors that impact living things. In this course you will investigate some of the major principles of molecular and cellular biology and how the various levels of organization work together to control the functioning of various organisms in all the kingdoms of living things. Evolution is the guiding principle that will be referenced throughout the course and will be used as a framework to which all other concepts in biology connect. You will learn how to think critically by designing experiments, reading scientific literature, and using data as evidence to explain your conclusions. There is also an emphasis on improving study skills in this class, the learning of which can aid you in all your classes at MBS and in your future studies.

**COURSE MEETINGS**

**This course meets either 2 or 3 times in a regular five day week.**

**In person classes will meet in MSC 205**

**Virtual classes can be accessed at** [**https://zoom.us/my/dr.hahn**](https://zoom.us/my/dr.hahn)

**PROPOSED TOPICS**

Uncertainty of Science

Characteristics of Living Things

Biological Molecules

Classification of Living Things

Molecular Genetics

Mendelian Genetics

Cells and Organelles

Cellular Energy (Cellular Respiration and Photosynthesis)

Cellular Reproduction

Ecology

The skills that underlie the study of these topics on which you will gain further competency include critical thinking, problem-solving, lab techniques, evidence-based reasoning, collaboration, and communication.

**TEXTBOOK**

Good news: your textbook for this class is available for free online! Your book is available in web view and PDF for free. If you prefer, you can also get a print version at a very low cost. You can also choose to purchase on iBooks or get a print version from OpenStax on Amazon.com. Though you can use whichever format(s) you want, the web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.)

Concepts of Biology from OpenStax, Print ISBN 1938168119, Digital ISBN 1947172034,

[www.openstax.org/details/concepts-biology](http://www.openstax.org/details/concepts-biology)

**SUPPLY LIST**

* Tablet or laptop (use of these items is encouraged during class; if they become distracting those instances will be dealt with on an individual basis; calculators will be the only devices allowed to be used during quizzes and tests unless otherwise agreed upon in advance)
* Headphones that will connect to your device
* A notebook or loose leaf paper in your binder
* Binder or folder to store handouts, quizzes, etc
* Scientific calculator

**COURSE WEBSITES**

**There are three Google applications associated with this and all courses at MBS.**

* **The Google Site is the same for all Biology sections. We will use it extensively throughout the year and it is highly suggested that you bookmark it in your browser.** [**https://sites.google.com/mbs.net/hahn/biology**](https://sites.google.com/mbs.net/hahn/biology)
* **Each section of the class has its own Google Classroom and associated Google Calendar.**
* **Assignments will be posted to Google Calendar, but you are expected to check Classroom daily for homework assignments, important announcements, and due dates for both graded and ungraded assignments.**
* **If you are absent it is your responsibility to locate and access the documents and assignments from the course site.**
* **Solutions to some activities will be posted after the work is discussed in class and it is your responsibility to check your work.**
* **Dr. Hahn’s schedule is posted to the course site and you should use it in order to figure out when your schedule has a mutual time free if you need extended time on tests.**

**GRADING POLICY**

Detailed grading guidelines and due dates will accompany each graded assessment. You will be graded using a weighted system. (See table below for the breakdown of percentages.)

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| --- | --- |
| **Type of Assessment** | **Percent of Total** |
| Individual Assignments and Participation | 20% |
| Lab Work and Reports | 20% |
| Projects | 20% |
| Quizzes | 20% |
| Tests | 20% |

The Earned Honors distinction is possible in this course. General expectations for both Standard and Honors students are included on the Google Site and linked [here](https://docs.google.com/document/d/1U8oCllIeGdRF6ZcxZTz_pofTQ_6_OlrfVGO-4J9RVZo/edit?usp=sharing). The minutiae of what it takes to achieve the distinction are detailed in the Learning Goals that will be supplied for each unit and opportunities will be explained and provided on each graded assessment.

**ASSESSMENT POLICIES**

* If you are going to be absent on the day of a test or quiz, let Dr. Hahn know in advance to set a time to take it either before you leave or within a week after your return.
* Missed tests and quizzes will be offered (and lab times may be offered) in cases of absence. You are expected to communicate with Dr. Hahn immediately upon return to school to schedule a time to take the assessment. All assessments need to be completed within a week of your return in order to prevent disruption to the flow of the concepts.
* You are responsible for providing your own scientific calculator, if necessary, for quizzes and tests. Phones are not an acceptable substitute.
* Quizzes will be given over the course of the year to check for mastery of skills. Graded closed-notes quizzes will be announced in advance. Graded open-note quizzes to check for understanding on homework may not be announced in advance.
* Quiz corrections may be available during the course of the year. More details will be given closer to the first quiz date.
* You can do corrections on tests only if your original score is below 80%. More details will be given nearer to the first test date.
* Violations of academic integrity on any assessment are unacceptable and will result in a zero on the work for all parties involved. Offenses will also be reported to the appropriate parties. (See the MBS Academic Honesty Guide for details.)
* If you have accommodations that include extended time and/or an alternative test site on in-class assessments, please communicate with Dr. Hahn in order to arrange the logistics at least one class period in advance.

**INDIVIDUAL WORK EXPECTATIONS**

* If you misplace a handout or are absent for a class, you are responsible for obtaining assignments from the course site
* Many homework assignments will not be graded for correctness, but they will be checked regularly. Trends of incompleteness will be reported via PCFs and may affect the Individual Assignments and Participation portion of the grade.
* All assignments (graded and ungraded) are due at the beginning of the class unless otherwise specified.

**LAB EXPECTATIONS**

* Many labs will be handed out in advance and will involve pre-lab assignments. If it is handed out in advance, you are required to read through the entire lab and complete the pre-lab BEFORE coming to class on lab day. The pre-labs will be checked at the beginning of the lab and a point will be deducted from the final lab grade if the pre-lab is not completed on time.
* If a lab is not distributed in class, you misplace your copy, or you are absent on the day it is handed out, you are responsible for obtaining a copy from the course site, reading through the lab, and completing the pre-lab BEFORE coming to class on lab day.
* Failure to clean up your station after the lab may result in a point deduction (the amount of which is based on the mess left behind) on the lab assignment for all members of the lab group.
* Failure to practice proper lab safety at all times may result in a point deduction (the amount of which is based on the severity of the infraction) on the lab assignment.
* Occasionally, you will be required to submit a formal lab report. The format for these will be discussed in more detail when appropriate.

**LATE POLICY**

* If there are extenuating circumstances as to why your assignment cannot be completed on time, it is your responsibility to communicate with Dr. Hahn before the assignment is due in order to discuss extensions or modified penalties.
* Any assessment graded for accuracy, not completion, will lose 10% for each school day (M-F, not including holidays) that it is late, for a maximum loss of up to 40% of the total. Assessments marked for completion cannot be turned in late.
* Graded assessments that are more than two weeks late will not be accepted unless you speak to Dr. Hahn within the two week window.

**ACKNOWLEDGEMENTS AND WORKS CITED**

The practice of science is a collaborative endeavor, so our classroom will mimic this collaboration in several ways:

* You are encouraged to work together to discuss homework, labs and class work, however, please remember that you are each responsible for understanding the material on your own. Therefore, homework problems and lab write ups should always be completed individually, even if you have discussed the question with fellow students.
* Though your data will be identical to your partners’ data, all calculations, graphs, analysis and discussion must be your own. Please do not hesitate to help or seek help from fellow classmates, but nevercopy the work of others or allow your own work to be copied.
* Acknowledge those you work with when completing all assignments. This includes lab partners, tutors, and collaborators in your own and other classes. If you did not collaborate or get help from anyone, you need to write “none” in the acknowledgements section. Failure to include acknowledgements will result in a deduction of points on assignments. (Please see the “Academic Integrity Guidelines” in the student handbook for more information.)
* The different sections of Dr. Hahn’s biology classes will track very closely to each other, but may differ from those of the other instructors.
* Do NOT use the work from students who took the course previously - - this includes tests, quizzes, labs, notes, etc. Using those materials is an integrity infraction and will be treated as such.
* Each lab and report needs to have a works cited using an established formatting citation (e.g. APA, MLA). Citations should be provided for all outside references on allassignments that call for them.
* Group members may earn different final points on a shared project based on level of participation.
* Dr. Hahn is available for drop-ins during collaboration times and during lunch times (if arranged in advance).

**ACKNOWLEDGEMENTS**

Policies in this syllabus were created in collaboration with Ms. Kealy and Ms. Popielski.