



COURSE SYLLABUS

BIO 100 WB - General Biological Science Self-Paced Degree Program

Web-Based: Online classroom located at uiulearn.uiu.edu

Instructor Information

Instructor Name: Dr. Rebecca Schmidt

UIU Faculty Email: schmidtr@uiu.edu

Telephone number: 563-425-5905

Availability: Email is the best way to reach me as I check it frequently. I can also be reached by phone between 8am and 5pm most weekdays. Leave a message, and I will return your email or phone call within 24 hours.

If you need to contact Upper Iowa University, please call the toll free number (800) 553-4150 or email selfpaced@uiu.edu.

Course Description

Semester Credits: 3 semester credits

Catalog Course Description:

This course presents the basic concepts of biology; it is intended for non-science majors. Recommended to satisfy the general education requirement for science.

Prerequisites: There are no pre-requisites for this course.

Credit Hours: 3

As a requirement of HLC Accreditation, all UIU courses, regardless of meeting schedule or instructional mode, follow the Federal Credit Hour Definition. As such, each credit hour earned at UIU is equivalent to a minimum of 45 hours of student engagement.

For more information on how specific instructional modes meet this requirement, please see *UIU's Policy Guidelines for Instructional Time Expectations*: [UIU Policies](#).

Course Materials

It is the student's responsibility to make sure she/he has access to all required course materials by the start of the session.

Required Textbooks

Hoefnagels, M. (2018) *Biology: Concepts and investigations (4th ed.)*. New York, NY: McGraw-Hill. ISBN: 9780078024207 (Hardcover)



Biology: Concepts and Investigations

Author: Hoefnagels, Marielle Edition: 4TH 18

ISBN 13: 978-0-07-802420-7

ISBN 10: 0-07-802420-X

MBS Direct SKU #: 1884861

Publisher: McGraw-Hill Publishing Company

OR

ebook Option: ISBN 9781260943498 Digital copy of the version listed above.

Required Resources: None

Recommended Resources: None

Ordering Textbooks

Purchase your textbook through the online university bookstore, [MBS Direct](#), or by phone at (800) 325-3252.

Course Objectives

1. Students will be able to describe living things at the chemical and cellular level.
2. Students will be able to identify parts of and apply the scientific method.
3. Students will be able to describe the transmission of energy through living systems.
4. Students will be able to solve basic problems using Mendelian genetics.
5. Students will describe the mechanisms of DNA replication, transcription, and translation.
6. Students will be able to explain the requirements and results of natural selection.
7. Students will be able to describe the characteristics of major phylogenetic groups.

Program Student Learning Outcomes

This course is assessed for student learning outcomes as part of the General Education Program (see below). It is not assessed for student learning outcomes in other programs.

General Education Task

Task Statement

The General Education Task for the Natural Sciences: A student will accomplish this task either in each of two separate scientific disciplines or in sequence within a single scientific discipline. The tasks may be accomplished either as laboratory exercises or as assignments containing a series of questions involving application to a particular scenario or scenarios within a specific scientific discipline. A student must complete all the objectives outlined below, in one or more assignments, for each task.

The student will demonstrate critical thinking in the context of the natural sciences. Given a problem in the natural sciences, the student will demonstrate an appropriate scientific approach by accomplishing all of the following:

- a) identify the problem or type of problem,
- b) choose an approach to solve the problem;
- c) reach a logical conclusion;
- d) explain how the conclusion is consistent with the data and principles;
- e) describe how the method, process, or solution could be applicable to a new situation.

Task Assignment

In this course, you will practice and apply the scientific method to investigate biological problems. You will first perform each of these four elements of the scientific method via four unit assignments. In Unit 4, you will combine the skills you have practiced and apply all four elements of the scientific method to one problem as the Gen Ed Task Assignment. You will find the details for each of these assignments in the Unit instructions.

Course Requirements and Grading Criteria

Course Requirements:

Participation

Student Introductions (Student Autobiography)

Student Introductions is the first discussion item. Since we may never have the opportunity to meet face to face, please introduce yourselves to me.

Assignments

Scientific Method General Education Task Assignments

In this course, you will practice and apply the scientific method to investigate biological problems. You will first perform each element of the scientific method over the course of four assignments. (These elements are described in the section above, under "General Education Task.") These assignments are designed to correlate with unit learning objectives and provide an opportunity to practice each stage of the scientific method. Detailed instructions are posted by Unit in the online classroom.

Gen Ed Task Project

In Unit 6, you will combine the skills you have practiced in a project relating to Unit 6 learning objectives). You will apply all elements of the scientific method task to one problem. Instructions are posted in Unit 6.

Application Assignments

The eight application assignments are meant to bring the content of each unit into a context relatable to your life. Application assignments may require you to watch brief online videos, visit informational or interactive websites, perform online virtual labs, or seek out examples or further information with web-based research. Each application assignment allows you to synthesize the topics and learning objectives covered in that unit. Detailed instructions are posted by Unit.

Short Answer Assignments

There are five short answer assignments. These will be assigned in Units 1, 3, 5, 7, and 8. Each short answer assignment is worth 20 points. Detailed instructions will be available for each assignment. The content assignments will be submitted to the appropriate submission folder and will utilize Turnitin.

Unit Learning Reflections

The Unit Learning Reflections will provide you with an opportunity to reflect on your readings from the textbook and your personal learning experience with the other learning activities to help you maximize your personal investment in the course. Detailed instructions are posted by Unit.

Quizzes

There will be quizzes in Unit 2, Unit 4, and Unit 6, each worth 25 points. The quiz in Unit 2 covers Chapter 1 and Chapter 2.1-2.4 and satisfies Course Objectives 1 and 2. The quiz in Unit 4 covers Chapter 6, satisfying Course Objectives 1 and 3. The quiz in Unit 6 covers Chapters 7 and 8, satisfying Course Objective 5. The quizzes consist of six multiple-choice questions (worth 2 points each) and a short answer question worth 3 points. These will be timed at 30 minutes.

Midterm Examination

The midterm exam is in Unit 4 and covers topics from Units 1 through 4. The midterm will consist of 35 multiple-choice questions (2 points each) and 2 short answer questions (5 points each). The exam will be timed at 75 minutes. The midterm exam in Unit 4 satisfies course objectives 1, 2, 3, and 7. The midterm covers chapters 1 through 6.

Final Assessment

The final exam is in Unit 8 and covers topics from Unit 1 through 8. The final exam consists of 35 multiple-choice questions (2 points each) and 2 short answer questions (5 points each). The exam will be timed at 75 minutes. The final exam will be approximately 75% new material and 25% cumulative material. The final exam in Unit 8 satisfies course objectives 1-7. The final covers chapters 1 through 12 and 17-21.

Grading Criteria

The course letter grade will be based on the following grading criteria: The course letter grade will be based on the following grading criteria. There will be four content assignments, four reflection assignments, four general education task practice assignments, a final general education task assignment, and two exams. Rubrics describing expectations and grading criteria are provided at the end of this packet.

Activity	Points
Student Introduction (Autobiography)	10
5 Short Answer Assignments (20 points each)	100
3 Quizzes (25 points each)	75
8 Application Assignments, 30 points each	240
8 Reflections, 10 points each	80
Midterm Exam	110
4 Gen Ed Task Assignments, 30 points each	120
Gen Ed Task Project	125
Final Exam	140
Total	1000

Grading Scale

This course will use the following scale:

Letter Grade	Percent	Points
A	93-100%	930 – 1000
A- (minus)	90-92%	900 – 929
B+	87-89%	870 – 899
B	83-86%	830 – 869
B- (minus)	80-82%	800 – 829
C+	77-79%	770 – 799
C	73-76%	730 – 769
C- (minus)	70-72%	700 – 729
D+	67-69%	670 – 699

Letter Grade	Percent	Points
D	63-66%	630 – 669
D- (minus)	60-62%	600 – 629
F	0-59%	0 – 599

GRADES AND FEEDBACK

Time for returning emails and phone calls is usually within 24 hours. I will post anticipated delays in grading via announcement as needed. Feedback will be provided through rubric score and/or comments per the assignment submission.

Turnitin

Turnitin is a tool for both teachers and students to ensure academic integrity by checking the originality of submitted papers to avoid issues of plagiarism and academic dishonesty. Students should be aware that Turnitin scans submitted work and compares it to ALL other sources on file. All assignments submitted to the assignments folder are scanned by Turnitin.

Withdrawal (W)

For Self-Paced Degree Program enrollments: if a student wishes to withdraw prior to the last day of the enrollment period, complete a withdrawal form found on myUIU or contact an academic advisor for assistance. A student-initiated withdrawal can occur at any time within the six-month enrollment period and a grade of W is applied.

REFUND POLICY

- Upon receiving a written or phone request for withdrawal, using the date of the request, a refund of tuition is made according to the guidelines listed below.
- On or before the first day of the enrollment period * 100%
- After the first lesson through 10% of the enrollment period 90%
- After the first 10% through the first 25% of the enrollment period 50%
- After the first 25% of the enrollment period 0%
- *An enrollment period is defined as a number of units to be submitted during a six-month period of time. The refund/repayments shall be calculated using the percentages noted above. The percentages are determined by the number of units/exams completed as compared to the total number of units/exams required for the course.
- Students who withdraw from a course prior to submitting the first unit or who are administratively withdrawn for nonsubmission of units will be charged an administrative fee.

Administrative Withdrawal (AW)

Self-Paced Degree Program Administrative Withdrawal A grade of AW (administrative withdrawal) is recorded for any course from which a student is administratively withdrawn. At least one complete assignment/unit must be received and verified by the instructor within the first 60 days of the enrollment period or the student will be administratively withdrawn from the course. Students who are administratively withdrawn for non-submission of assignments, will be charged an administrative fee of \$99. Non-Attendance (NA): Never attended grades are not applicable to the Self-Paced Degree Program.

Incomplete/Extension

Students who are enrolled in self-paced courses will be allowed to request one four-month extension and receive an 'I' (incomplete grade) at the end of their original six month enrollment period if:

- A minimum of one assignment has been received for grading per guidelines **AND**
- All course units and exams are not completed and submitted **OR**
- A course withdrawal has not been initiated

Incomplete grade details:

- When the extension is granted and an incomplete grade is issued, the student will receive a four-month enrollment period to complete the course.
- Students do not have the option to withdraw from a course after the initial six-month enrollment period.
- An 'I' grade posted to the student's official record will be replaced with a final letter grade; however, the incomplete will remain on the official transcript as a notation.
- Note: Students are not reported as enrolled during the incomplete/extension period and are not eligible for student loan deferment.
- The fee for a self-paced extension is \$99 per course. To request an extension, the "Self-Paced Course Extension Request" form must be completed and returned to the Self-Paced department. The form can be found at <https://my.uiu.edu> (Academics Tab under Student Forms). The request for an extension and payment must be submitted no earlier than one month before the end of the course and no later than a week before the end of the course. Please see page 40 of the Academic Catalog for more information regarding the Incomplete/Extension guidelines. **If you do not request and pay for an extension, a final grade will be issued for the course based on coursework received by the original course end date.**
- If you do not wish to use the extension option and will not be able to finish your Self-Paced class by the original six-month end date, you can submit a course withdrawal form before the course end date if you wish to withdraw from the course. The amount of

the course refund is determined by the number of lessons submitted as compared to the total due.

Course Schedule

Course units and exams should be completed in the order they are shown below. Completing units/exams out of sequence could result in a loss of points and a reduced grade.

Units	Topics of Study	Activities	Assessments
Unit 1	Chapter 1: Scientific Method & Characteristics of Life Chapter 2: The Chemistry of Life <i>Course objectives: 1, 2</i>	Course Syllabus 'About the Instructor' Student Introductions Read: Chapter 1, 2.1-2.4	Student Introductions
			Reflection – Uses Turnitin
		Watch video, Perform virtual lab, Visit website Visit website	Application Assignment: Water Virtual Lab – Uses Turnitin
			Short Answer Assignment 1
			Gen Ed Task 1: Are nanobacteria alive? – Uses Turnitin
Unit 2	Chapter 2: (Organic biomolecules) Chapter 3: Cells <i>Course objective: 1</i>	Read: Chapter. 2.5, & 3 (See Chapter 16 for virus reference) Choose a Nutrition label of interest	Reflection – Uses Turnitin
			Application Assignment: Nutrition Label Analysis – Uses Turnitin
		Visit website	Quiz 1
			Gen Ed Task 2: Cell-based Pathogen – Uses Turnitin
Unit 3	Chapter 4: The energy of Life, Enzymes	Read: Chapter 4 & 5	Reflection – Uses Turnitin
		Watch video, Web research	Application Assignment: Household Enzymes – Uses Turnitin

	Chapter 5: Photosynthesis <i>Course objectives: 3,1</i>	Review Chapter. 1.3	Short Answer Assignment 2
			Gen Ed Task 3: Photosynthesis Experiments – Uses Turnitin
Unit 4	Chapter 6: Cell Respiration and Metabolism <i>Course objectives: 3,1</i>	Read: Chapter 6	Reflection – Uses Turnitin
		Read Summary	Application Assignment: ATP and Metabolism – Uses Turnitin
		Review Chapter 1-6	Quiz 2
			Midterm Exam
Unit 5	Chapter 7: DNA structure, Gene function	Read: Chapter 7.1-7.5, 7.7, & Chapter 8.1-8.6 (Chapter 11 optional)	Reflection – Uses Turnitin
	Chapter 8: DNA replication, Cell division	Visit website, watch 2 videos, (See Chapter 11 for reference)	Application Assignment: Genetic Biotechnology – Uses Turnitin
	Chapter 11: Biotechnology (enrichment) <i>Course objectives: 5, 1</i>	Reference Chapter 8	Short Answer Assignment 3
			Gen Ed Task 4: Mitosis, Cell division, and Cancer – Uses Turnitin
Unit 6	Chapter 9: Sexual Reproduction and Meiosis	Read: Chapter 9.1-9.6, 9.8, 10.1-10.5, Chapter 10.7-10.8	Reflection – Uses Turnitin
	Chapter 10: Genetics <i>Course objectives: 4,5,6</i>	Read Summary, Reference Chapter 10	Application Assignment: Genetic Counseling – Uses Turnitin
		Review Chapter 2, 3, 4, 6 if necessary	Quiz 3
			Gen Ed Task Project: Environmental Stress and Sexual vs Asexual Reproduction – Uses Turnitin
Unit 7	Chapter 12: Evolution	Read: Chapter 12, 17 & 18	Reflection – uses Turnitin

	Chapter 17: Bacteria and Archaea	Web research, watch video	Application Assignment: Antibiotic Resistance in Bacteria – Uses Turnitin
	Chapter 18: Protists <i>Course objectives: 6, 7</i>	Gen Ed task continued	Short Answer Assignment 4
			Gen Ed Task Project: Environmental Stress and Sexual vs Asexual Reproduction – Uses Turnitin
Unit 8	Chapter 19: Plants	Read: Chapter 19, 20 & 21	Reflection – Uses Turnitin
	Chapter 20: Fungi Chapter 21: Animals <i>Course objectives: 7</i>	Web research, visit 2 websites	Application—Applied Biodiversity – Uses Turnitin
		Review Chapter. 7, 8, 9, 10, 12, 17, 18, 19, 20, 21	Short Answer Assignment 5
			Final Exam

Course Expectations

Email

Upper Iowa University employees and students are issued an UIU email account. University email communications will only be sent to UIU email address. Faculty and staff are not obligated to respond to students using non-UIU email accounts.

Technology Requirements

Access to a reliable up-to-date computer, updated virus protection, and an Internet connection to access course materials and complete course activities.

Note: You are responsible for ensuring that you have a reliable up-to-date computer, updated virus protection, and Internet connection to access the course materials and complete course activities. You need to make alternate arrangements in case of unexpected computer and Internet problems. Upper Iowa University Page 3 of 8 Backup: Remember to regularly back up course files to avoid data loss in the event of hardware failure or user error.

Professional Writing and Speaking Guidelines

Communications in class and online should follow the Student Conduct and Discipline, Respect for the University Environment, and Code of Student Responsibility in the [Student](#)

[Handbook](#) (pg. 20 and 21). Respect the opinions of others using appropriate language and communications.

University Policies

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Academic Accommodations

It is the policy of Upper Iowa University to ensure equal access to educational and co-curricular activities to students with disabilities as mandated by the Americans with Disabilities Act Amendments Act (ADAAA) and Section 504 of the Rehabilitation Act of 1973. A student seeking accommodations should contact the Director of Disability Services (DDS) as early in the session as possible. In order to receive accommodations, students must disclose their disability to the DDS by completing a *Voluntary Disclosure Form*, as well as providing appropriate documentation. The *Voluntary Disclosure Form* is available in the DDS office or online at [Disability Services](#). Students will be given a *Request for Accommodations Contract* during their initial appointment with the DDS. **This appointment will be in person for Fayette campus students and over the phone for center, online, and self-paced students.** It is the student's responsibility to provide the instructors with a copy of the *Request*

for Accommodations Contract (for Center or online students, these contracts are emailed out to instructors by the DDS for the student). Additionally, students should work cooperatively with their instructors throughout the session to make sure that appropriate accommodations are being made. You can contact the DDS at (563) 425-5949, disabilityservices@uii.edu, or stop by the office in the Student Center, Office of Student Life, Room 229.

Academic Misconduct Policy

Cheating, academic dishonesty, and plagiarism constitute a violation of the offender's own integrity, as well as the integrity of the entire University; they will not be tolerated. Violators will receive sanctions based on the level of academic misconduct.

Cheating includes, but is not limited to:

- The use of unauthorized books notes or other sources in the giving or securing of help in an examination or other course assignments.
- The copying of other students' work or allowing others to copy your work. The submission of work that is not your own or allowing others to submit your work as theirs.
- The submission of the same work for two or more classes without the approval of instructors involved.

Academic dishonesty includes, but is not limited to:

- Sharing academic materials knowing they will be used inappropriately.
- Accessing another person's work without permission.
- Providing false or incomplete information on an academic document.
- Changing student records without approval.
- Obtaining and using texts or other materials intended for instructor use only.

Plagiarism includes, but is not limited to:

- The presentation of another's published or unpublished work as one's own.
- Taking words or ideas of another and either copying them or paraphrasing them without proper citation of the source.
- Using charts, graphs, statistics or tables without proper citation.

Levels of Academic Misconduct and Sanctions

The faculty member teaching the course has the primary responsibility for resolving allegations of academic dishonesty, though egregious violations will be resolved by the School administration, the Academic Misconduct Board, or some combination thereof. The final decision on the level of a violation rests with the Academic Misconduct Board. Options for resolving an alleged case of academic dishonesty range from dismissing the allegation with no negative sanction to being expelled from the university ([Academic Misconduct Policy: Table 1](#)). A negative sanction is defined as an action taken by the faculty member that affects the

student's grade for the assignment or his or her cumulative grade for the course. Anytime academic misconduct is detected, the procedures outlined in [Academic Misconduct Policy: Table 1](#) should be followed. The incident will be maintained in a searchable database maintained by the Office of Academic Affairs.

Copyright Statement

In recognition of the Copyright Law of the United States (Title 17, United States Code), Upper Iowa University reminds both faculty members and learners that a willful infringement of the law may result in disciplinary action. The University library has available materials discussing the "fair use" concept, along with criteria and guidelines for reproduction and use of copyrighted materials.

This syllabus is subject to change.

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