

BIOL 1140:501 Biology for Health Sciences

Spring 2023 • CRN # 59163 • Lecture Syllabus



Face to Face

Lecture: Tues. & Thurs.
10:30am-11:45am
VAAS 133



I love teaching Biology - the study of life. In this class we will start by learning about the molecules that are part of all cells. Yes - your cells and everything we eat are composed of molecules. Most of the semester we will spend learning about the cell - such wonderful little machines that do all the work within an organism. First, we will have to learn about all the cell components - think of them as little organs (organelles). Then, we will learn about how our cells obtain energy from food we eat. Next, we will discuss DNA - our chromosomes; they are the ones that determine what we look like and everything about us. Have you ever thought about cell division? Why do cells divide? Why do we need to make more cells? These questions will be answered during our discussion on Mitosis and Meiosis. We also will discuss how traits are passed from generation to generation. Look at your family and see what traits you share. The last part of the semester we briefly study anatomy & physiology of the human body. How amazing is this? Now do you know why I love teaching Biology - we learn about our body and how it works.

Bring the knowledge that you have and take the journey with me as you continue your educational goals.

Course Description

This introductory biology course for students interested in health science careers focuses on the concepts of chemistry, cell biology, metabolism, genetics, and regulation of gene expression.



I started my educational path at Dine College, a community college on the Navajo Reservation. My passion is teaching Biology and Microbiology and studying bacteria. I'm very excited to meet and work with you. -Dr. T



Tammi Duncan-Teller,
PhD

"I hope to continue to inspire our nation's youth to pursue careers in science, technology, engineering, and math so they, too, may reach for the stars."

--ELLEN OCHOA The First Hispanic Woman to Go to Space.

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Course Learning Outcomes (CLO)

At the completion of this course, students will be able to:

Introduction to Biology

CLO 1: Explain the central ideas and process of biology

CLO 2: Explain the role of science and critical thinking in society.

Introduction to chemistry

CLO 3: Apply basic chemistry to the biology cells

Cells

CLO 4: Describe the structures and functions associated with eukaryotic cells and compare/contrast to prokaryotic cells.

CLO 5: Describe the components and mechanisms of cellular metabolism

Genetics

CLO 6: Describe the DNA structure and replication, including mutation and DNA repair.

CLO 7: Explain the central dogma of genetic flow; explain gene expression and how it's regulated.

CLO 8: Explain the relationships between sexual reproduction, genetic diversity and inheritance.

CLO 9: Describe and contrast the processes of mitosis and meiosis.

CLO 10: Describe patterns of inheritance and human genetic disorders.

Human Physiology

CLO 11: Explain homeostasis and identify major tissues, organs and organ systems and their function.

The overall goal of the course is to help you become literate in these scientific concepts and be able to apply them in your life as you move forward in reaching your educational goal.

Dr. T's Contact Information

Email: tammid31@unm.edu
Office: 505.925.8726
Front office: 505.925.8600
Office: Rm 132, Arts & Sciences Building



Talk to Me Hours

- Mon. 11:15am-12:15pm
- Tues. 9:00am-10:30am & 12:30pm-2:30pm
- Wed. Available by appt.
- Thurs. 9:00am-10:30am
- Fri. Available by appt.

Zoom meets: Available by appt.

<https://unm.zoom.us/j/5736149969>

Password: **biology**

Grading Criteria

Preps: Preps are question sets that are worth 5 pts and due to UNM Canvas at 11:59pm the evening before class. Bring a printed copy to class. *Failure to submit to UNM Canvas will be deducted 2pts. Late - 2pts.* If submitted with no name -1 point. If submitted incomplete -1pt.

Follow up Assignments (FA): FAs are question sets that is worth 5 pts and are assigned at the end of each chapter. Same guidelines as Prep submissions.

Exams: There are three exams. Two of the highest scores will count toward your grade. Each of these exams is worth 100 pts and their total is 200 pts. You will be given one class period to complete this exam. You will not be able to use your notes, textbook, or online resources. The lowest score will be dropped.

Reviews: There are four Reviews. Each of these Reviews are worth 12 pts each and their total is 48pts.

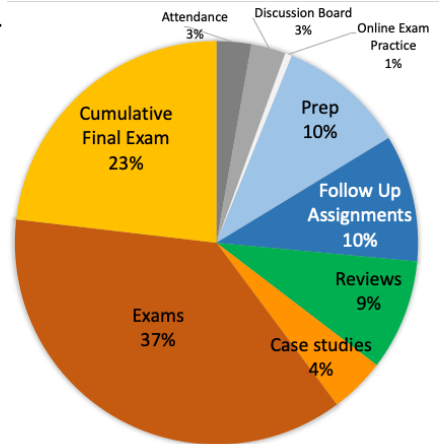
Reviews are tools to help you start preparing for your Exams or Final. These are not solely used to study for the Exam or Final itself. You'll have to review class notes, homework, and learning objectives from each class to prepare. Review 4 is a review for your cumulative final. I suggest that you are study at the end of each week the material that was just covered. Same submission guidelines as Preps.


Case studies: There are two case studies that will help you build your critical thinking and self-assessment skills. Same submission Guidelines as Preps.

Attendance (A)/Discussion Board (DB): You must be in the class on time to get the most out of this course and participate on Discussion board. You are responsible for "signing-in" to document your attendance in class. -50% for late DB submissions.

Cumulative Final: The Final is a 125pts exam at the end of the semester. You will have 2 hours to take this exam face to face during semester finals week.

In summary, there is no extra credit. Every point counts. The due dates are firm. Communicate. Be on time. Study every day. Ask questions. Try your best. -Dr. T



|  | Points per assignment: | Total Points: | Percentage of overall grade: |
|-------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|--------------------------------------------------|
| Preps (10) | 5 pts each | 50pts | 9.4% |
| Follow up Assignments (10) | 5 pts each | 50pts | 9.4% |
| Intro. Online Prep/Follow up | 2pt | 2pt | 0.5% |
| Case studies (2) | 12 pts each | 24 pts | 4.5% |
| Exams (2 of 3) | 100 pts each | 200 pts | ~38% |
| Reviews (4) | 12 pts each | 48 pts | 9% |
| Attendance (A) | 0.5pt/class | 15 pts | 2.8% |
| Discussion Board (15) | 1 pt/DB post | 15 pts | 2.8% |
| Final (Cumulative) | 125 pts | 125 pts | 23.5% |
| TOTAL | | 530 pts | 100 % |
| A+ 100% or higher A 91-99% A- 90% | B+ 88-89% B 81-87% B- 80% | C+ 78-79% C 71-77% C- 70% | D+ 68-69% D 61-67% D- 60% F <60% |

Required learning sources



1. Textbook: Inquiry into Life by S. Mader and M. Windelspecht, 16th edition, 2020, McGraw Hill Publisher. **REQUIRED.** The bookstore has a special edition of the book - Biology for Health Sciences-University of New Mexico-Valencia.



canvas

2. UNM Canvas: <http://canvas.unm.edu> The webpage contains resources you need to succeed in the course. Login using your UNM username and password. ***You are responsible for all announcements, assignments, tests and/or any changes to the syllabus that will be posted on the webpage. Announcements are sent every Friday. Please check email regularly.***

3. Technology and computer: In this course, you will need a dependable computer, reliable internet connection, computer speakers, Microsoft PowerPoint and Word, and Adobe Flash Player.

Course Policies/Information

This is a three credit-hour Face to Face course. Class meets face to face for two 75-minute sessions of direct instruction for sixteen weeks during the Spring 2023 semester. Students are expected to complete a *minimum* of six hours of out-of-class work (readings, homework, study, assignment completion, and class preparation) each week.

Attendance. You must be in the class on time to get the most out of this course, participate in class discussions, and to get a good grade. You are responsible for "signing-in" to document your attendance in class. If you are missing more than 15 min. of class, it will count as an absence. The student will be held responsible for all material and information regardless of whether the student was in class. Exception will be made per student basis dependent on emergency.

Make-up Exams. Make-up exams will be given to students with a documented emergency. You must notify the instructor prior to the day of the missed exam.

Prep. These will be assigned weekly to help you master the concepts presented. They are due to UNM Canvas at 11:59pm the evening before class. Be sure to include your name on each submitted homework assignment. See Grading Criteria guidelines.

Review. There will be four Reviews. These will help you apply the knowledge that you have gained. One will be due before each regular exam. Be sure to include your name on your Review. One point will be deducted if not.

Late assignments. Late assignments will only be accepted within the first week following the due date. There will be a 50% reduction in grade for Discussion board posts. See grading criteria guidelines for Preps, Followups, and reviews. I will not accept assignments after the first week.



Course Policy/Information Continue

Withdrawal. Last day to withdraw from class without a “W” on your transcript is **Feb. 3, 2023** at 5:00pm using UNM Canvas. Last day to withdraw from class with out Dean’s signature/permission on LoboWEB is **Apr. 14, 2023**. See <https://registrar.unm.edu/semester-deadline-dates/index.html> . –Open Spring 2023. Note* I don’t submit “W” after the 12th week of classes.

Cell phones. As a courtesy to the class, please silence any cell phones. Any sight of a cell phone during exams or quizzes will result in an automatic fail for that assignment. If you need a to step out during a test/quiz, please leave your phone on your table.

Disruptive behavior. Please avoid any disruptive behaviors in the classroom and online communications. For class, this includes going in and out of the class, texting, talking. For online communication and interactions follow netiquette.

Plagiarism. Only submit work that is yours. Always cite any work used using APA format. <https://libguides.unm.edu/c.php?g=326014&p=2187071> Copy and Paste from Google, your classmates, or your book is considered plagiarism. Write answers in your own words. *You will receive two warnings with the assignment given a zero. A third time you will be dropped from the course and the UNM Science & Wellness Department Chair notified.*

Netiquette. The rationale of providing **Rules of Netiquette** for students is to provide guidelines for online behavior and communication between you and your classmates. We (myself included) are all held to the following guidelines that will provide a safe and respectful online classroom space for constructive critiques, discussion, and scholarly reports between you and your classmates. These guidelines are expected to be upheld in any online communications (Email, Discussion Board Forums, Messaging, and Blogs) between all of us.

Rules of Netiquette continue.

1. Your online behavior and communication should be similar to how you would treat and speak to a person in standing in front of you.
2. Be mindful of different backgrounds, which include cultural, linguistic, political, and religious differences.
3. Be respectful of other’s views and opinions and try to remain open minded. You can have respectful disagreements. Avoid flaming, which is publicly attacking or insulting another person’s view.
4. Provide constructive and concise responses to the subject of the posts in Discussion Forums and Blogs. Stay on topic, read all comments/viewpoints in discussion before contributing to discussion, avoid slang and profanity, be prepared to correct information if your comment is misunderstood or misinterpreted, and avoid using personal identifying information.
5. Practice good grammar and spelling skills. Use 12 pt. font Times New Roman or Calibri, avoid text shortcuts, define acronyms, use correct spelling, limit use of emoticons, and use clear and concise language.
6. Avoid the use of all CAPITAL LETTERS. It suggests shouting, impoliteness, or can be aggressive. Reread you post, checking for sarcasm, slang or anger, before submitting it. Avoid sending a message out of anger or written if you are angry.
7. Call your instructor if you are in conflict with them or another student.
8. In relation to security, protect your passwords and don’t send confidential information through email. If you suspect your password has been used, change your password.
9. There are specific listings of practices for email netiquette and message board netiquette below.

Email Netiquette

- Write a concise email to @unm.edu accounts.
- Include "Bio 1140" in your subject line to me.
- Ask for permission of author before forwarding an email to classmate.
- Include a formal salutation to your recipient.



Discussion Forum and Journal Netiquette

Include "topic-your name" in subject line.

Write concise paragraph on the topic.

Paraphrase and cite your references with APA and credit classmates work if appropriate.

Read all messages in thread before replying.

Don't repeat another person's post.

Accommodations: UNM-Valencia is committed to providing courses that are inclusive and accessible for all participants. As your instructor, it is my objective to facilitate an accessible classroom setting, in which students have full access and opportunity. If you are experiencing physical or academic barriers, or concerns related to mental health, physical health and/or COVID-19, please consult with me after class, via email tammid31@unm.edu or during talk-to-me hours. I am not legally permitted to inquire about the need for accommodations. We can meet your needs by collaborating with the Director of Student Affairs, Hank Vigil, by email [vigilh@unm.edu](mailto:viglih@unm.edu) or by phone (505) 925-8581.

Academic Dishonesty: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. *Academic dishonesty includes, but not limited to, dishonesty in quizzes, tests, or assignments; Copying and pasting answers from Google; claiming credit for work not done or done by others, hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.*

COVID-19 Health and Awareness. UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM's [Administrative Mandate on Required COVID-19 vaccination](#). If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the [Centers for Disease Control \(CDC\) guidelines](#). If you do need to stay home, please communicate with me at tammid31@unm.edu; I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let me, an advisor, or another UNM staff member know that you need support so that we can connect you to the right resources. Please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.

Protocol as of 1/17/2022 for vaccinated individuals testing positive (No quarantine for exposure).

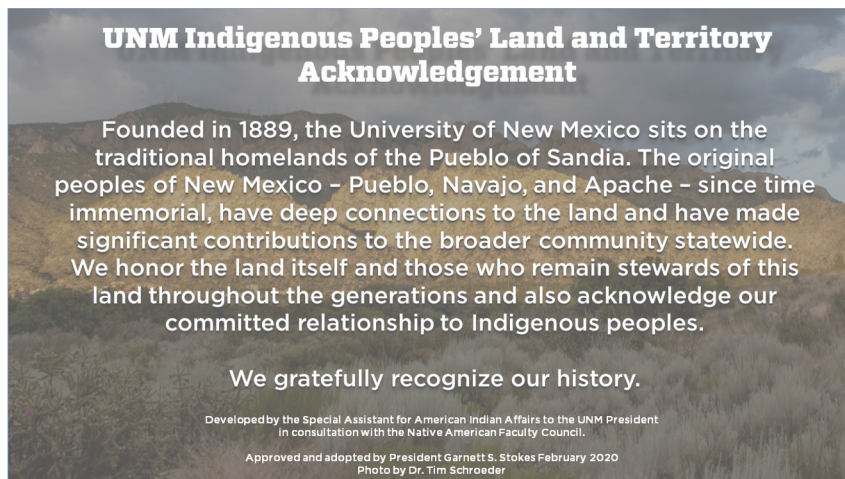
1. Upload your information to the Self-Reporting of Positive Covid-19 Diagnosis ([https://lobowebapp.unm.edu/apex_ods/f?p=135:LOGIN_DESKTOP:16863389260097:::~:](https://lobowebapp.unm.edu/apex_ods/f?p=135:LOGIN_DESKTOP:16863389260097:::)).
2. Provide documentation (The Covid PCR Test) to me via email (you are not exempt from assignments or exams).
3. Isolate for 5 days- Day 0 is the onset of symptoms or positive viral test (The Covid PCR Test).

Equal Opportunity and Non-discrimination In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered “responsible employees” by the Department of Education (see page 15--[offices/list/ocr/docs/qa-201404-title-ix.pdf](https://ofo.unm.edu/offices/list/ocr/docs/qa-201404-title-ix.pdf)). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct, and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity (oeo.unm.edu). For more information on the campus policy regarding sexual misconduct, see: <https://oeo.unm.edu/title-ix/index.html>

Citizenship and/or Immigration Status: All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The Administration’s welcome is found on our website: <http://undocumented.unm.edu/>.

Respectful and Responsible Learning: We all have shared responsibility for ensuring that learning occurs safely and equitably. UNM has important policies to preserve and protect the academic community, especially policies on student grievances (Faculty Handbook D175 and D176), academic dishonesty (FH D100), and respectful campus (FH CO9). These are in the *Student Pathfinder* (<https://pathfinder.unm.edu>) and the *Faculty Handbook* (<https://handbook.unm.edu>). Please ask for help in understanding and avoiding plagiarism or academic dishonesty, which can both have very serious consequences.

Support in Receiving Help and in Doing What is Right: I encourage students to be familiar with services and policies that can help them navigate UNM successfully. Many services exist to help you succeed academically and to find your place at UNM, see students.unm.edu or ask me for information about the right resource center or person to contact. UNM has important policies to preserve and protect the academic community, especially policies on student grievances (Faculty Handbook D175 and D176), academic dishonesty (FH D100), and respectful campus (FH CO9). These are in the *Student Pathfinder* (<https://pathfinder.unm.edu>) and the *Faculty Handbook* (<https://handbook.unm.edu>) Please ask for help in understanding and avoiding plagiarism or academic dishonesty, which can both have very serious disciplinary consequences.



•••• Course Schedule ••••

| Week | Date | Chapter: Topic | Items Due | Due Date @ 11:59pm |
|------|----------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------|
| 1 | Jan. 17 Tues. | Overview of Biology | Prep 1: Ch 1 | Wed. 1/18 |
| | Jan. 19 Thurs. | 1: Study of Life | Intro. Online Prep Intro. Online Follow Up Discussion 1 | Fri. 1/27 Fri. 1/27 Fri. 1/20 |
| 2 | Jan. 24 Tues. | 1: Scientific Method | Prep 2: Ch 2 | Wed. 1/25 |
| | Jan. 26 Thurs. | 2: Basic Chemistry | Discussion 2 | Fri. 1/27 |
| 3 | Jan. 31 Tues. | 2: Molecules of Life I | Follow Up 1: Ch. 1 | Tues. 1/31 |
| | Feb. 2 Thurs. | 2: Molecules of Life II Feb. 3 Last day to drop class without "W" with 100% tuition refund on LoboWeb. | Discussion 3 | Fri. 2/3 |
| 4 | Feb. 7 Tues. | Review 1 (Ch. 1 & 2) | Follow Up 2: Ch 2 | Fri. 2/10 |
| | Feb. 9 Thurs. | Exam 1 (Ch. 1 & 2) | Discussion 4 Review 1 | Fri. 2/10 Thurs. 2/9 |
| 5 | Feb. 14 Tues. | 3: Cell Biology | Prep 3: Ch 3 | Mon. 2/13 |
| | Feb. 16 Thurs. | 3: Cell Structure Case Study 1 | Discussion 5 Follow Up 3: Ch 3 | Fri. 2/17 Fri. 2/24 |
| 6 | Feb. 21 Tues. | 4: Cell membrane | Prep 4: Ch 4 | Mon. 2/20 |
| | Feb. 23 Thurs. | 4: Cell membrane | Discussion 6 Follow Up 4: Ch 4 Case Study 1 | Fri. 2/24 Fri. 3/3 Fri. 2/24 |
| 7 | Feb. 28 Tues. | 6: Energy and Enzymes I | Prep 5: Ch 6 | Mon. 2/27 |
| | Mar. 2 Thurs. | 6: Energy and Enzymes II | Discussion 7 | Fri. 3/3 |
| 8 | Mar. 7 Tues. | Review 2 (Ch. 3, 4 & 6) | Follow up 5: Ch 6 | Fri. 3/10 |
| | Mar. 9 Thurs. | Exam 2 (Ch. 3, 4 & 6) | Discussion 8 Review 2 | Fri. 3/10 Thurs. 3/9 |
| 9 | Mar. 14 Tues. | No Class-Spring Break | | |
| | Mar. 16 Thurs. | No Class-Spring Break | | |

•••• Course Schedule ••••

| Week | Date Tues. & Thurs. | Chapter: Topic | Items Due | Due Date @ 11:59pm |
|--------------|------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------|
| 10 | Mar. 21 Tues. | 7: Cellular Respiration | Discussion 9 Prep 6: Ch 7 | Mon. 3/20 Mon. 3/20 |
| | Mar. 23 Thurs. | 7: Cellular Respiration | Discussion 10 | Fri. 3/24 |
| 11 | Mar. 28 Tues. | 25: DNA Structure & DNA Replication | Prep 7: Ch 25 | Mon. 3/27 |
| | Mar. 30 Thurs. | 25: Gene Expression | Follow 6: Ch 7 Discussion 11 | Fri. 3/31 Fri. 3/31 |
| 12 | Apr. 4 Tues. | 25: Gene Regulation | | |
| | Apr. 6 Thurs. | 25: Gene Regulation & Mutations | Discussion 12 | Fri. 4/7 |
| 13 | Apr. 11 Tues. | Review 3 (Ch 7 & Ch 25) | Follow Up 7: Ch 25 | Fri. 4/14 |
| | Apr. 13 Thurs. | Exam 3 (Ch 7 & Ch 25) | Discussion 13 Review 3 | Fri. 4/14 Thurs. 4/13 |
| 14 | Apr. 18 Tues. | 5: Cell Cycle & Cell Division | Prep 8: Ch 5 | Mon. 4/17 |
| | Apr. 20 Thurs. | 5: Cell Division Case Study 2 Apr. 14 Last day to drop class without Dean's Permission | Discussion 14 Follow Up 8: Ch 5 | Fri. 4/21 Fri. 4/28 |
| 15 | Apr. 25 Tues. | 23: Genetic Inheritance Apr. 24 UNM Course Feedback open UNM Canvas | Prep 9: Ch 23 | Mon. 4/24 |
| | Apr. 27 Thurs. | 23: Genetic Inheritance | Discussion 15 Case Study 2 | Fri. 4/28 Fri. 4/28 |
| 16 | May 2 Tues. | 24: Chromosomal Inheritance | Prep 10: Ch 24 Follow Up 9: Ch 23 | Mon. 5/1 Fri. 5/5 |
| | May 4 Thurs. | 24: Chromosomal Inheritance Review 4 May 5 UNM Course Feedback close at 5pm | Follow Up 10: Ch 24 Review 4 | Mon. 5/8 Tues. 5/9 |
| Final | May 9 Tues. | Cumulative Final Exam 10:30-12:30pm | Final Exam | Tues. 5/9 |

*I reserve the right to make necessary changes.