Biol 1114 **Life I: Molecular & Cellular Concepts** **Spring 2026**

Course Information and Syllabus

Instructor: Jon Scales
Email: jon.scales@msutexas.edu
Lecture: TR 11-12:20 Rm: BO 248
Office: BO 224G
Office Hrs: M 9-11:30, W 8-10, R 2-5
Labs: T 1:30-3:20; 4-5:50
Rm: BO 203

Course Philosophy:

This course introduces students to fundamental aspects of molecular & cellular biology..

I expect student participation in the form of asking and answering questions, attentiveness and courteous behavior during lectures. It is my opinion that you can only get out of any course what you put into it. This course is a critical prerequisite for all further biology courses. This course is designed specifically for Biology Majors. The rigor and content reflect this specific student group. Students of all majors are welcome in this course, but should be aware that it is easier than one might think to bite off more than one might chew.

Course Conduct:

Use of a laptops or tablets to" type notes or view slides" during lecture is prohibited. You may take notes using a stylus to write on a tablet. You may audio record lectures only with prior, explicit permission of the instructor. Use of cell phones during lecture is prohibited unless specifically asked to use the device by the instructor. Do not photograph the screen or board with your cellular device or tablet during lectures. You will be called out and dismissed from lecture for violation these instructions. You will be dropped from the course if observed using a cell phone during lecture. The behaviors you are required to adhere to in this course are standard courteous behaviors for lecture audience members and students.

Students are expected to behave as adults. These are ways adults are expected to behave in a classroom setting:

1. Go to the bathroom before coming to class
2. Come to class 2-5 minutes early, take a seat, take out your notebook and be prepared to start class on time.
3. Do not disturb your neighbors or the instructor while the instructor is lecturing.
4. Do not get up and leave repeatedly during lecture.
5. Turn cell phone off/silent and keep it off the desktop. See instructions above regarding use and penalty for use.
6. No head gear of any kind may be worn during exams. All back packs, coats, purses, etc will be left at the front/sides of the room during exams.
7. Do not come late to exams/quizzes. If you come late after any other student has completed the exam, you will not be allowed to take the exam.

Students should refer to the current MSU handbook and activities calendar for university policy on academic dishonesty, class attendance, student rights and activities. These conduct standards apply to both lecture and lab.

Cheating of any kind will result in no credit for that assignment, quiz, or exam. Repeated offense will result in dismissal from the course with a grade of F.

Students displaying disruptive behaviors will be reported to the Office of Students Rights and Responsibilities. Disruptive behaviors are grounds for dismissal from the course as noted in the student handbook p27:

> Instructor Drop
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> An instructor may drop a student any time during the semester for excessive absences, for consistently failing to meet class assignments, for an indifferent attitude, or for disruptive conduct. **The instructor must give the student a verbal or written warning prior to dropping the student from the class.**
>
> A student dropped from a class by a faculty member for disruptive behavior has the right of appeal to the Student Conduct Committee through the Office of Student Rights and Responsibilities (CSC 108).

The above paragraphs serve as your one and only verbal and written warning.

Lectures are being video recorded. No video recordings of lectures will necessarily be uploaded onto D2L. This course is strictly an IN PERSON course and no accommodations will be made for distance learning environments.

Students that have been certified through the office of Disability Services with disability accommodations must provide documentation from that office. Students must abide by all published procedures for taking **exams** through the DSS office with accommodations.

Course Materials

Textbook - Life: The Science of Biology 12th Ed.
D2L: lecture powerpoints, review quizzes, & worksheets may be posted on D2L
Lab Manual – The lab is available as a pdf on D2L. Download and print your own individual copy before the 2nd lab meeting. I will check to determine if each student has their own copy. You will not be allowed to attend any lab without your lab manual.

Attendance Policy:

Obviously, attendance is required for participation and attendance will be taken periodically. Students not attending regularly will be dropped from the course. Attendance to lab is mandatory. Students will be dropped upon the 2nd unexcused absence from laboratory. There are no make-up lab assignments, quizzes, or exams.

Assignments:

Reading:

It is expected that you will read the listed chapters from the textbook. A good method of doing this is to scan through the chapter before coming to class and then read the material we cover more thoroughly afterwards. The logic of this approach is that you will have seen new terms we bring up in class in the overall context of the topic and then you can go back for more detail after we discuss it in class. Discussion topics will be posted weekly on D2L. These will be due each Monday night, except on Mondays of exams.

Examinations:

We will have four (4) lecture exams. **Make note of these times and put them into your schedule**. **NO MAKEUPS! NO DO-OVERS!**

Make-Up Policy:

There will be no make-up exams, quizzes, assignments, or labs. DO NOT MISS ANYTHING. If an exam is missed due to an excused absence, the grade for the missed exam will be the same as the lowest of the other exams. If two exams are missed, for any reason, the student will need to drop the course.

Course Grading:

Grade Scale	Components of Grade	
A ≥ 90	Exams --------	60%
B ≥ 80	Quizzes & Worksheets-------	15%
C ≥ 70	Laboratory --------	25%
D ≥ 60		
F < 60		

Tentative Lecture Schedule

Week	Date	Topic	Chap	Week	Date	Topic	Chap
1	1/20-22	Chemistry of Life	2	9	3/24	Cell Division	11
2	1/27-29	Macromolecules	3&4	9	3/24-26	DNA	13
3-4	2/3-2/10	Cells Organelles Structure & Function	5	10	3/31	DNA, Genetics	12
4	**2/12**	**EXAM 1**			**4/2**	**Easter Break**	
5	2/17	Cell Membranes	6	11	4/7-9	Transcription and Translation	14
5	2/19	Cell Signaling	7	12	4/14	Translation	14
6	2/24 -26	Bioenergetics	8	**12**	**4/16**	**EXAM 3**	
7	3/3	Cellular Respiration	9	13	4/21	Mutations	15
7	3/5	Photosynthesis	10	13	4/28	Genomes	17
	3/9-13	**Spring Break**		14	4/28-30	Gene Expression	16
8	**3/17**	**EXAM 2**		15	5/5-7	Recombinant DNA Technology	18
8	3/19	Cell Division	11	**16**	**5/12**	**FINAL EXAM 1-3PM**	

Lab TA: Ms Kiya Davis kldavis0627@my.msutexas.edu Office Hrs: T 11-12, W 10-12

Lab Objectives

To reinforce and supplement the biological concepts taught in lecture. You will be required to read the material to be covered prior to coming to lab. You will work in groups and be assigned an activity to perform during the lab period

Attendance

Due to the hands-on nature of this course, it is crucial to attend the scheduled meetings. There are no make-ups for **missed labs or lab exercises.** No make-up exams will be given. TWO ABSENCES WILL RESULT IN BEING DROPPED FROM THE COURSE. If you are absent from a lab, you may not be able to turn in any work for that lab exercise.

Assignments:

Reading:

It is expected that you will read the lab exercise before lab. Minimal instructions will be given to you in lab concerning the methods, so you must already be familiar with what will be done in order to finish lab on time.

Lab Grades

The lab portion of the course will be 25% of your total grade. Components of the laboratory grade are shown below. Lab exercise due dates will be announced in lab.

Components	Weight
Lab exercises	80 %
Quizzes	10 %
Presentation	10 %

Reminders

- **Print out and bring** the lab manual **TO LAB with you – there won't be extras.**
- **Food** and/or drinks are not allowed in lab
- **Cell phones** must be turned off before lab begins. No messing around on phones during labs.

Lab #	Date	Subject
1	Jan 20	How to be a Biology Major
2	Jan 27	Skills for Quantitative Lab
3	Feb 3	Quantitative Lab
4	Feb 10	Reporting Data
5	Feb 17	Microscope Use
6	Feb 24	Salivary Amylase Exercise
7	Mar 3	Gel Electrophoresis
		Spring Break
8	Mar 17	Gel Electrophoresis
9	Mar 24	NCBI Computer Exercise
10	Mar 31	PCR
11	Apr 7	Transformation
12	Apr 14	Picking & Streaking Bacteria
13	Apr 21	Gel Electrophoresis of PCR
14	Apr 28	Oral Presentations
15	May 5	Lab Final