

# University of North Texas at Dallas

## Fall 2024

## SYLLABUS

BIOL1730: Biology for Science Majors I Lab: 2 Hrs.	
Department of Natural Sciences	School of Liberal Arts and Sciences
Instructor Name:	Dr. Anshu Singh
Office Location:	Email is the best form of communication; expect response within 24 hours
Course section:	Biol 1730 - 0004
Email Address:	Anshu.Singh@untdallas.edu
Office Hours:	By appointment (in person – Friday 30 mins shortly before lab or after lab)
Classroom Location:	Founders Hall (DAL2) Room 256
Class Meeting Days & Times:	Tuesday 1 - 3:50PM
Course Catalog Description:	BIOL 1730 is the laboratory section of the first half of a college two-semester 1st year Biology sequence designed for science majors, students who require a biology class, which will meet the requirements for Biology majors (e.g. premedical or other pre-professional students who may be completing a non-biology major). The intent of this course sequence is to provide the student with a broad background in biology that can serve as a prerequisite for higher-level courses if desired.
Prerequisites:	None
Co-requisites:	Credit for or concurrent enrollment in BIOL 1710.
Required Text:	<b>Laboratory Manual: BIOLOGY FOR SCIENCE MAJORS I (CUSTOM).</b> 1 <sup>st</sup> Edition Copyright 2024. Publisher: McGraw-Hill. <b>Author: Rodriguez ISBN: 9781307818161</b>
Access to Learning Resources:	UNT Dallas Library: phone: (972) 780-3625; web: <a href="http://www.unt.edu/unt-dallas/library.htm">http://www.unt.edu/unt-dallas/library.htm</a> UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: <a href="mailto:1012mgr@fhcg.follett.com">1012mgr@fhcg.follett.com</a>
Course Goals or Overview:	The goal of this course is to provide the student with a broad understanding of biology at the cellular level.
<b>Learning Objectives/Outcomes:</b> At the end of this course, students will be able to:	
1	Explore the natural sciences
2	Be able to locate, evaluate, and organize information including the use of information technologies
3	Be able to think critically and creatively, and learn to apply different systems of analysis
4	Develop problem solving skills that incorporate multiple viewpoints and differing contexts in their analysis
5	Cultivate intellectual curiosity and self-responsibility, building a foundation for life-long learning
6	Engage with a variety of others in thoughtful and well-crafted communication
7	Broaden and refine their thinking as a part of the give and take of ideas, seeking to better understand other's perspectives as well as their own

## Laboratory Schedule

Week/Date	Proposed	Points
Week 1 Aug 26	Classes Begin, <b>NO LABS</b>	
Week 2 Sept 2	Introduction, Lab Safety  Lab 1: Measurements in Biology	10
Week 3 Sept 9	Lab 2: Biologically Important Molecules  <b>Lab Report 1 – Due the week of Sept. 11th</b>	10  50
Week 4 Sept 16	Lab 3: The Microscope	10
Week 5 Sept 23	Lab 4: The Cell	10
Week 5 Sept 30	Lab 5: Photosynthesis	10
Week 6 Oct 7	<b>Laboratory Practical 1 (Labs 1-5)</b>	<b>100</b>
October 14th	Lab 6: Cellular Respiration	10
October 21st	Lab 7: Mitosis	10
October 28th	Lab 8: Meiosis	10
November 4th	Lab 9: Molecular Biology and Biotechnology  <b>Lab Report 2 – Due the week of Nov. 6th</b>	10  50
November 11th	Lab 10: Genetics	10
November 18th	<b>Laboratory Practical 2 (Labs 6-10)</b>	<b>100</b>
November 25th	Thanksgiving Holiday, <b>NO LABS</b>	
December 2nd	<b>NO LABS</b>	
December 9 - 14	<b>Finals Week, NO LABS</b>	<b>Total: 400</b>

WEEK OF	Topic	Points
Aug 26	<i>NO LAB – FIRST WEEK OF CLASSES</i>	-
Sep 2	Lab Safety Guidelines Lab 1. Measurements in Biology	10
Sep 11	Lab 2. Biologically Important Molecules <b><i>Lab Report 1 – Due the week of Sept. 11th</i></b>	10 <b>50</b>
Sep 18	Lab 3. The Microscope	10
Sep 25	Lab 4. The Cell	10
	<b><u>Laboratory Practical 1</u></b> <b><i>Labs 1 - 4</i></b>	<b>100</b>
Oct 2	Lab 5. Photosynthesis	10
Oct 9	Lab 6. Cellular Respiration	10
Oct 16	Lab 7. Mitosis	10
Oct 23	Lab 8. Meiosis	10
Oct 30	Lab 9. Molecular Biology and Biotechnology <b><i>Lab Report 2 – Due the week of Nov. 6th</i></b>	10 <b>50</b>
Nov 6	Lab 10. Genetics REVIEW FOR PRACTICAL 2	10 -
Nov 13	<b><u>Laboratory Practical 2</u></b> <b><i>Labs 5 - 10</i></b>	<b>100</b>
Nov 20	<i>NO LAB – Thanksgiving Holiday</i>	-
Nov 27	<i>NO LAB – WEEK OF READING DAY</i>	-
Dec 4	<i>NO LAB – WEEK OF FINAL EXAMS</i>	<b>Total: 400</b>

## Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

**Pre-Lab Quizzes (50 points)** – Before starting each laboratory exercise you will be given a short quiz (~10 min) to assess how well prepared you are for that day's lab by reading the background information and procedures covered in the manual. Each quiz will be worth 5 points.

**Lab Exercise Completion (50 points)** – Once you complete each lab exercise, at the end of the lab session, the instructor will sign off your lab manual. Each lab exercise completion will be worth 5 points.

**Lab Reports (100 points)** – Two complete lab reports will be required, each worth 50 points (see Laboratory Schedule above). Instructions on how to write the lab reports will be discussed during the first lab session. ***The lab report is due at the beginning of the indicated lab session.***

**Laboratory Practical Exams (200 points)** – Two exams will be given and they will consist of a combination of short answer and fill in the blank questions that require identification and mastery of lab topics, materials and equipment, as presented in the lab manual and discussed during the lab sessions.

## Grading Matrix

Instrument	Value	Total points
Pre-Lab Quizzes	12.5 %	50
Lab Exercises	12.5 %	50
Lab Reports	25 %	100
Laboratory Practical 1	25 %	100
Laboratory Practical 2	25 %	100
<b>Total</b>	<b>100 %</b>	<b>400</b>

### Grade Determination

A = 90% or better  
B = 80 – 89 %  
C = 70 – 79 %  
D = 60 – 69 %  
F = less than 60%

## University Policies and Procedures

### Students with Disabilities (ADA Compliance):

#### Chapter 7(7.004) Disability Accommodations for Students

The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Disability Services Office website at <http://www.untDallas.edu/disability>. You may also contact them by phone at 972-338-1777; by email at UNTDdisability@untDallas.edu or at Building 2, room 204.

### Student Evaluation of Teaching Effectiveness Policy:

Student's evaluations of teaching effectiveness is a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider students' evaluations to be an important part of your participation in this class.

**Assignment Policy:**

Assignments are intended to reinforce material covered in lecture. Collaborative efforts on completing the assignments are encouraged so long as all member of the collaboration contribute equally. As with all other graded assessments, cheating will not be tolerated. While collaborations are encouraged, each student must submit their own work, which cannot be identical to the work submitted by the other members of the collaboration. Assignments should be turned in on time. ***Late assignments will NOT be accepted, unless proper documentation is provided.***

**Exam Policy:**

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook). Students are allowed to take make-up for ***only one*** missed exam, with proper documentation. The instructor must be contacted within 24 hours of the exam to schedule a make-up. A makeup exam must be taken within one week of the original exam. If students know in advance that they will miss an exam, they must take the exam prior to the exam date. There is no make-up for the second or subsequent missed exams. Students should take the exam on time, before the deadline date and time. Any student caught cheating will automatically receive a 0 on the exam, and the instructor may pursue further disciplinary action.

**Academic Integrity:**

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at

[http://www.untDallas.edu/sites/default/files/page\\_level2/pdf/policy/7.002%20Code%20of%20Academic\\_Integrity.pdf](http://www.untDallas.edu/sites/default/files/page_level2/pdf/policy/7.002%20Code%20of%20Academic_Integrity.pdf) for complete provisions of this code.

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

**Artificial Intelligence (AI) policy:**

"UNT Dallas acknowledges the evolving capabilities of Artificial Intelligence (AI) technologies and their various effects on student writing and content creation. The Department of Natural Sciences takes a use-with-permission approach to AI. Students are only permitted to use AI technology in the creation of any course content if permitted by the course instructor. If the use of AI technology is detected, without specific instructor permission, the student will be deemed in violation of the plagiarism policy."

**Attendance and Participation Policy:**

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent. If students miss more than one class for other than a documented emergency (e.g. hospitalization, death in the family), then they may receive a 5-25% reduction in their overall grade, depending on the session missed.

**Bad Weather Policy:**

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campus main voicemail number (972) 780-3600 or search postings on the campus website [www.unt.edu/dallas](http://www.unt.edu/dallas). Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

**Diversity/Tolerance Policy:**

Students are encouraged to contribute their perspectives and insights to class discussions in the online environment. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular

nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Dean of Students as the instructor deems appropriate.

#### **Use of Electronic Gadgets in the Lab:**

You are allowed to take notes or record the class using laptops/iPads/other electronic devices. However, the instructor reserves the right to ask you to discontinue use of an electronic device if it becomes disruptive to you or others in the classroom or lab.

#### **Food/Drink Policy:**

No food or drinks are allowed in the laboratory.

### **UNT Dallas Learning Commons**

#### **Writing Center**

The UNT Dallas Writing Center offers free, one-on-one or group tutoring services to all registered undergraduate and graduate students. Our goal is to help students write a good paper, and most importantly, become better writers. We work with students on any type of written or oral project and can help students at any stage of the writing process (from brainstorming and outlining to citing and looking over a final draft).

The Writing Center is located on the 2nd Floor of the NEW Student Center (big glass structure in front of the stairs). To make an appointment, browse the Writing Center's online resources, or see a list of our student FAQ's, please <https://learn.untDallas.edu/writing-center>. If students cannot come in for a face-to-face appointment, students can take advantage of our free online tutoring service through SMARTHINKING. To get more information about this service, visit <https://learn.untDallas.edu/smarthinking>.

To make the best use of your time, please bring as much information as possible with you to your appointment (assignment, grading rubric, previous graded papers from the class, etc.). The Writing Center will not proofread papers or talk with you about grades, but we will help you become better writers over time.

#### **Math Lab**

The UNT Dallas Math Lab offers free, one-on-one or group tutoring services to all registered undergraduate students. Our goal is to help students improve their math skills, succeed in all of courses requiring math, and learn math-related skills they will need post-graduation. We work with students enrolled in all Math, statistics, accounting, finance, and Science courses.

The Math Lab is located on the 2nd Floor of the NEW Student Center. The Math Lab operates on a walk-in basis, so students can walk-in at any time. To browse the Writing Center's online resources, view our hours of operation, or see a list of our student FAQ's, please <https://learn.untDallas.edu/math-lab>. If students cannot come in for face-to-face tutoring, students can take advantage of our free online tutoring service through SMARTHINKING. To get more information about this service, visit <https://learn.untDallas.edu/smarthinking>.

#### **"STEM Center**

The STEM Center offers one-on-one tutoring services for students who have declared a STEM\* major. The Center provides academic support for major-related science and math courses. The STEM Center is located in the west wing of Founders Hall, Suite 242A. Please see <http://mywco.com/untDstem> for specific course offerings and tutor availability.

The STEM Center was established in 2022 as a resource and support hub for undergraduate students enrolled in science, technology, engineering, and math (STEM) degree programs at UNT Dallas and for BAT-LSAMP scholars. It aims to increase the personal and professional resources available to these students. The Center currently provides tutoring services, access to STEMinars, access to test prep material for the MCAT, DAT, and PCAT, computer use, laptop checkout, printer access, and free poster printing for STEM students. Please see <http://untDallas.edu/stemcenter> for more information.

*\*As of Fall 2022, STEM majors include Biology, Information Technology, and Mathematics."*