

BIOL 1760: Biology for Science Majors Laboratory (& Honors Biology)

Tentative SCHEDULE OF TOPICS* – Spring 2026

<u>LABS MEETING</u>	<u>TOPIC / ACTIVITY</u>	<u>LABS</u>
WEEK-1 (Jan 12-15):	Introduction to Lab course & Safety Scientific Methods & Metric System	- Pre-Lab-1/Lab-1
WEEK-2 (JAN 19-22):	<i>No Labs-MLK Day (do not come to the lab)</i>	--
WEEK-3 (JAN 26-29):	Microscopy & The Cell (Structure and Function)	- Pre-Lab-2/Lab-2/ Quiz#1
WEEK-4 (FEB 2-5):	Cell Division (Mitosis and Meiosis)	- Pre-Lab-3/Lab-3
WEEK-5 (FEB 9-12):	Genetics & DNA (Biotech) and Agarose Gel Electrophoresis	-Pre-Lab-4/Lab-4/Quiz#2
WEEK-6 (FEB 16-19):	LAB EXAM #1 (In Canvas) (do not come to the lab)	-Lab Exam#1
WEEK-7 (FEB 23-26):	Research Project (Day-1)	- Pre-Lab-5/Lab-5
WEEK-8 (MAR 2-5):	Research Project (Day 2)	- Pre-Lab-6/Lab-6/ Quiz#3
WEEK-9 (MAR 9-12):	<i>No Labs-Spring Break (do not come to the lab)</i>	--
WEEK-10 (MAR 16-19):	RESEARCH PROJECT LAB REPORT SUBMISSION (do not come to the lab)	-Project Lab Report
WEEK-11 (MAR 23-26):	Taxonomy & Gymnosperms	- Pre-Lab-7/Lab-7
WEEK 12 (MAR 30-APR 2):	Angiosperms & Vegetative Structures of Plants	- Pre-Lab-8/Lab-8/Quiz#4
WEEK 13 (APR 6-9):	Arthropoda	- Pre-Lab-9/Lab-9
WEEK-14 (APR 13-16):	Rats	- Pre-Lab-10/Lab-10/Quiz#5
WEEK-15 (APR 20-23):	LAB EXAM #2 (In Canvas) (do not come to the lab)	-Lab Exam#2

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LAB COURSES END APR 23, 2026

*Topics and practicums are subject to change. Students are expected to confirm dates, and to be current on all materials.

SYLLABUS & POLICIES

Lab Manual:

Students do not need to buy lab manuals for this course. Documentations related to lab topics as well as instructional ppt will be uploaded on Canvas. Students will need to print out lab worksheets from Canvas Modules for the week for respective lab topics. However, Openstax Biology textbook (see below) is highly recommended for more detailed study of the topics.

Recommended Textbook:

Name: Biology 2e from OpenStax (www.openstax.org/details/books/biology-2e)

Print ISBN 1947172514 and Digital ISBN 1947172522

Course Description:

Biology for Science Majors Laboratory-BIOL1760, is the first course for students majoring in science or who are seeking to satisfy a portion of the Natural Sciences requirement of the University Core Curriculum.

Course Objectives:

This course aims to equip students with essential laboratory techniques, including microscopy and agarose gel electrophoresis, while grounding them in core principles of cell and molecular biology. Key areas of focus include biochemistry, cell structure and function, Mendelian genetics, and introductory biotechnology. Additionally, students will explore taxonomy, major animal phyla, fundamental mammalian anatomy and physiology, and significant plant phyla. The course also introduces scientific research methodologies.

However, although this is a portion of BIOL1710/1711 and 1720/1722 lectures, it is a standalone course, and students are expected to do the background material study for their labs themselves.

Prerequisite Credit or concurrent enrollment in BIOL 1710/11 and/or BIOL 1720/22.

STOP: If your major field of study does not require a science majors' laboratory course, speak to your Advisor about non-majors' course options: Biol 1122 or 1132.

Lab Policies:

Attendance-

- Students should attend only the lab sections they are enrolled in. (Students are not permitted to sit in any other lab sections.)
- Students are expected to attend their enrolled labs regularly and to abide by the attendance policy established for the course. Regular attendance in the lab is mandatory. In case of absence, you must contact your lab instructor within three days to obtain any missed information. You are responsible for acquiring notes from a classmate.
- It is important to inform the Supervisor and TA ahead of time if you anticipate being absent, so the impact on your learning goals can be addressed. If you are ill, please notify the Supervisor and TA to maintain the health and safety of our community.

- Students are required to attend the lab section they are enrolled in. Schedule changes must be completed during the revision period. Failure to adhere may result in removal from the course with a grade of WF for non-attendance.
- After three absences, regardless of reason, the instructor reserves the right to drop you from the course with a grade of WF.
- Punctuality is essential. Arriving more than 20 minutes late will result in a zero for that lab. Repeated tardiness may prevent participation in lab activities.
- Attendance is crucial for learning. If a student fails to attend labs (without submitting valid documentation for excused absences) but completes online assignments, they will still receive a zero for those submissions.
- Make-up labs are not permitted. Please plan appointments outside of your scheduled lab times.

Expectations and Conduct:

The lab instructor/TA will upload all necessary background materials (manuals, virtual lab links, presentations, PDFs) and safety instructions on Canvas before each lab. Students must review these documents prior to attending lab sessions. In the lab, students are expected to actively participate in experiments and follow the TA's guidance.

To ensure a positive lab experience, students are expected to:

- Be aware of all university deadlines (e.g., Add/Drop periods) as listed on the UNT website. All schedule changes must occur during the revision period.
- Show respect for the instructor, TA, and classmates by adhering to the Student Code of Conduct and valuing differing opinions.
- Fully engage in lab activities and complete all online assignments, including pre-labs and quizzes etc. on Canvas.
- Follow all lab safety procedures. Failure to do so may result in exclusion from the lab for that session.
- Keep workstations clean and organized.
- Complete your own work on all graded assignments (quizzes, pre-labs, lab reports, and exams).
- Plan as there are no make-up assignments. Schedule appointments outside of lab times.
- Turn off cell phones and electronic devices before class begins, unless pre-approved.
- Keep personal conversations to non-class times to maintain focus during lab activities.

Course Technology Requirements:

- Laptops/PCs/tablets/I-pads (or other electronic devices with Internet Access with compatible web browser) with Zoom Accessibility
- Microsoft Office Suite (MS Word, MS Excel, MS Power Point)- Link for students to be able to access the free Microsoft Office download through UNT. <https://it.unt.edu/installoffice365>
- PDF- free [Adobe Acrobat Reader](#) , Adobe Premier Pro

Course Technical Skills Requirements:

- Ability to send and receive emails, including attaching and downloading files.
- Proficiency in navigating the learning management system (Canvas).
- Creating, sending, and receiving Microsoft Word and Excel documents.
- Printing Word documents or opening and printing PDF files when needed.

UIT Help Desk: <http://www.unt.edu/helpdesk/index.htm>

Computer and Internet Literacy: http://clt.odu.edu/oso/index.php?src=pe_comp_lit

Necessary plug-ins: <http://goo.gl/1lsVF>

Course Safety Statements:

Students must review the UNT safety rules (available at HealthAlerts.unt.edu) and consult the Safety Rules outlined in Canvas. Adherence to these safety rules is mandatory; students who fail to comply will be asked to leave the lab. Students in the Department of Biological Sciences are strongly encouraged to follow proper safety procedures and guidelines. While participating in laboratory sessions, you are expected to identify and utilize safety measures for activities that involve lifting, climbing, walking on slippery surfaces, using equipment and tools, and handling chemical solutions and hot or cold products.

Please note that the University of North Texas is not liable for injuries incurred during class activities. All students are encouraged to obtain adequate insurance coverage in the event of an accidental injury. For those without insurance, Student Health Insurance is available, and brochures can be found at the UNT Health and Wellness Center on campus.

Students who are injured during class activities may seek medical attention at the UNT Health and Wellness Center, where rates are reduced compared to other medical facilities. If you have an insurance plan other than UNT's Student Health Insurance, please ensure it covers treatment at this facility. If you choose not to visit the UNT Health and Wellness Center, you may be transported to a local hospital's emergency room, and you will be responsible for all associated expenses.

Student Conduct and Discipline:

The primary concern of the University of North Texas is the student. The university attempts to provide, for all students, a campus environment that is conducive to academic endeavor and social and individual growth. To that end, rules, regulations and guidelines governing student behavior and the student's relationship with the university have been formulated into a student code of conduct and discipline. Enrollment at the University of North Texas is considered implicit acceptance of these and other policies applicable to students, all of which are educational in nature and designed to help students understand expectations and accept responsibility for their own actions.

Additional information can be found in the Code of Student Conduct.

Class Attendance and Payment Policy:

To attend class, all fees must be paid in full. Please check your online daily schedule through the 12th day of classes to ensure you are not dropped from any course due to non-payment. Be aware that you may not realize a drop has occurred for reasons such as unapplied financial aid or schedule change fees. The Department of Biological Sciences does not reinstate students after the 12th class day, regardless of the circumstances. It is your responsibility to confirm that all payments are made and that you are eligible to attend classes by the 12th class day.

Religious Holidays:

In accordance with Section 51.911 of the Texas Education Code, the University of North Texas allows students who are absent for the observance of a religious holy day to take examinations or complete assignments scheduled for

that day within a reasonable timeframe. Students must submit a written request to each professor by the 12th class day, indicating the dates of the anticipated absence in advance of the religious holiday to qualify for an excused absence. This allows for alternate arrangements to be made. A copy of the state rules and procedures regarding Holy Days, along with the notification form, is available from the Registrar's Office. Failure to notify the instructor in advance may result in a reduction of points.

Policy on Disability Accommodations:

The University of North Texas is committed to providing reasonable academic accommodation for students with disabilities. To seek accommodation, students must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. Once verified, the ODA will provide an accommodation letter, which should be delivered to faculty to initiate a private discussion about your specific needs in the course. Accommodation may be requested at any time; however, it is advisable to submit ODA notices as early as possible in the semester to avoid delays in implementation. Students must obtain a new accommodation letter each semester and meet with each faculty member or supervisor prior to implementation in each class. Note that ODA accommodation will only begin once the ODA paperwork for the course is received. For more information, please visit the Office of Disability Accommodation website at <http://www.unt.edu/oda> or contact them by phone at 940.565.4323.

Copyright Notice:

Some or all materials in this course may be protected by copyright. Federal copyright law prohibits the reproduction, distribution, public performance, or public display of copyrighted materials without the express written permission of the copyright owner, unless fair use or another exemption applies. For additional information about copyright policies, please visit: <http://copyright.unt.edu/content/unt-copyright-policies>.

Emergency Procedures:

UNT utilizes a system called Eagle Alert to promptly notify students with critical information in emergencies (such as severe weather, campus closures, or health and safety threats like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans regarding course materials. If the Canvas is inaccessible during an emergency, you may contact me via email for further information.

ASSESSMENT & GRADING

Canvas:

All course materials, including the syllabus, lab schedule, and other content, will be posted on Canvas. Your instructor will regularly update announcements, assignments, and grades on this platform. Please log in to Canvas as soon as possible to familiarize yourself with accessing announcements, grades, and course materials.

Attendance in the lab is crucial for your learning. If you do not attend lab sessions (without submitting excused documentation for your absence) but complete online assignments (e.g., pre-labs, quizzes, exams, lab reports due in Canvas), you will receive a grade of zero for those online submissions. Students will not be allowed to enter the lab more than 20 minutes after the start time and will receive a grade of zero for that session.

Remember to follow the pacing guide available on Canvas and refer to the schedule document. This schedule is designed to help you learn at a pace that supports content retention.

All pre-labs, quizzes, and exams will be administered online on Canvas. Students are responsible for knowing the due dates for all graded materials.

Assessment:

- A. **Pre-lab Grades:** Pre-lab assignments, worth up to 4 points, must be completed by the due date. Late submissions will receive a grade of zero, regardless of the reason. Pre-labs must be submitted before your scheduled lab time.
- B. **Lab Grades:** Lab grades, also worth up to 4 points, are based on attendance and student performance during in-person labs. Lab grades are distributed as follows: Attendance + Participation/Performance + Lab Safety + Cleaning Lab Stations.
These grades must be completed during lab time; late submissions will receive a grade of zero. No online submission is required for lab grades.
- C. **Quizzes:** Five quizzes, each worth up to 10 points, will be administered during the semester through Canvas. The lowest quiz score will be dropped. Missed quizzes cannot be made up.
- D. **Lab Exams:** Two lab exams, each worth up to 20 points, will be given during the semester via Canvas. Exam questions may include various formats, such as short answer, labeling diagrams, drawing, identification, true/false, and fill-in-the-blank. Lab exams cannot be made up.
- E. **Research Project Participation:** Attendance and full participation in all research project activities (and related assignments) are prerequisites for receiving credit and for writing the Research Project Lab Report.
- F. **Research Project Lab Report:** This report, worth up to 40 points, is due for submission on Canvas after completing the research project.
- G. **Course Completion:** All elements of the course must be completed to pass.
- H. **Grade Records:** Grades will be maintained on Canvas. Students should retain all graded items in case of technological failure or grade disputes, as the burden of proof falls on the student.

Note: The TA reserves the right to deduct points for any failure to comply with the policies outlined in the syllabus, departmental guidelines, or the University of North Texas Bulletin.

Grade Distribution:

- Pre-Lab Grades (10 @ 4 pts) = 40 points
- Lab Grades (10 @ 4 pts) = 40 points
- Quizzes (4 @ 10 pts) = 40 points
- Lab Exams (2 @ 20 pts) = 40 points
- Research Project Lab Report (1 @ 40 pts) = 40 points

Total Possible Points = 200

Grade Weight:

- Pre-Lab Grades: 20%
- Lab Grades: 20%
- Quizzes: 20%
- Lab Exams: 25%
- Research Project Lab Report: 15%

Grading Scale:

- **A:** 90-100% (Outstanding; performance well above minimum criteria.)
- **B:** 80-89% (Good; performance above minimum criteria.)
- **C:** 70-79% (Solid; meets course criteria.)
- **D:** 60-69% (Below average; fails to meet minimum criteria.)
- **F:** 59% and below (Sub-par; fails to complete the course.)

Extra Credit:

Extra credit opportunities are built into the grading assessment. Please do not request additional extra credit.

Grade-Related Policies:

Late work will not be accepted on this course. Students are responsible for knowing the due dates for all graded materials. Any work submitted after the deadline will receive a grade of zero, unless a university-excused absence is documented within 48 hours of the missed deadline.

If you miss an assignment/exam for one of the following reasons, contact the Lab Supervisor immediately to discuss options for making up missed grades:

- Participation in a sponsored university activity (requires prior notice and an authorized absence card from the Dean of Students Office).
- Observance of a religious holiday (must notify the instructor in writing within the first 12 days of the semester).
- Qualified medical excuse or the death of an immediate family member (documentation required; contact the instructor within three days of absence).

Grade Disputes:

Students must wait 24 hours before contacting the TA to dispute a grade (TA contact information is available on Canvas). During this time, you should review the assignment details and reflect on the quality of your submitted work. Any grade disputes must be addressed during the TA's office hours, not during lab class sessions. If you would still like to discuss your grade, please make an appointment with the TA via email on Canvas, providing specific examples that demonstrate why you believe you deserve a higher grade. The TA will only discuss grades individually, not in groups. If you do not contact the TA to schedule a meeting within seven days of receiving the grade, you forfeit your right to dispute it.

Policy on Academic Misconduct (Academic Integrity Policy):

Cheating in any form will not be tolerated. Tests (exams, quizzes, etc.) are to be completed individually without the use of outside sources; they are not open books. Any student found cheating or exhibiting behaviors consistent with

cheating—such as assisting others, talking during a testing event, sitting too close to other students, leaving answer sheets or screens uncovered, or submitting work that is not their own (including AI-generated content)—will receive a minimum penalty of zero for the graded item.

Plagiarism is defined as presenting someone else's work as your own or reusing your own work from another class without permission. Plagiarism is strictly prohibited, and students who are caught plagiarizing will receive a grade of zero for that assessment. In instances where a student copies another's work, both the student who copied and the student who shared their work will receive a zero. AI-generated work is also considered academic misconduct and will incur similar consequences. Self-plagiarism is regarded as plagiarism as well; please familiarize yourself with the issues surrounding self-plagiarism. More severe penalties may be imposed depending on the circumstances. All incidents of academic dishonesty will be reported to the appropriate authorities.

Release of Grades:

The Family Educational Rights and Privacy Act (FERPA) (1974) does not permit faculty or staff to report grades by phone or email.

Instructor Rights:

The instructor reserves the right to change the schedule, assignments, and/or evaluation criteria throughout the semester. Any changes made will be announced via Canvas announcements with an updated version. UNT strives to offer you a high-quality education and a supportive environment so that you can learn and grow. As an instructor I am committed to helping you succeed as a student. To learn more visit unt.edu/success and explore unt.edu/wellness.

Lab Supervisor: Nathaniel Peterson; nathaniel.peterson@unt.edu

SAFETY RULES & BIOLOGY LABORATORY PROCEDURES (not comprehensive)

- **Stay Informed:** Check HealthAlerts.unt.edu for the latest UNT health alert rules.
- **Follow Instructions:** Adhere to the directions provided by the TA and the written instructions at your station.
- **No Food or Drink:** DO NOT EAT OR DRINK IN THE LAB! This includes water, preserved or unpreserved materials, specimens, and reagents. Smoking is prohibited in all University of North Texas buildings.
- **Footwear Requirements:** Open-toed shoes are not permitted in the lab. Wear closed-toed shoes for protection against broken glass and spills. (No crocs). Students wearing inappropriate footwear will be asked to leave.
- **Appropriate Clothing:** Wear clothing that, if damaged, would not be a significant loss, as chemicals can damage fabrics.

- **Personal Protective Equipment:** Always wear safety glasses or goggles and gloves during experiments involving heated glassware or solutions, or when dangerous fumes may be present. Note: Sunglasses are not permitted in the laboratory.
- **Personal Belongings:** Place bags (with electronic devices) in the cabinet at your station once seated. You only need your lab worksheet, notebook, and pen/pencil at your station.
- **Stationary Work:** Remain at your designated station; do not move around. All necessary materials will be set up at your station. If you require anything, the TA will bring it to you.
- **Preparation:** Familiarize yourself with the experimental procedures you will be performing before arriving in the lab. Follow safety rules as instructed while working.
- **No Children:** Do not bring children to the lab. Unaccompanied children are not permitted on campus.
- **Emergency Equipment:** Know the locations of emergency equipment, such as eyewash stations, fire extinguishers, and first aid kits. Report all accidents to an instructor immediately.
- **Cleanliness:** Keep the laboratory clean and organized. Failure to maintain a clean workstation may result in a loss of points.
- **Electrical Safety:** DO NOT insert ANY objects into electrical outlets other than approved electrical plugs.
- **Chemical Disposal:** Ensure you know how to properly dispose of any chemicals used in the lab.
- **Container Safety:** Make sure all chemical and/or specimen containers are tightly closed after use. If chemicals contact your skin, wash immediately with water.
- **Care with Sharp Objects:** Exercise extra caution when working with scalpels, razor blades, and glass pipettes. Never force a glass pipette into a pipump.
- **Glass Disposal:** Dispose of broken glassware in the designated glass disposal bucket in the lab. This bucket is for glass, slides, and coverslips only.
- **Hot Glassware:** Handle hot glassware using appropriate tongs or test tube clamps. Use caution when heating chemicals.
- **Injury Reporting:** If you or another student is injured in any way during lab, inform the instructor immediately. Do not attempt to clean up blood-contaminated spills!
- **First Aid:** Administer first aid promptly to clean, sterilize, and cover any scrapes, cuts, or burns. Wear bandages over open skin wounds.
- **Report Hazards:** Report any hazardous conditions to the TA immediately.