
Introduction to Life Science II

Biology 1302 (section 001)

Spring 2026

Instructor: Rachel Leicher

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Office hours: Tuesday 11:00-2:00, or by appointment

Meeting Information: 9:30AM-10:50AM every Tuesday and Thursday in the Soules College of Business #112

Course Objectives: Biology 1302 is the second of two courses designed to help understand the scientific study of life at the organismal, population, and community levels including form, function, reproduction, taxonomy, systematics, ecology, and evolutionary history of biodiversity.

Student Learning Outcomes: After this class, you should be able to...

- To define biology, comprehend and apply the scientific process.
- To describe and understand the concept of evolution as genetic change in a population over time. To show how evolution is a unifying theme in biology.
- To describe the concept of phylogeny and apply it to prokaryotes, protists, plants, fungi, and animals.
- To describe and understand vertebrate anatomy and physiology.
- To describe and understand the ecology of population, communities, ecosystems, and the biosphere. Understand the role of humans in the ecology of the biosphere.
- To understand the significance of biology to you and your life and apply the knowledge acquired to making educated decisions as a member of society.
- To apply new learning and studying skills to your life.

Suggested Textbook: Hoefnagels, Mariëlle. 2025. Biology: The Essentials. McGraw Hill, New York NY. ISBN: 9781266436369

NOTE: This comes bundled with an electronic version of the textbook and online activities. Therefore, you do not need to buy the textbook separately unless you want a print copy. We will NOT be utilizing the homework function of MH Connect.

Grading:

1. Homework Assignments (15%)
2. Quizzes (25%)
3. **ONE** Group Project: Field Guide (30%)
4. Discussion Board Posts/ In-Class Discussions (20%)
5. Attendance (10%)

Grading: Letter grades will be assigned according to the following scale:

A = above 89.5 B = 79.5 – 89.49 C = 69.5 – 79.49 D = 59.5 – 69.49 F = Below 59.5

All your course grades will be available in Canvas, allowing you to view your current grade at any time. Please be aware that I cannot offer extra credit or work at the end of the semester. Your average shown in Canvas will determine your final grade in the course.

At the end of the semester, grades will be calculated in Canvas following the syllabus. If your average is **within 0.5 points** of the following letter grade, I will round it up **automatically** (see grade scale above). The only other adjustment that will be made is if the final percentage is **WITHIN ONE POINT** of the following letter grade (and **NO** more), and the student has missed **THREE OR FEWER LECTURES, TWO or FEWER WEEKLY QUIZZES**, and has a **CLASS PARTICIPATION GRADE OF 80% or HIGHER**. If you meet these criteria, I will **round up to the next letter grade**. (Mitigating circumstances will be considered at the discretion of the instructor).

Late work and Make-up policy: All assignments are expected to be submitted by the posted deadlines. **NO LATE WORK WILL BE ACCEPTED**. All students are responsible to turn in assignments, quizzes, etc by the posted due date on Canvas.

Extensions or make-up opportunities may be granted in cases of documented emergencies or other serious circumstances (e.g., illness, family emergencies, university-sanctioned events). To be eligible for an extension:

- You must contact the instructor as soon as possible – ideally before the due date.
 - For non-emergency illnesses, students must contact the instructor within 24 hours of the missed class session and provide a doctor's note to receive make up assignment materials.
 - If the illness does not require a doctor's visit (and therefore no doctor's note can be provided), students may make up assignments from up to two missed class meetings, provided they reach out within 24 hours of the first missed class to inform me of the situation.
 - Any documented reasons for an absence, appropriate documentation (doctor's note, official university letter, etc) must be provided.
- Extensions are granted, or not granted, at the discretion of the instructor.

Please note that simply missing a deadline without prior communication is not a valid reason for an extension or grade adjustment.

Attendance/Participation: Attendance is essential to success in this class. If you miss a class, it is your responsibility to contact another student (not the instructor) to get notes and other announcements made during class time.

Arriving Late/ Leaving Early: If a student anticipates arriving late to class or leaving early for an acceptable reason, they must notify the instructor as far in advance as possible and provide documentation when appropriate (e.g., medical appointments, university-sponsored activities). It is the student's responsibility to obtain missed lecture notes or information from a classmate.

Students who arrive 15 minutes or more after class begins, or who leave more than 10 minutes before class ends, will not receive attendance credit for that class session.

Homework Assignments: You will be required to complete homework assignments, reading quizzes, and/or online activities throughout the semester. These activities are designed to help you engage actively with the course material and improve your understanding. These assignments will be assigned by the instructor based on the class pace in the course. Late work will not be accepted.

Quizzes: Quizzes will be administered regularly throughout the semester, typically once per week. All quizzes are completed individually and during class time.

Some quizzes will require students to write answers on notebook paper while questions are projected on a PowerPoint slide. For these quizzes, students will have approximately one minute per question, though the exact time may vary depending on question complexity. Students who arrive late may answer only the questions that remain; previously displayed questions will not be repeated.

Other quizzes will be printed, distributed, and completed within a set time period based on complexity and number of questions. Students who arrive late for these quizzes will only have the remaining time to complete them.

Each quiz will be worth 10–15 points, depending on content and length.

iNaturalist Biodiversity Assignment: This is a semester-long assignment designed to engage students in citizen science and increase their awareness of local biodiversity. Students will individually use the **iNaturalist** app—a community science platform that allows users to document and share observations of biodiversity in their surroundings.

Objective

- Develop familiarity with biodiversity in your local environment
- Contribute to a global citizen science project
- Practice observational, data collection and scientific communication skills

Requirements

- **Download and setup:** Students must download the iNaturalist app and create an account within the first week of the semester. Complete instructions will be posted on Canvas.
- **Training:** An in-class tutorial, typically held on the first or second day of class, will guide students through using the app and understanding the standards for submitting high-quality observations.
- **Observations:** Students will be required to upload regular biodiversity observations throughout the semester, including high-quality photos and accurate identifications when possible.
 - A **minimum of 65 observations** is required for the semester.
 - **15 individuals uploaded must be vertebrates** (reptiles, amphibians, mammals, birds, etc)
 - **25 individuals uploaded must be invertebrates** (insects, arachnids, etc)
 - **25 individuals uploaded must be plants or fungi**

- You cannot include any domesticated species (cats, dogs, individuals at a pet store, farm animals, landscaping plants, etc)
- All observations must be made in nature (nothing in a store, garden, zoo, etc)
- Replicates of organisms will not be counted towards the total number of organisms.
- DO NOT upload pictures from the internet. **All pictures must be taken BY YOU, during the semester.** This means you cannot go back years in your camera roll and upload pictures from your vacation.
- You must include location and timestamp information on your images. This will help with the identification, or confirmation of identification, of organisms by other iNaturalist users.
- **Photographs must be clear, in focus, and feature the intended organism as the primary subject.**
Images in which the organism only appears incidentally should not be uploaded. For example, a family portrait with a forest in the background would not be acceptable. Instead, submit a photo that highlights a single identifiable organism—such as a close-up of a specific pine tree showing its bark, needles, or cones—so that it can be accurately recognized. Multiple images of the same organism can be uploaded to make identification easier.
- **Having extra organisms included in a group will not result in a penalty of points or extra points. Extra organisms in one group WILL NOT cover missing organisms of another group.**
 - Check-ins: Progress will be monitored through periodic check-ins. These will ensure students stay on track and have opportunities to ask questions or troubleshoot issues.
- Final Submission: At the end of the semester, students must have all uploads on iNaturalist within the class project group by the due date. No extensions or late work will be accepted.

Guidelines

- Observations must adhere to iNaturalist's community standards, including maintaining appropriate photo quality, tagging locations accurately, and ensuring accurate species identification. Failure to follow the guidelines will result in a failing grade.
- Students must respect nature and comply with all local laws and guidelines during their field observations.
- Participation and engagement throughout the semester are critical to obtain full credit.

Grading Criteria:

- iNaturalist Set Up Quiz (10pts)
 - iNaturalist account created, joined class project, completed onboarding quiz
- iNaturalist Check-in #1: Introduction (15pt)
 - Upload a picture of your observation page that clearly shows your username and, at least, 4 observations.
- iNaturalist Final Check-in:
 - FOR THE CANVAS SUBMISSION: students will need to upload a word doc, pdf, or text entry of their iNaturalist username. This Canvas submission will be 2 points towards the overall grade.
 - PROJECT: all organism images within each group should be uploaded to iNaturalist under the class project group. Each upload should have the needed info to be identified by the iNaturalist community, although, if your image does not a confirmation of identification, it will still be accepted. All guidelines stated previously should be followed for the overall project.
 - Rubric:

Criteria	Possible Points
15 vertebrates	30 (2 pts each)
25 invertebrates	25 (1 pt each)
25 plants or fungi	25 (1 pt each)
Submission of iNaturalist username	5
Quality of Images	15

Discussion Board Posts/ In-Class Discussions: Throughout the semester, students will complete a series of discussion-based assignments connected to our course text, *The Hidden World* by George McGavin. These activities are designed to deepen engagement with the material, support critical thinking, and prepare students for class participation and assessments.

Introductory Discussion Post

During the first week of class, students will submit an introductory post to help establish our classroom community. This post will include basic background information, academic or professional interests, and personal goals for the course. Additional instructions will be provided on the course website.

Reading-Based Discussions & Activities

After the introductory post, students will participate in several reading checkpoints based on assigned chapters from *The Hidden World*. These checkpoints ensure students remain on pace with the reading and are prepared to engage meaningfully with the text.

Reading checkpoints may take one of the following forms:

- Online written discussion post
- In-class discussion
- Small-group activity
- Individual or collaborative assignment
- Short reading quiz
- Writing assignment

Students must complete the assigned reading **before class** on designated checkpoint dates. The format of each checkpoint will be announced in advance.

Reading Checkpoints: (dates will be listed on Canvas and may change based instructor discretion)

- Reading Check 1: Chapters 1–3
- Reading Check 2: Chapters 4–6
- Reading Check 3: Chapters 7–8
- Final Reading Check: Comprehensive check covering entire book

Participation & Completion Expectations

To receive full credit for a checkpoint, students are expected to:

- Submit online posts by the posted deadline when required
- Arrive prepared to participate in in-class activities
- Demonstrate familiarity with the assigned chapters through contributions and responses
- Engage respectfully and thoughtfully with peers

Students who do not complete the assigned reading prior to class may not be able to meaningfully participate and may lose credit for that checkpoint.

Professional Conduct

All written and verbal contributions should reflect professional communication. Students are encouraged to reference specific ideas, themes, or examples from *The Hidden World* to support their points during discussions and written posts.

Group Project : You will be assigned to a group of four or five this semester to complete a group project. This project involves creating an infographic on a specific topic. Your final score on the group project will include a team assessment that you must complete on your team members. Grades for this group project may vary depending on your level of activity in planning, creating, and submitting the final project. More details will be posted on Canvas and will be discussed in class within the first two weeks of the semester.

- Topic – Diseases and Syndromes

CANVAS: Students should log into Canvas as soon as possible and carefully read all announcements. Canvas and student email should be checked DAILY for new announcements or messages. On Canvas, you will find lecture outlines, videos, discussion board posts, quizzes, and much more that will be very helpful for you as you take this course. You will also have quizzes posted throughout the semester under the module sections, labeled "Quizzes." Announcements will be posted when these quizzes are active for you to take. Another helpful tool is that all course grades will be available in Canvas, allowing students to view and calculate their current course grades at any time.

Academic Integrity: Students should be aware that absolute academic integrity is expected of every student in all undertakings at The University of Texas at Tyler. Failure to comply can result in strong university-imposed penalties. **Be forewarned that possessing anything containing course content will be considered cheating, whether you refer to it during the exam.** Also, be aware that **TALKING to anyone other than the instructor or proctor during an EXAM will automatically be considered cheating.** It does not matter what you were talking about. This includes using **cell phones** (even if they call YOU) or any other electronic device that could be used to record test material. Violation of this policy will be **considered cheating and treated accordingly.** Penalties for cheating include anything from a **zero on the exam or quiz** during which the cheating occurred up to an **F for the course in question**, at the instructor's discretion.

Use of an AI Generator such as ChatGPT, iA Writer, MidJourney, DALL-E, etc. is **explicitly prohibited** unless otherwise noted by the instructor. The information derived from these tools is based on previously published materials. Therefore, using these tools without proper citation constitutes plagiarism. Additionally, be aware that the information derived from these tools is often inaccurate or incomplete. **It is imperative that all work submitted should be your own.** Any assignment found to have been plagiarized or to have used unauthorized AI tools may receive a zero and/or be reported for academic misconduct.

UNIVERSITY POLICIES AND INFORMATION

Withdrawing from Class: Students may [withdraw](#) (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email enroll@uttyler.edu to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision. UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal](#).

Texas law prohibits students from dropping more than six courses during their entire undergraduate career*. The six courses dropped include those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. CAUTION #1: Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). CAUTION #2: All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. CAUTION #3: All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. CAUTION #4: All veterans or military-affiliated students should consult with the [Military and Veterans Success Center](#).

* Students who began college for the first time before 2007 are exempt from this law.

Artificial Intelligence Statement: UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may

appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).

Final Exam Policy: Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members must maintain student final examination papers for a minimum of three months following the examination date.

Incomplete Grade Policy: If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in place of a grade only when all of the following conditions are met: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

Grade Appeal Policy: Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

Disability/Accessibility Services: In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and

Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email saroffice@uttyler.edu, or call 903.566.7079."

Military Affiliated Students: UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. The [Military and Veterans Success Center \(MVSC\)](#) has campus resources for military-affiliated students. The MVSC can be reached at MVSC@uttyler.edu or via phone at 903.565.5972.

Students on an F-1 Visa: To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

Academic Honesty and Academic Misconduct: The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

FERPA: UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements to protect your confidential information.

Absence for Official University Events or Activities: This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.

Absence for Religious Holidays: This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog](#).

Absence for Pregnant Students: This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at parents@uttyler.edu and also complete the [Pregnant and Parenting Self-Reporting Form](#).

Campus Carry: We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <https://www.uttyler.edu/about/campus-carry/index.php>.

Student Resources:

Resources to assist you in this course

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas](#) [Links to an external site.](#)
- [Robert Muntz Library](#) . and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)
- [Office of Research & Scholarship Design and Data Analysis Lab](#)

Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [My SSP App](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Student Assistance and Advocacy Center](#)
- [Military and Veterans Success Center](#) (supports for all of our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

I RESERVE THE RIGHT TO MODIFY THIS SYLLABUS AT ANY TIME. THEREFORE, YOUR ATTENDANCE AND ATTENTION TO THE ANNOUNCEMENTS IN CANVAS ARE CRUCIAL BECAUSE THEY WILL ASSIST YOU IN REMAINING CURRENT ON THE MATERIAL AND KNOWING WHEN THE SYLLABUS MAY BE MODIFIED.

SCHEDULE OF TOPICS – BIOL 1302				
Week of	Topics	Chapter	Assignments	Due Dates
Aug 25 th	Forces of Evolutionary Change	12	Connect Ch. 12 Discussion Topic #1 iNat, syllabus & Quiz 1	
Sept 1 st	Evidence of Evolution	13	Connect Ch. 13 Quiz 2 Discussion Topic #2	
Sept 8 th	Speciation and Extinctions	14	Connect Ch. 14 Quiz 3 Virtual Lab #1	
Sept 15 th	Populations	18	Connect Ch. 18 Quiz 4 iNaturalist check-in #1	
Sept 22 nd	Communities and Ecosystems	19	Connect Ch. 19 Quiz 5	
Sept 29 th	Preserving Biodiversity	20	Connect Ch. 20 Quiz 6 Discussion Topic #3	
Oct 6 th	Animal Tissue and Organ Systems	23	Connect Ch. 23 Quiz 7 iNaturalist Check-in #2	
Oct 13 th	Nervous System and the senses	24	Connect Ch. 24 Quiz 8 Infographic Project	
Oct 20 th	The Endocrine System	25	Connect Ch. 25 Quiz 9	
Oct 27 th	The Skeletal and Muscular Systems	26	Connect Ch. 26 Quiz 10 iNaturalist check-in #3	
Nov 3 rd	The Circulatory and Respiratory Systems	27	Connect Ch. 27 Quiz 11	
Nov 10 th	The Digestive and Urinary Systems	28	Connect Ch. 28 Quiz 12 iNaturalist check-in #4	
Nov 17 th	The Immune System	29	Connect Ch. 29 Quiz 13 Virtual Lab #2	
Nov 24 th	Thanksgiving Break – No Classes			
Dec 1 st	Animal Reproduction and Development	30	Connect Ch. 30 Quiz 14 Final iNaturalist Report	
Dec 8 th	Finals Week – No Class			

Last Day to Withdrawal from the course: November 4th, 2025