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**Introduction to Life Science II**  
Biology 1302 (section 001)  
Fall 2025

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**Instructor:** Rachel Leicher

**Office:** HPR 115      **Email:** rleicher@uttyler.edu

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

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**Class will be every Tuesday and Thursday in the Cowan Fine Arts Center Room 1009**

**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.

**Required 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. Therefore, you do not need to buy the textbook separately unless you want a print copy.

**Grading:**

1. Connect Assignments (30%)
2. Quizzes (20%)
3. iNaturalist Project (15%)
4. **TWO** Virtual Connect Lab Assignments (10%)
5. **THREE** Discussion Board Posts (10%)
6. **ONE** Group Project: Infographic (15%)

**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. Students must reach out about making up missed in class assignments by the end of the same day as the missed class and the assignment was completed by the rest of the class. The student must also present an excused reason for missing class in order to make up any missed quizzes, activities, etc.

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.
- 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.

**Connect Assignments:** You will be required to complete weekly homework assignments, reading quizzes, and/or adaptive learning modules (SmartBook Assignments) through Connect. These activities are designed to help you engage actively with the course material and improve your understanding.

- Connect Assignments will be due at the end of the semester
  - it is each student's responsibility to work through all assigned connect modules and assignments by the due date.
- No late work will be accepted
- Grades from Connect will be imported into Canvas and account for 30% of your grade

**Quizzes:** There will be **at least fourteen quizzes** during the semester, usually one quiz per week. All quizzes will be taken individually and in class (**EXCEPT the iNaturalist quiz will be taken online by the stated due date**). Some quizzes will be taken using a piece of notebook paper and the questions will be displayed on a PowerPoint slide. For PowerPoint quizzes, you will have, approximately, one minute per quiz question (this will vary depending on the complexity of the question). If a student arrives late, they may complete what they can of the remaining PowerPoint questions, but the once a question has passed, it will not be brought back up. Other quizzes will be printed, handed out, and completed within 10 minutes. For these quizzes, if a student arrives late, they will only have the allotted amount of time left to complete the quiz. Each quiz will be worth 10 points.

**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 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 100 observations** is required for the semester.
    - **50 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 & Fungi**
      - You cannot include any domesticated species (cats, dogs, individuals at a pet store, etc)
      - All observations must be made in nature (nothing in a store, garden, zoo, etc)
      - You can only include 3 replicates of the same species. This means you could upload, up to, 3 different individual ladybugs to count toward your total of 25 invertebrates. They **MUST** be different individuals though from different environments (what I mean is, do not upload 3 separate pictures of 3 different ants from the same colony)

- 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.
- Check-ins: Progress will be monitored at one check-in point. Students are responsible to completing the semester long project on their own time outside of class. No late work will be accepted.
- Final Submission: At the end of the semester, students will submit a summary report reflecting on their contributions, observations, and lessons learned from the experience. \*see Canvas details

### **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**

- Setup & Tutorial (iNaturalist Set Up Quiz) (10pts)
  - iNaturalist account created, joined class project, completed onboarding quiz
- Check-In #1 (15pts)
  - Must upload a screenshot showing that the student has uploaded 2 observations to iNaturalist and another screenshot showing that the student has joined the class project.
  - The student will also need to include a written short summary of how they plan to acquire all of the observations needed for the project
- Final Check-In (100pts)
  - Each organism will be worth 1 point for a total of 100 possible points for the entire project. You must follow the above guidelines for number of organisms per group. 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.

**Virtual Lab Assignments:** This course includes virtual lab assignments delivered through McGraw-Hill Connect. These simulations are designed to help you build laboratory skills and reinforce key biological concepts through interactive and online experiments. Additional information will be posted on Canvas, where you should be able to access each virtual lab.

\*each virtual lab contains SEVERAL module activities to work through

- Virtual Lab 1 – Evolution and Natural Selection Labs
- Virtual Lab 2 – Anatomy and Physiology Labs (Endocrine, Immunity)

**Discussion Posts:** There will be three discussion boards that you will need to complete. In each discussion board, a portion of your grade will come from the post that you create, while the other portion of the score will come from your participation by commenting on other students' work.

- Topic 1 – Introductions
- Topic 2 – Evolution
- Topic 3 – Climate Change

**Group Project (Infographic):** 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](mailto: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](mailto: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](mailto: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](mailto: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 <http://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.**

\*\*\*Tentative schedule is subject to change

<b>SCHEDULE OF TOPICS – BIOL 1302</b>				
<b>Week of</b>	<b>Topics</b>	<b>Chapter</b>	<b>Assignments</b>	<b>Due Dates</b>
Aug 25 <sup>th</sup>	Forces of Evolutionary Change	12	Connect Ch. 12 Discussion Topic #1 iNat (ONLINE-due 8/31 @ 11:59PM), syllabus & Quiz 1 (in class TBD)	8/31 @ 11:59PM
Sept 1 <sup>st</sup>	Evidence of Evolution	13	Connect Ch. 13 Quiz 2 (in class TBD) Discussion Topic #2	9/7 @ 11:59PM
Sept 8 <sup>th</sup>	Speciation and Extinctions	14	Connect Ch. 14 Quiz 3 (in class TBD) Virtual Lab #1 (multi labs to work through)	9/14 @ 11:59PM
Sept 15 <sup>th</sup>	Populations	18	Connect Ch. 18 Quiz 4 (in class TBD) iNaturalist check-in #1 (due 9/14)	9/21 @ 11:59PM iNat chk in due 9/14 @ 11:59PM
Sept 22 <sup>nd</sup>	Communities and Ecosystems	19	Connect Ch. 19 Quiz 5 (in class TBD)	9/28 @ 11:59PM
Sept 29 <sup>th</sup>	Preserving Biodiversity	20	Connect Ch. 20 Quiz 6 (in class TBD)	10/5 @ 11:59PM

			Discussion Topic #3	
Oct 6 <sup>th</sup>	Animal Tissue and Organ Systems	23	Connect Ch. 23 Quiz 7 (in class TBD) iNaturalist Check-in #2 (due 10/5)	10/12 @ 11:59PM iNat chk in due 10/5 @ 11:59PM
Oct 13 <sup>th</sup>	Nervous System and the senses	24	Connect Ch. 24 Quiz 8 (in class TBD) Infographic Project	10/19 @ 11:59PM
Oct 20 <sup>th</sup>	The Endocrine System	25	Connect Ch. 25 Quiz 9 (in class TBD)	10/26 @ 11:59PM
Oct 27 <sup>th</sup>	The Skeletal and Muscular Systems	26	Connect Ch. 26 Quiz 10 (in class TBD) iNaturalist check-in #3 (due 10/26)	11/2 @ 11:59PM iNat chk in due 10/26 @ 11:59PM
Nov 3 <sup>rd</sup>	The Circulatory and Respiratory Systems	27	Connect Ch. 27  Quiz 11 (in class TBD)	11/9 @ 11:59PM
Nov 10 <sup>th</sup>	The Digestive and Urinary Systems	28	Connect Ch. 28 Quiz 12 (in class TBD) iNaturalist check-in #4 (due 11/9)	11/16 @ 11:59PM iNat chk in due 11/9 @ 11:59PM
Nov 17 <sup>th</sup>	The Immune System	29	Connect Ch. 29 Quiz 13 (in class TBD) Virtual Lab #2 (Cmulti labs to work through)	11/23 @ 11:59PM
Nov 24 <sup>th</sup>	<b>Thanksgiving Break – No Classes</b>			
Dec 1 <sup>st</sup>	Animal Reproduction and Development	30	Connect Ch. 30 Quiz 14 (in class TBD) Final iNaturalist Report (due 11/30)	12/7 @ 11:59PM iNat Report due 11/30 @ 11:59PM
Dec 8 <sup>th</sup>	<b>Finals Week – No Class</b>			

**Last Day to Withdrawal from the course:** November 4<sup>th</sup>, 2025