WISCIENCE
UNIVERSITY OF WISCONSIN-MADISON

Exploring Biology

Fall Semester 2023 **IntegSci 100-001** **2 credits**

Time: Mondays 2:25-4:20 (combined lecture + discussion)
Place: 3250 Helen C. White Hall
Course Director: Dr. Cara Theisen, she/her, (chtheisen@wisc.edu), WISCIENCE

1. COURSE OVERVIEW

Welcome to **Exploring Biology**, a first-year seminar course focused on giving students the skills and knowledge needed for successful academic and post-graduate careers in biology, and helping new students transition to UW-Madison. This course will teach students the five core concepts in biology – the "big ideas" that apply to biological phenomena. They are: Evolution (E), Pathways and Transformations of Energy and Matter (PTEM), Information Flow, Exchange, and Storage (IFES), Structure and Function (SF), and Systems (S). Students will also develop critical thinking and communication skills, learn about the breadth of biosciences careers, and become familiar with resources on campus that support student success.

"Biology in Wisconsin": The course will be organized around four primary topics that relate to people living in Wisconsin. We will explore science affecting residents in Wisconsin, look at Wisconsin biological systems as examples of concepts, and learn about how research being done on campus is contributing to discoveries in biology. This course will have four units:

1. Agroecology in Wisconsin: Reciprocity with Native Ecosystems
2. Genomics and Biotechnology Around Us
3. The Power of Plants
4. Viral Transmission

In these units, students will learn how to relate and apply the five core concepts in biology to various biological principles.

The Agroecology in Wisconsin unit will explore connections between Wisconsin agriculture and native ecosystems.

The Genomics and Biotechnology Around Us unit is designed to explore the research stories of DNA, better understand how biotech companies in Madison use genomics, and learn how we can apply this knowledge in our daily lives to evaluate scientific claims.

The Power of Plants unit will focus on the role of plants as the foundation for nearly all life on earth and explore current research in plant biology.

The Viral Transmission unit will focus on the interactions between viruses, hosts, and their environment, and how these factors come together to promote or inhibit transmission of viruses from host to host.

2. COURSE FORMAT & MEETING TIME

This class is taught in what is called a blended format, that "blends" in person instruction with online learning activities:

- **Class meetings**: Class meets on Mondays from 2:25-4:20 pm and is run as a combined lecture and discussion (with one 10-minute break). Students are seated in table groups by discussion section, with an instructor and two undergraduate peer leaders assigned to each section. This gives you an opportunity to interact with a smaller group of students so you can get to know them well, but also benefit from the expertise of a team of instructors who will be leading the combined class together. Find your table assignment in class.
- **Online activities/pre-class preparation:** The class will also include online activities that students will complete individually outside of class. This will include tasks that introduce new course concepts and prepare you for activities in class, as well as activities that will reinforce and extend what was learned that week in class. Pre-class preparation work will be accessed in the course Canvas site under the weekly module. The pre-class work for the following week will be posted on Tuesday by 12:00pm.

This class format offers benefits of online courses, such as learning at your own pace, having flexibility to choose when and where you learn best, and including a variety of different types of activities. Because course concepts are primarily introduced online before class, in person class meetings are able to be highly interactive, giving you the opportunity to form meaningful connections with classmates and instructors. Activities in class will build on concepts that were introduced in online activities, allowing you to deepen your understanding and apply what you are learning with the support of classmates and instructors. Overall, blended courses like Exploring Biology offer a high amount of structure, which has been shown in research studies to help all students to be successful in college.

Discussion Sections

Discussion Section	Tables	Section Instructor	Peer Leaders	FIG
IntegSci 100-301	7, 8, 10, 11	MW	AV & TL	11
IntegSci 100-302	16, 17, 18, 19	CV	NT & MM	12
IntegSci 100-303	9, 12, 13, 15	MK	HP & JC	13
IntegSci 100-304	1, 2, 3, 4	OS	EF & KW	14

3. PANDEMIC LEARNING

While the University has returned to normal operations during the Covid-19 pandemic, illnesses including Covid-19 are still prevalent.

- **Masking and personal safety in class:** Mask are not required indoors at UW-Madison. Please respect the decision of classmates and instructors who decide to continue wearing a mask. We will have masks available in class. We will also have cleaning materials that you are welcome to use to clean your personal area at the start of class.
    - **Absences due to illness or quarantine:** We have designed this course to be flexible if you need to miss class for illness so that you can still learn and be successful. If you become ill (or a family member or close contact becomes ill and that impacts your participation in this course), please seek

treatment and let your instructor know as soon as possible. For the health and safety of your fellow classmates and instructors, please do not attend class if you are sick. This includes but is not limited to: if you have a fever, have COVID or Flu symptoms or have been exposed, or you have tested positive for any respiratory viruses. We want you to be able to prioritize your health and recovery and will work with you to make alternate plans for how to proceed with the course. Students will also need to be flexible should a member of the instructional team become ill. Please refer to the Absences and Late Work section for detailed policies.

4. LEARNING GOALS & COURSE CREDIT

Learning Goals:

Students in Exploring Biology will:
Learn biology concepts and ideas:

1. Identify and describe the five core concepts of biology (Evolution (E), Pathways and Transformations of Energy and Matter (PTEM), Information Flow, Exchange, and Storage (IFES), Structure and Function (SF), and Systems (S)).
2. Apply the biology core concepts from molecular to ecological scales.

Develop ways of thinking like scientists

3. Gain skills in scientific thinking, including asking questions, interpreting data, evaluating claims, communicating science, and reading scientific literature.
4. Appreciate the importance of diversity and inclusion in science, including how a diversity of individuals promotes a richer understanding of science and makes scientific research more equitable.

Explore the biology and UW landscape and articulate ideas about their own interests

5. Identify how biologists contribute to society and how the people of WI are impacted by biology.
6. Explore the breadth of careers related to biology.
7. Become familiar with campus resources and opportunities to help you thrive as a STEM student at UW-Madison.

Credit: This is a 2-credit course. The credit standard for this course is met by an expectation of a total of at least 90 hours of student engagement with the course learning activities, which include regularly scheduled class meeting times, reading, writing, and other student work as described in this syllabus. This corresponds to an average of 6 hours spent on coursework in this class per week.

Designation: The only prerequisite for enrollment in Exploring Biology is that you are a first-year student interested the biosciences. While most students will major in one of the 30 biological sciences at UW-Madison, non-bioscience students are also welcome to enroll; many of the skills emphasized will be applicable to other majors as well.

Prerequisite: First-year student
Breadth: Biological Science, counts towards Natural Science Requirement
Level: Elementary
Letters and Science Credit: Counts as Liberal Arts and Science Credit

First-year Seminar: Exploring Biology also counts as a 'first-year seminar'. This means that it includes many activities that are intended to support new students in their transition to academic and student life at UW-Madison. This includes opportunities to connect with peers, learn about resources and opportunities to make the most of your Wisconsin Experience, and practice engaging as part of an academic community through discussions and in-class activities.

First-Year Interest Groups: This course is part of the First-year Interest Group (FIG) program. You are grouped in your discussion section and at your table with all students who are in your FIG, which means you are taking two other courses together. We encourage you to connect with your classmates to get to know people with similar interests, form study groups, and support each other. During class, we will occasionally discuss how what you are learning in Exploring Biology relates to your linked courses, but we encourage you to engage in these discussions with your classmates outside of class as well! Discovering how the fields relate to one another can help you learn more deeply and be able to apply and integrate what you are learning in new contexts.

5. INSTRUCTIONAL TEAM ROLES & CONTACT INFORMATION

Instructors: This course was developed by eight instructors (four serving the Monday section and four serving the Wednesday section). The instructors are all UW-Madison researchers from a variety of subdisciplines in the biological sciences. They brought together their backgrounds, experiences, and expertise to create units that highlight the core concepts in biology through a 'Biology in Wisconsin' lens, as well as include introductions to biological knowledge, skills, and careers. You will hear from the instructors who designed each unit in the activities and videos in Canvas. You will also work closely with one Section Instructor who is assigned to your discussion section. You can learn more in the 'Meet Your Instructors' section of the Course Introduction Module in Canvas.

				
Name Pronouns	MW *He/Him/His*	MK *She/Her/Hers*	CV *He/Him/His*	OS *They/Them/Theirs*
Email	@wisc.edu	@wisc.edu	@wisc.edu	@wisc.edu
Unit	**Agroecology in Wisconsin**	**Genomics and Biotechnology Around Us**	**The Power of Plants**	**Viral Transmission**
Section	IntegSci 100-301	IntegSci 100-303	IntegSci 100-302	IntegSci 100-304

How to Contact Your Instructor: Your Section Instructor will be your primary contact throughout the course. And while we will have many opportunities to communicate with one another—during in-person lecture and discussions—personal inquiries can be confidentially directed to them via email. Your Section Instructor will respond to messages between 24- and 48-hours during weekdays (Monday – Friday). Please be professional in your communication and include "IntegSci 100" or "Exploring Biology" in the subject line along with what you're writing to us about. You can also post questions about anything related to the course in Piazza, where instructors and other students will be able to answer them. See details below about Piazza.

Instructor Office Hours: Office hours are an opportunity to have a conversation with your instructor in a small group or one-on-one setting. Your instructors (in this course and others) love it when students come to office hours because it gives us a chance to get to know you better, find out about how the course is working for you, and help you to be successful, within and beyond this course. Feel free to use office hours to check in about assignments, ask questions you have about careers, chat about our research projects and opportunities on campus, or to just get to know us better. You are always welcome to come to any member of the instructional team's office hours, whether they are your Section Instructor, or not. If our office hours don't work for you or you need to join virtually, please send us a message to schedule another time and arrange to join online.

Instructors	Office Hour Time	Location
MW & OS	Mondays @ 4:30 – 5:30 PM	Helen C. White 3251, via Zoom* or by appointment
MK & CV	Tuesdays @ 11:00 AM– 12:00 PM	Steenbock Library Room 110C via Zoom* or by appointment

****To join online office hours**: Please let the instructors know you are planning to join virtually ahead of time. Click Zoom in the left panel in Canvas. The next office hour will be listed at the top of 'upcoming meetings'. Click to join.

Peer Leaders: Undergraduate peer leaders are involved with this course to help support you as you navigate your first semester at UW-Madison. They will attend class to share campus resources and major exploration tips and ideas every week, as well as hold weekly 'Peer Leader Hours' to meet with students on a drop-in basis about anything related to your undergraduate experience. The times for 'Peer Leader Hours' will be announced each week. Feel free to ask them anything related to being a UW-Madison student, and check out their bios on Canvas to learn more about how they can help. You'll also have a 1:1 meeting with one of your discussion section's Peer Leaders early in the semester.

Section	IntegSci I00-301	IntegSci I00-302	IntegSci I00-303	IntegSci I00-304
Name Pronouns	NT *She/Her/Hers*	AV *She/Her/Hers*	HP *He/Him/His*	EF *She/Her/Hers*
Email	@wisc.edu	@wisc.edu	@wisc.edu	@wisc.edu
Name Pronouns	MM *She/Her/Hers*	TL *She/Her/Hers*	JC *She/Her/Hers*	KW *She/Her/Hers*
Email	@wisc.edu	@wisc.edu	@wisc.edu	@wisc.edu

Course Director & WISCIENCE: The Course Director coordinates all activities of the course and works closely with Instructors and Peer Leaders. While your Section Instructor is your first point of contact for most course things, you can also contact the Course Director, Dr. Cara Theisen, in cases when you may not be comfortable contacting them. You should also contact Dr. Theisen about accommodation-related inquiries and if you would like more information about other WISCIENCE courses and programs. Dr. Theisen is Teaching Faculty in WISCIENCE, the Wisconsin Institute for Science Education and Community Engagement.

Name	Pronouns	E-mail	Office Hours
Cara Theisen, Ph.D.	She/Her/Hers	chtheisen@wisc.edu	By appointment

WISCIENCE Diversity Statement: WISCIENCE (as an organization) and members of the teaching team (as human beings and instructors of this course) are committed to an inclusive learning environment. We value diversity as a source of strength, creativity, and innovation and strongly believe that the diversity within our learning community is an asset to our learning experience. We believe that our diversity will enhance our learning in this course and provide further opportunities for us to learn from each other. This course was intentionally designed to highlight how diversity and inclusion benefit science and we have strived to create an inclusive and equitable course where all contributions are valued, especially because of the identities, backgrounds, cultures, statuses, and experiences that inform them. If you feel there are ways this course could be more inclusive, please talk with Dr. Theisen and/or indicate how so on course feedback surveys, which will be shared throughout the semester.

6. TECHNOLOGY

Technology Requirements: There are some technology requirements that are important for success in this course. This course is taught via hybrid instruction and has both asynchronous and synchronous activities, many of which will be completed with the support of online tools. For asynchronous work, where students are working independently or with classmates to master unit content, students will need access to a computer (running at least OS 10.13 High Sierra or Windows 10) with a stable, high-speed internet connection. Students will also need an internet browser that is compatible with Canvas like Firefox, Chrome, Internet Explorer and Safari. If these ideal specifications are not possible, there are resources available to students on campus. Students are able to check out laptops and iPads via the Equipment Checkout System page with their Wiscards. Check out the UW-Madison IT department for free or discounted software, including MS Office and antivirus options for personally owned computers, accessing WiscVPN, GSuite, special printing jobs, and more. There are also various computer labs throughout campus - they offer color printers, scanners, and digital editing resources. The DoIT Help Desk provides students with free tech support and troubleshooting help. Visit helpdesk.wisc.edu for more information. If your access to this equipment is limited, students can also use alternate devices like iPads or cell phones.

Course Technology:

Course Site - Canvas: All course information and assignments will be organized in Canvas by week under 'Modules'. There is no required textbook; all readings and materials will be shared via Canvas. Instructors will also post announcements and share information in Canvas, so it is important to check it regularly. Refer to more detailed information about the course site under the 'Course introduction' module in Canvas.

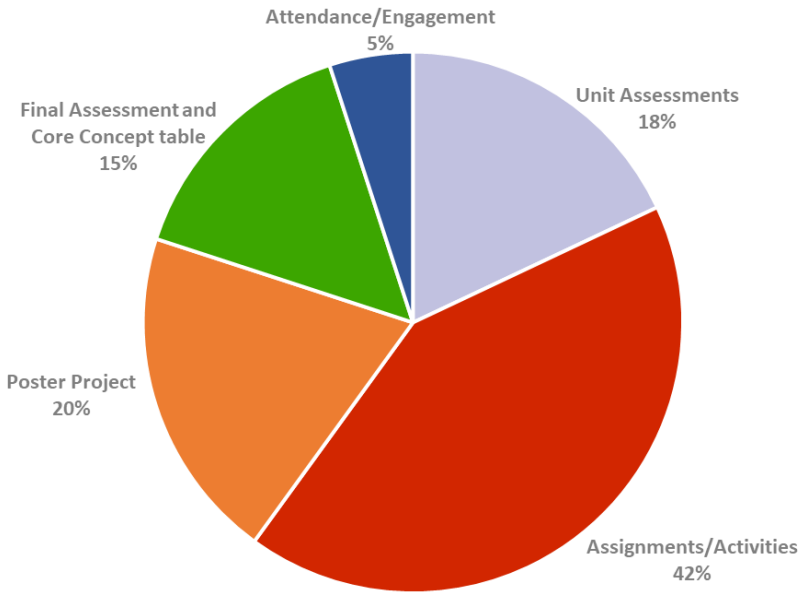
Top Hat: Top Hat is a computer/mobile device app (free to students) that we will use during class each week to gauge learning and as a polling tool to get immediate responses from the entire class. Visit Top Hat Account setup for information about getting started with Top Hat and use the following join code to join this course: **034343.** We will be using Top Hat right away, so **please come to class the first day with your subscription activated**. If you have not received an email to register or you are unable to join the course with the join code, please contact Owen (They/Them, omsullivan@wisc.edu) or Thomas (He/Him, tpotts2@wisc.edu). For more information, you can visit the Top Hat Overview & Getting Started Guide.

Virtual Meeting Platform – Zoom: Zoom may be used occasionally for online office hours and other meetings. Access Zoom in the left side of the course Canvas page.

Q&A Platform - Piazza: We will be using Piazza (accessible through the course Canvas sidebar) for Q&A. Piazza is a communication tool designed around the idea that anyone can ask and answer questions, which makes it the fastest way for you to get your questions answered. Any questions or comments you have about the course, whether related to the weekly topic, an assignment, or course logistics, should be posted to Piazza. (Feel free to message your instructor directly in Canvas for personal questions or anything unrelated to the course.) If a classmate posts a question you can answer, please do so! We will all benefit from asking and answering each other's questions. The instructional team will also answer questions on Piazza so that the answer will be visible to everyone. You can expect a response between 24 and 48 hours. We also encourage you to post any questions related to being a UW-Madison student (that are unrelated to the course) for your peer leaders to answer.

7. GRADING & ASSESSMENTS

Grade Determination: You will be evaluated based on your own learning and engagement, and not compared to your peers. This means that everyone is capable of earning an 'A' – you will not be graded on "a curve". We encourage you to monitor your performance in Canvas and read all feedback provided on assignments, but know that your current grade displayed in Canvas will not always be accurate because your final grade will be weighted according to the following categories.



This course will use the following scale: A (93-100%), AB (88-92%), B (80-87%), BC (75-79%), C (67-74%), D (60-66%), and F (0-59%). Class grades will be determined based on your performance in five categories of work, described below.

Assignments & Activities (each unit: 7%, outside of units: 14%, total: 42%): We will explore the five biology core concepts and develop skills in scientific thinking over the course of 4 units. You'll receive credit for activities that you complete before class and during class. You will also complete other assignments throughout the course that will support your academic and career development, but do not directly relate to units.

Unit Assessments (18%, each unit: 6%): At the end of the first 3 units, you will complete a Unit Assessment to provide evidence of what you learned in that unit. This will include submitting examples of Core Concepts to practice and get instructor feedback before the final Core Concept Table submission. Instead of a Unit 4 Assessment, there will be questions related to this unit on the Final Assessment. We expect and encourage you to use available resources, such as notes and Canvas materials, but unit assessments should be completed individually.

Poster Project (20%): The goals of the poster project are to develop your ability to think critically, read scientific literature, and communicate like a scientist. Throughout the semester, you will apply the scientific process through reading scholarly articles, interpreting data, determining the validity of scientific information, and articulating your conclusions to your peers in a poster fair on the final day of class. More specific details about this project, including intermediate deadlines, can be found in Canvas.

Attendance/Engagement (5%): Attendance and participation in our weekly in-person meeting is required. You will complete activities and Top Hat questions in class that you will submit for credit and will also receive credit for your engagement in class each day. We understand that illnesses and unexpected emergencies can happen, and in these cases you should be in contact with your section instructor as soon as possible, and ideally before you miss class. They will work with you to give you the opportunity to make up activities that you missed. Please do not attend class while you are ill.

Final Assessment & Core Concept Table (15%): The final assessment allows you to demonstrate and reflect on what you've learned related to the course-learning outcomes. Over the course of the semester, you will build a core concept table exemplifying the five core concepts at different scales, from molecular to biological. This table will allow you to track what you have learned across all units and will be submitted as part of your final assessment. The second portion of the final assessment will be available in Canvas from 12:00pm on 12/15 and is due by 7:05 p.m. on 12/18. It is a timed 2-hour assessment that you will complete online. Late submissions will not be accepted. You'll also receive credit for completing pre-class and post-class surveys, which will help the instructors to support you and get your feedback.

Absences & Late Work Policies:

While attendance in class is required and there are weekly assignments to support your learning, we have built this course to be flexible so that you can still be successful even if you have planned or unexpected absences, or if you are not able to submit all assignments by the specified deadlines. Please communicate with your Section Instructor at the start of the Fall semester, or as soon as possible if you need to miss class or turn in an assignment late, and they will work with you to provide you as many opportunities to learn as possible.

Absences

- Notify your Section Instructor about all absences, planned or unplanned, as early as possible and at least 24 hours prior to missing class. All students are allowed to miss one class session without needing to make up the points **if your section instructor is notified at least 24 hrs in advance**. You are still responsible for the material that is covered when you are absent, even though you don't need to officially make anything up. We recommend reviewing in class slides, completing activities on your own, getting notes from a classmate, and attending office hours if you have questions. The information presented in class will be necessary for the unit assessment and final assessment.
- **Planned and Excused absences:** If you miss more than one class for a planned and excused absence (see reasons below), your section instructor will work with you to give you the opportunity to make up in-class activities. Discuss the details with them, but in most cases, this will involve completing work on your own or with a classmate outside of class, and by attending office hours. It will be your responsibility to make up any missed work from those class periods.
    - Religious observances: While UW-Madison does not observe most religious holidays, the university is committed to accommodating any students who have conflicts with scheduled exams, assignments, or other required attendance due to religious obligations, provided adequate notice is given. If your religious observances will cause you to miss class at any point this semester, please reach out to your section instructor within the first two weeks of class so that we can establish accommodations for your absence.
    - University athletics: If your participation in university-sponsored athletic events will cause you to miss class at any point this semester, please reach out to your section instructor within the first two weeks of class so that we can establish accommodations for your absence.
    - Illness and personal/family emergencies: We understand that different things may come up during the semester that impact your ability to participate and engage with the course. In the case of illness, personal, or family emergency, please reach out to your section instructor 24 hrs prior to missing class or as soon as possible.
- **Unexcused absences:** If you miss more than one class for a reason other than those listed above, or you fail to notify your section instructor at least 24 hrs prior to missing class, that is

considered an unexcused absence. You will not have the opportunity to make up missed Top Hat or Engagement points. Because we still want you to have the opportunity to learn, you may be able to make up other in class activities, up to a maximum of 50% of the possible points. Discuss with your section instructor. Instructors will handle this on a case-by-case basis and determine the maximum points possible.

Late Work

Assignments are viewed as an opportunity for you to learn and to demonstrate what you have learned. We have set deadlines for all assignments to help you manage your time, to stay on track with course learning, to provide you with timely feedback from instructors, and so you are prepared for in-class assignments that build on pre-class work. Plan to submit all assignments by the deadline. However, we understand that things come up and in rare cases, you may need to submit an assignment after the deadline in order to optimally learn and demonstrate what you have learned.

At the start of the semester while first-year students are still adjusting to college coursework, we will accept all assignments up to 4 days after the deadline without penalty with the following exceptions: Poster Project Draft, Final Poster, and Final Assessment. After this initial transition period, this policy will be re-evaluated (after the first unit) and will likely be updated to be more consistent with what you will see in future STEM courses. It may also be revoked if used too frequently; it is intended to give students flexibility in the rare cases when it is not possible to turn work in by the deadline.

- To earn full points on assignments submitted within the 4 day grace period, students are required to email their section instructor 24 hrs prior to the original due date, so plan to review all assignment expectations in advance.
- You do not need to provide a reason for the late submission.
- After the 4 day grace period, 10% off the total points for each assignment will be deducted per day.

Note: While we have this flexible submission policy, it is still in your best interest to turn assignments in by the deadlines set. Pre-class assignments are designed to prepare you for in-class activities that will build on what you did in pre-class, so turning these in late frequently could negatively impact your scores on in-class assignments and Tophat questions. If you need to turn in an assignment past the deadline, you also may not receive timely feedback from your instructor.

The last day to submit all late work is Wednesday, December 13th. Assignments will not be accepted beyond the end of the Fall semester, unless specific arrangements have been made in advance (for example, due to an extended illness).

8. COURSE WORKLOAD, FLOW, & SCHEDULE

Workload and Flow: This course is organized in weekly modules that contains a series of activities that allow you to engage with course content, your classmates and your instructor. Each unit consists of three modules. Each in-person class meeting will be prefaced by pre-class activities that will recap the previous class and prepare you for the upcoming class. Pre-class assignments are due at 5:00 PM on Sunday before class, unless otherwise stated in Canvas.

For a 2-credit course, students should expect 6 hours/week of course-related work (including time spent in class). We expect students to spend up to 1 hour on pre-class unit activities per week. This

information is also displayed in the calendar below. Students will also be working on the two course projects throughout the semester. These make up the remaining ~2 hours of coursework each week.

Here are two examples of how a student might spend time working on activities and projects for this course. The goal of these tables is just to give you an idea of how to structure your time, you are in no way limited by what is represented here. We encourage you to find the structure that works best for you!

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
In-person Class Session 2:25-4:20 PM	Do HW for Other Courses	**Fill in Core Concepts Table (15 min)**	**Complete Pre-Class Unit Activities (45-60 min)**	Do HW for Other Courses	**Complete work for Poster Project (45 min)**	Do HW for Other Courses **Out of class assignments (Follow-up and prep) due by 5:00 PM**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
In-person Class Session **2:25-4:20 PM**	Do HW for Other Courses	**Fill in Core Concepts Table (15 min)** **Complete Pre-Class Unit Activities (45-60 min)** **Complete work for Poster Project (45 min)** **Out of class assignments (Follow-up and prep) due by 5:00 PM**	Do HW for Other Courses	Do HW for Other Courses	Do HW for Other Courses	Do HW for Other Courses

COURSE SCHEDULE

*Subject to change. Always check Canvas modules & assignments for current deadlines.

Wk	Class Date	Unit Topic	Weekly topic, skills and/or career focus	Major Deadlines
		With the exception of the first and last weeks of class, we'll learn from four different units, each spanning three weeks.	Within each unit, there are three modules where you will learn about different Biology in Wisconsin topics, build academic and biological skills, and explore related career fields.	You will have an assignment deadline most weeks, but also smaller pre-class preparation activities that relate to the unit. Refer to the Canvas module for each week. All assignments are due 11:59 pm on the day listed.
1	9/11	Course Welcome	Course overview, goals and syllabus, intro to biology core concepts	**Pre-course Survey:** due 9/8 **Course Intro Assignment**: due 9/17 **Canvas Syllabus Quiz:** due 9/10
2	9/18	**Unit 1: Agroecology in Wisconsin** *Developed by **MW** and VS*	Evolution of pollinators	**STEM Identity Pie Chart & Co-curricular Events Assignment:** Due 9/24
3	9/25		Fields (careers/academic paths/research) in Agroecology and how changes in native ecosystems can impact agriculture	
4	10/2		Research Spotlight, use scientific data to evaluate a state plan for wolf management	**Discovery Poster Project**: Article Selection due 10/4 **Unit 1 Assessment + CC Table:** Due 10/8
5	10/9	**Unit 2: Genomics and Biotechnology Around Us** *Developed by **MK** and YC*	Research Spotlight, Exploration and discovery of DNA, DNA structure and function	
6	10/16		Genetic IFES, genomic techniques, biotech companies in WI	**Discovery Poster Project:** Independent Article Summary due 10/22

				Career assessment discussion post: due 10/22
7	10/23		Identify CCs and techniques in pop culture posts, evaluate scientific claims	**Unit 2 Assessment + CC Table:** Due 10/29
8	10/30	**Unit 3: The Power of Plants** *Developed by **CV** and NK*	Photosynthesis, plant biology research opportunities at UW-Madison	**Discovery Poster Project:** Peer Evaluation Form 11/5 **DARS Report and Degree Plan Assignment:** Due 11/5
9	11/6		Plant evolution, Wisconsin plant communities	**Discovery Poster Project:** Outline due 11/12
10	11/13		Research spotlight, traditional ecological knowledge in plant biology	**Unit 3 Assessment + CC Table:** Due 11/19
11	11/20	**Unit 4: Viral Transmission** *Developed by **OS** and TP*	Disease triangle, virus/host interactions, virus transmission interventions	**Reflection on Career Spotlights & Campus Events Assignment:** Due 11/26
12	11/27		Research Spotlight, vectored virus transmission, scientific collaboration	**Discovery Poster Project:** Draft for Peer Review due 12/3
13	12/4		Pandemic response plans, underserved populations, improving response plans	**Discovery Poster Project:** Final poster due 12/10
14	12/11	Poster presentations	Scientific communication, core concepts, peer review	**Core Concept Table:** Due 12/18 at 7:05 pm
	Final Exam – opens 12/15 at 12pm; due by 12/18 at 7:05 pm			2 hr timed exam; completed online in Canvas

9. COURSE & UNIVERSITY POLICIES

Academic Integrity: By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to student resources for academic integrity.

Specifically, this course is designed to help you develop critical thinking skills to take with you throughout your undergraduate experience. In order for this to be effective, it is important that you produce your own work. Although this course heavily incorporates group work and collaboration, it is still expected that all submitted work will be original (either to the individual or the group). The best way to avoid academic misconduct is to generate your own work. When you need to use ideas from an external source, proper credit must be given to the original creator through citations. See the UW Writing Center for more information about how to properly cite references. If academic misconduct or plagiarism is thought to have occurred, the instructional team will meet with you for an explanation. If it is determined that academic misconduct has occurred, you will receive a score of 0 on that assignment and the incident will be reported to the Dean of Students.

AI Technology Usage: In this course, use of AI is permitted with limitations. It can be used in some cases to support your learning but should not replace your original thinking. We acknowledge that AI tools are available and can provide helpful information and assist with brainstorming ideas. However, they cannot provide correct citations or references to reliable data and should not be considered a credible source of information. AI is also limited to the information stored in its database which is not updated frequently. New scientific data is published every day, therefore any information provided by AI will not be current and could miss new key findings within the field. Since AI can only use the information provided within its database, it lacks any creativity you may bring with your own ideas and original thinking. During this course, we will be asking you to make your own connections with the course material and participate in activities that will help you to develop your scientific and critical thinking skills. AI will be insufficient for you to make these connections and over-reliance on AI will hinder your own development of skills that are essential for your college experience and career.

How to use AI appropriately in this class: It is permitted in this course to use AI tools such as ChatGPT on some assignments (exceptions noted below) to help you investigate topics and brainstorm ideas, but it should not replace your original thinking and synthesis of course ideas and topics. Any information provided by AI should be checked using reliable sources and should not be assumed to be accurate. It is expected that all work submitted will be in your own words. If you choose to use AI technology on permitted assignments in ANY way (including to brainstorm ideas), you must include a section where you describe how you used it and cite it using APA format. If in doubt about permitted usage, please speak with your instructor prior to the assignment deadline.

When AI is not permitted in this class: It is not permitted to copy text directly from AI technology and submit it as your work, even with a citation. All work submitted should be in your own words. When the use of AI is NOT permitted or limited to certain uses on assignments, this usage will be clearly stated in the assignment description. Be sure to read each assignment description carefully for statements of AI limitations. The use of AI technology on the following assignments is NOT permitted in any capacity and will be considered a violation of the University academic integrity policy: Unit Assessments, Core Concept Table, the Final Assessment, and other assignments as noted in assignment descriptions.

Diversity and Inclusion: Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. Please contact the instructional team if your unique needs require additional accommodations. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background –people who as students, faculty, and staff serve Wisconsin and the world.

Hate and Bias Incidents: The University of Wisconsin-Madison is committed to creating a safe and supportive environment for all people. Hate and bias incidents distract from our classroom community and negatively affect your and your peers' ability to learn, feel welcome, and feel safe. Hate and bias incidents will not be tolerated in this course. Please intervene in incidents of hate and bias when you can, and report incidents to any instructor—if you feel comfortable—and/or to the UW-Madison hate and bias reporting system. We are dedicated to addressing reports of hate and/or bias seriously, promptly, confidentially, and sensitively. The Dean of Students Office will respond to your report and provide you with options to meet your needs. You can also report anonymously. For more information, support, and resources regarding addressing hate and bias on campus, please visit the Dean of Students Office.

Accommodations for Students with Disabilities: The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity and we are committed to providing accommodations for all students with disabilities. If there are circumstances that may affect your performance, please let Dr. Theisen or your section instructor know as soon as possible so that we can work together to develop strategies for meeting both your needs and the requirements of the course. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (UW-855) require the university to provide reasonable accommodations to students with disabilities to access and participate in its academic programs and educational services. Faculty and students share responsibility in the accommodation process. Students are expected to inform Dr. Cara Theisen of their need for instructional accommodations at the beginning of the semester (by the end of the third week), or as soon as possible after being approved for accommodations. Dr. Theisen will work either directly with you or in coordination with the McBurney Disability Resource Center to provide reasonable instructional and course-related accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: McBurney Disability Resource Center)

10. RESOURCES

The UW-Madison STEM Student Resources website is a great source that provides an extensive list of resources available to UW-Madison students including related to: course help, dining accessibility, writing feedback, financial support, professional development, finding jobs/internships, diversity and inclusion, student involvement, heath, wellness, research, tech support, child care and family resources, student vote resources, and more.

About WISCIENCE: This course is offered by WISCIENCE. **WISCIENCE** is the Wisconsin Institute for Science Education and Community Engagement. WISCIENCE offers courses and programs that are designed to help STEM students explore and make the most of the incredible resources here at UW–Madison, so you can truly engage in the Wisconsin Experience. In addition to Exploring Biology, we offer courses and programs related to research, service, and leadership in STEM. Everything we offer is designed to complement the courses that you are taking in your academic department to help you apply what you are learning beyond the classroom, become a leader in STEM, and build community with other STEM students.

UW-Madison Land Acknowledgement Statement

The University of Wisconsin–Madison occupies ancestral Ho-Chunk land, a place their nation has called Teejop (day-JOPE) since time immemorial. In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin.

This history of colonization informs our shared future of collaboration and innovation. Today, UW–Madison respects the inherent sovereignty of the Ho-Chunk Nation, along with the eleven other First Nations of Wisconsin. We encourage you to visit the Our Shared Future website for more resources and to learn more about the First Nations in the state of Wisconsin by visiting their websites, linked on the First Nations of Wisconsin Library Research Guide.