GENERAL BIOLOGY BIOL 101, SPRING 2021 Section 01 (L1 and L2)

Instructor: Dr. Karin Bodensteiner

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Lecture: Synchronous online via Zoom; Monday and Wednesday, 9:30 to 10:45 a.m.

URL: https://uwsp.zoom.us/j/96856471946?pwd=YjFheTNMVTUvUkRUclgxWGh5Z2xtdz09&from=addon

Meeting ID: 968 5647 1946; Passcode: 981156

Textbook: Taylor MR, SJ Simon, JL Dickey, K Hogan, and JB Reece. 2018. <u>Campbell Biology: Concepts and Connections</u>, 9th ed. Benjamin Cummings/Pearson, Boston.
Biology 101 Lab Manual exercises, provided on Canvas.

Laboratory Exercises: Will be posted on Canvas and discussed during synchronous, online recitation sessions once a week.

Recitation: Synchronous online via Zoom; Tuesdays at 9:00 a.m. or 2:00 p.m.

9 a.m.: https://uwsp.zoom.us/j/99150722728?pwd=S0NwOXJNL0NLY2lkbFZyVGFsWG9ydz09&from=addon

Meeting ID: 991 5072 2728; Passcode: 899751

2 p.m.: https://uwsp.zoom.us/i/96625533903?pwd=QnpPUUNXMERwcTI0S3N5T1o5VEFNQT09&from=addon

Meeting ID: 966 2553 3903; Passcode: 863039

Virtual Office Hours: Tuesday and Thursday 12:00-1:30 p.m. via Zoom, or by appointment.

URL: https://uwsp.zoom.us/j/93434963822?pwd=b0NsUGhRVWpidVlkTzE4N2xlZ0hFdz09&from=addon

Meeting ID: 934 3496 3822; Passcode: 578333

Course Content and Additional Course Information: We will use Canvas for delivery of course material. Please visit the Canvas training site for help with using Canvas (https://uwstp.instructure.com/enroll/36GKLY). Material associated with each lecture and lab will be posted to Canvas as we go through the semester.

Zoom Support: https://www.uwsp.edu/infotech/Pages/Tutorials/Zoom/Zoom.aspx

System Requirements:

Because this is an on-line course, it is important that you have the appropriate tools to access course content. Your phone is not an adequate interface for some course components, so you will need a computer outfitted with Chrome (version 80 or higher) or Firefox. Other internet browsers can be extremely glitchy and do not work well with Canvas.

As some components of this course are synchronous (meetings on line that you attend at a specific time), you should have a stable internet connection that meets the following specifications:

- 800kbps/1.0Mbps (up/down) for high quality video
- For gallery view and/or 720p HD video: 1.5Mbps/1.5Mbps (up/down)
- Receiving 1080p HD video requires 2.5mbps (up/down)

If you are unsure of your internet specifications, please check with your internet provider. And if you need to access computers on campus, please consult this listing of availability: https://www.uwsp.edu/infotech/Pages/ComputerLabs/All-Labs.aspx

Course Description:

This course introduces non-major students to the basic principles of Biology and acquaints them with the diversity of life. We will explore basic cellular-level processes, genetics, reproduction, evolution, biological diversity, animal physiology, and how organisms relate to one another within their environments, with special emphasis on the applicability and relevance of biological concepts, knowledge, and technology to average citizens. This course meets natural science general education requirements by fulfilling the learning outcomes for this category of the general education program.

General Education Program Natural Science Learning Outcomes: (upon completing this requirement, students should be able to...)

- 1. Explain major concepts, methods, or theories in the natural sciences to investigate the physical world.
- 2. Interpret information, solve problems, and make decisions by applying natural science concepts, methods, and quantitative techniques.
- 3. Describe the relevance of aspects of the natural sciences to their lives and society.

Student Learning Outcomes: (with diligent effort on their part, upon completing this course, students should be able to...)

- 1. Apply the scientific method to biological questions.
- 2. Discuss biological principles including:
 - cellular level functions that are necessary for life
 - inheritance and evolutionary change
 - the diversity of animals and plants within an evolutionary context
 - the function of animal organ systems
 - the basic functioning of populations, communities, and ecosystems
- 3. Discuss the relevance of biological principles to their lives and society.

Lecture:

Our class will be held synchronously at the scheduled lecture time (M/W from 9:30 to 10:45 a.m.) in a regularly scheduled Zoom meeting. I am hopeful that these meetings will be similar to an in-person class, where you are free to ask questions, discuss material, and engage with your classmates, instructor, and course material. Although I will be posting recordings of these lectures on Canvas once they are completed, synchronous meeting attendance is expected and will factor in to your professionalism grade at the end of the semester.

Laboratory and Recitation:

Labs will consist of on line exercises that will help you hone your skills in scientific reasoning and data analysis. Most labs also provide an opportunity to apply concepts covered in lecture. You will complete approximately one lab per week on line. The following week, you will meet virtually via Zoom with your laboratory section and your instructor to go over the lab. This recitation meeting is intended to help clarify information from the lab, and will give you an opportunity to ask questions and interact with others. Note that because of the way labs are scheduled, you will be dealing with two labs each week for most of the semester— discussing and submitting labs the week after beginning them online. Please see the course schedule at the end of this document for additional details.

Thought Questions: Approximately twice per unit (8 @ 5 pts each), you will be given thought questions, with a typed response/answer due the following week. These questions are intended to spur your thinking on content we are considering in lecture or laboratory, and there may not be a single, or even a correct, answer. For these assignments, you are encouraged to consult multiple sources and discuss your thoughts/ideas with your classmates. You will be graded (individually) on the quality of your typed response and discussion participation.

Exams and Assignments:

There will be four lecture exams over the course of the semester. Each exam is worth 100 points and will consist of multiple choice, definitions, fill-ins, and short answer questions. In addition, application of information provided in lecture to an unknown problem may be required. Course material will build over the semester and it will be important for you to remember and apply basic information learned early on to material covered later in the course. Points will also be awarded in the laboratory. These points will come from lab-based assignments throughout the semester. You should expect some form of assignment almost every week in lab. All exams and assignments will count towards the final grade (i.e. no grades will be dropped). If you have an unexcused absence, you will not be allowed to make up a missed assignment.

Professionalism:

Attendance: You are expected to attend and/or complete all lectures, labs, and recitations. If you will miss a class due to a college-sanctioned event, you must notify your instructor in advance and complete any coursework before the next scheduled lab or class period. Exams must be taken at the assigned time and alterations to this schedule will only be made for emergencies. In such cases, evidence of some kind must be provided and you are expected to make arrangements within 48 hours of the exam to schedule a makeup. It is your responsibility to communicate concerns and get notes for any missed classes. As part of your professionalism grade, you will also be evaluated on course participation, including participation in virtual classes and on line discussions.

<u>Behavior</u>: Complete mutual respect and courtesy is expected and all students should come to class ready to be engaged and actively participate in the learning experience. Open, honest discussion is encouraged and will factor in to your professionalism grade.

Lecture materials and recordings for this course are protected intellectual property. Students in the course may use course materials and recordings for their personal use as related to participation in this class. Students may also take notes on course material. Students may not copy or share lecture materials outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from selling their personal notes or being paid for taking notes without the instructor's express written permission. Unauthorized use of copyrighted materials (lecture notes, slides, and recordings) constitutes copyright infringement under university policy, and University of Wisconsin System Chapters 14 and 17, governing student academic and non-academic misconduct.

Point Breakdown:

| Lecture Exams | 4 @ 100 pts each |
|------------------------|------------------|
| Online Laboratory | 120 pts |
| Thought Questions | 40 pts |
| <u>Professionalism</u> | 40 pts |
| Total | 600 pts |
| | |

Grade Scale (out of 100% of Total):

| Grade Scale (Out Or | 100/8 01 1018 |
|---------------------|---------------|
| A ≥ 93-100 | C = 73-76 |
| A- = 90-92 | C- = 70-72 |
| B+ = 87-89 | D+ = 67-69 |
| B = 83-86 | D = 60-66 |
| B- = 80-82 | F < 60.0 |
| C+ = 77-79 | |

Honor Lock:

We will be using Honorlock to proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam remotely. You DO NOT need to create an account, download software or schedule an appointment in advance. You will need a computer, a working webcam, a functional microphone, a stable Internet connection, and the Chrome browser. Before you get started, please review the Honorlock Student module in Canvas to familiarize yourself with Honorlock.

Face Coverings:

At all UW-Stevens Point campus locations, the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the <u>Disability and Assistive Technology Center</u> to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.

Other Guidance:

- Please monitor your own health each day using this screening tool. If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646). As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.

Course Assistance:

One-on-one tutors and walk-in tutoring are available to help students with lecture and lab material. Interested students should contact the Tutoring-Learning Center (tlctutor@uwsp.edu). Information on group tutoring to follow.

Grade Discrepancies:

Grades will be posted on Canvas throughout the semester. If there are discrepancies on any assignments, quizzes, or exams, they can be addressed with the instructor, in person, up to one week after the grade is posted. After this time, the grade will stand with whatever was originally granted.

Academic Policies:

Academic misconduct (as outlined and defined by Chapter 14 in the Academic Handbook: https://www.uwsp.edu/acadaff/Pages/handbook.aspx) will not be tolerated. Cheating or plagiarism will result in a score of zero for a give assessment and/or additional disciplinary action.

Disability Services:

Any student who feels that they may need an accommodation based on the impact of a disability should contact the Disability and Assistive Technology Center (room 609 Albertson Hall, datctr@uwsp.edu). If you have already registered with this office and would like to discuss your class accommodations for the semester, please meet with me.

Emergency Response Guidance:

- In the event of a medical emergency call 9-1-1 and guide emergency responders to victim.
- In the event of a tornado warning, proceed to lowest level interior room without windows.
- In the event of a fire alarm, evacuate building in a calm manner, meet on sidewalk to east of building, near UWSP sign. Notify instructor or emergency command personnel of any missing individuals.
- Active Shooter/Code React Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Call 9-1-1 when it is safe to do so. Follow instructions of emergency responders.
- See UW-Stevens Point Emergency Procedures at www.uwsp.edu/rmgt/Pages/em/procedures for details on all emergency response protocols at UW-Stevens Point.

Course Schedule:

| Wk: | Dates: | Lecture Topic: | Chapter: | Online Lab: |
|-----|-----------|---|----------|---|
| 1 | M 1/25 | Introduction to General Biology | 1 | Scientific |
| | T 1/26 | Recitation 1 (Lab Introduction) | | Investigation |
| | W 1/27 | The Chemicals of Life; Thought Question 1 Assigned | 2 | |
| 2 | M 2/1 | Biological Molecules | 3 | Data Analysis and |
| | T 2/2 | Recitation 2 (Scientific Method Lab) | | Graphing |
| | W 2/3 | Cellular Structure; Thought Question 1 Due; Thought Question 2 Assigned | 4 | |
| 3 | M 2/8 | Cellular Function | 5 | Macromolecules and |
| | T 2/9 | Recitation 3 (Data Analysis and Graphing) | | Cells |
| | W 2/10 | Cellular Respiration; Thought Question 2 Due | 6 | |
| 4 | M 2/15 | Photosynthesis | 7 | No Lab |
| | T 2/16 | Recitation 4 (Macromolecules and Cells) | | |
| | W 2/17 | Exam 1, 9:30 to 10:45a.m. on Canvas; Thought Question 3 Assigned | | |
| 5 | M 2/22 | Cellular Reproduction | 8 | Diffusion and |
| | T 2/23 | Recitation 5 (Exam 1 Review and Discussion) | | Osmosis |
| | w 2/24 | Patterns of Inheritance; Thought Question 3 Due | 9 | |
| 6 | M 3/1 | From DNA to RNA to Protein | 10 | Enzymatic Activity |
| | T 3/2 | Recitation 6 (Diffusion and Osmosis) | | ,, |
| | W 3/3 | Control of Gene Expression; Thought Question 4 Assigned | 11 | |
| 7 | M 3/8 | How Populations Evolve | 13 | Photosynthesis |
| = | T 3/9 | Recitation 7 (Enzymatic Activity) | | , |
| | W 3/10 | Speciation; Thought Question 4 Due | 14 | |
| 8 | M 3/15 | Evolutionary History | 15 | No Lab |
| | T 3/16 | Recitation 8 (Photosynthesis) | | |
| | W 3/17 | Exam 2, 9:30 to 10:45 a.m. on Canvas; Thought Question 5 Assigned | | |
| 9 | M 3/22 | | | |
| | T 3/23 | Spring Break | | |
| | W 3/24 | opg 2.com | | |
| 10 | M 3/29 | Microbes, Protists, and Fungi | 16 & 17 | Cell Division |
| | T 3/30 | Recitation 9 (Course check-in and Discussion) | 10 0 17 | 0011 211131011 |
| | W 3/31 | Plant Diversity; Thought Question 5 Due | 17 | |
| 11 | M 4/5 | Invertebrate Diversity | 18 | Genetics |
| | T 4/6 | Recitation 10 (Cell Division) | | Genetics |
| | W 4/7 | Chordate Diversity; Thought Question 6 Assigned | 19 | |
| 12 | M 4/12 | Animal Diversity Continued | 18 & 19 | Central Dogma |
| | T 4/13 | Recitation 11 (Genetics) | 10 0 13 | Certiful Bogina |
| | W 4/14 | Animal Form and Function; Thought Question 6 Due | 20 | |
| 13 | M 4/19 | Exam 3, 9:30 to 10:45 a.m. on Canvas | | Bacteria and Protists |
| 15 | T 4/20 | Recitation 12 (Central Dogma) | | Bucteria and Frotists |
| | W 4/21 | Nutrition and Digestion; Thought Question 7 Assigned | 21 | |
| 14 | M 4/26 | Circulation and Gas Exchange | 22 & 23 | Land Plants |
| | T 4/27 | Recitation 13 (Bacteria and Protists) | 22 0 23 | Lana Hants |
| | W 4/28 | Reproduction and Embryonic Development; Thought Question 7 Due | 27 | |
| 15 | M 5/3 | Nervous Systems | 28 | Animal Diversity |
| | T 5/4 | Recitation 14 (Land Plants) | | ai Diversity |
| | W 5/5 | The Biosphere; Thought Question 8 Assigned | 34 | |
| 16 | M 5/10 | Population Ecology | 36 | No Lab |
| 10 | T 5/11 | Recitation 15 (Animal Diversity) | | INO Lab |
| | W 5/12 | Ecosystems and Conservation Biology; Thought Question 8 Due | 37 & 38 | |
| 17 | M 5/17 | Exam 4, 12:30-2:30 p.m. on Canvas | 3, 0, 30 | |
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