

# Mayville State University

## BIOL 221L – Anatomy and Physiology II Lab

**Dr. Anthony Schroeder**

Summer 2023

**1 credit**

**\*\*\*Before starting this online course, students need to check with their current and future programs to determine if this course will be accepted for credit in their programs/universities\*\*\***

---

**Contact Information: Anthony Schroeder, Ph.D., [anthony.schroeder@ndus.edu](mailto:anthony.schroeder@ndus.edu),  
218-281-8252**

**Hours of Availability: 11am-noon; MWF**

**Instruction Mode: Online; Asynchronous**

**Time Zone: All times indicated throughout the syllabus and course materials reflect Central Standard Time. All deadlines are set at 5pm CST on all due dates, NOT MIDNIGHT.**

**How to address your instructor: Dr. Schroeder; Professor Schroeder**

**Meeting Times and Location: Online/Email**

---

### **Course Description**

Two laboratory hours per week. Laboratory topics to be covered are designed to complement the materials studied in BIOL 221. Topics include activities related to the nervous, endocrine, digestive, urinary, and reproductive systems. Genetics and developmental topics will be reviewed. Microscopic specimens will be examined as appropriate. Animal specimens will be dissected and activities related to the study of human physiology are also included.

**Pre-/Co-requisites:** Most students will also need BIOL 221. This is dependent upon student need.

### **Purpose of the Course**

Labs will vary. Some will consist primarily of material intended to introduce you to the structure and function of organs and/or organ systems. These will be “dry” labs, written exercises in which you will complete online quiz-like activities that will be computer-graded. Dissections or “wet” Labs may require Lab Reports, Lab Quizzes, or both. Where required, Lab Reports must be completed and submitted with required photos to the digital drop box. There may also be long-answer questions or data tables, which you will complete and include in the online report. Some labs will use materials found within the home, and there will be a sheep brain, cow eye, and fetal

pig, included in the lab kit you must purchase, which will be dissected. For labs, which would normally involve microscopy, a microscope lab kit can be purchased through the MSU Bookstore. It is essential that you follow procedures carefully, submit all required photograph in which all required structures are clearly visible, and answer all parts of all questions.

### Course Objectives

- Identify structures and functions of the nervous system
- Be able to explain the structures of the special senses
- Understand the organization and functioning of the endocrine organs, including the functions of major hormones.
- Understand the organization and function of the regions of digestive system, including the roles of different nutrients.
- Understand the organization and functioning of the excretory system, especially the function of the kidney in producing urine.
- Understand the organization and functioning of both the male and female reproductive system, including the processes of ovulation, menstruation, childbirth, and lactation.

### Program Student Learning Outcomes (SLOs) Addressed in This Course (required)

The Academic Program Student Learning Outcomes document can be found in your course shell. It contains all learning outcomes pertaining to Essential Studies courses and all majors and minors. The document has an index, so you can quickly find the degree you are pursuing.

As part of Mayville State’s effort to demonstrate continuous improvement in achieving student learning outcomes, this course:

<input checked="" type="checkbox"/> introduces SLO # <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>	<input checked="" type="checkbox"/> introduces SLO # <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>	<input checked="" type="checkbox"/> introduces SLO # <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>	<input checked="" type="checkbox"/> introduces SLO # <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>
---	---	---	---

As part of Mayville State’s effort to demonstrate continuous improvement in achieving Essential Studies Learning Outcomes, this course will assess

ELO #   1   2   3   4

as part of the Essential Studies and Capstone Courses. As part of Mayville State University’s Essential Studies curriculum, this course seeks to prepare students for twenty-first century challenges by gaining: 1) Knowledge of human cultures; 2) Intellectual and practical skills; 3) Personal and social responsibility; 4) Integrative and applied learning.

### Course Improvements Based on Most Recent Assessment Findings

During previous offerings of this course, students have done well. Even though students have met expectations in the course, I will be spending more time explaining diagrams that are pertinent to the education of students. I would

prefer to see structure identification and function scores to be higher. In addition, oral communication skills of students were assessed for content knowledge, vocabulary, presentation skills and preparation. Students excelled in oral communication if they took the time to use their own words to explain terminology.

This course will be assessed in the future (based on the 2019-2025 assessment curriculum map) and the findings will be reported in this syllabus.

### **Required/Recommended Materials**

Lab Protocols will be provided to students via Blackboard. Lab kits need to be purchased from **Mayville State University Bookstore**. It is VERY beneficial to have the textbook (*Visual Anatomy and Physiology, Martini, Ober, Nath 3<sup>rd</sup> ed*) when filling out lab materials, worksheets, and/or quizzes. Online sources should be used to fill out lab assignments. Printer, Webcam, 24/7 internet access, computer that meets the university standards (Mac users may have issues, this is a PC campus), and Microsoft Office (Mac programs such as Pages cannot be opened by instructor, MS Office is required and a free copy can be downloaded through the MSU Technology website (link below). Students may be using alternative versions of the text, and this is ok, but just keep in mind that if page numbers are referenced, they may be different. The content is the same in all versions of the text, students just need to locate the material in the text pertinent to the chapter/context discussed. **Not having course materials is NOT an acceptable reason for not completing the assignments and no credit will be awarded.** Late enrolling students may miss points that WILL NOT be made up and could negatively affect their grade. If you enroll after the first date of the course you accept these terms.

By continuing on with this course, student acknowledges text differences may be discovered.

<http://www.mayvillestate.edu/msu-online/msu-online/getting-started>).

<http://www.mayvillestatebookstore.com/home.aspx>

### **Instructional Strategies**

We will use the following methods to assist you in your learning anatomy and physiology. **(INTASC 1, 2, 3, 4, 8)**

- Direct instruction
- Indirect instruction
- Interactive instruction
- Experimental learning
- Guided and independent study
- Cooperative learning activities
- Class Discussions
- Chapter Exams
- Application
- Inquiry approach
- Simulations
- Questioning skills
- Case Studies
- Instructional strategies

### **Learning Experiences**

- Read all chapters/lab protocols prior to completing labs or do appropriate research online, including chapters as noted, research articles, etc. Students who are not enrolled in the lecture portion may be at a

disadvantage as they do not get lecture content. By continuing with the course, students acknowledge and accept this.

- Assignments will be given in through Blackboard.
- It is important for you to check your grades in Blackboard. If you find that the instructor has made a mistake while entering your grade, you have one week to bring it to the attention of the instructor. After a ONE WEEK PERIOD, grades will be locked in Blackboard.
- Please refrain from requesting extensions as they will not be granted. Please not this before starting the course and refrain from leaving negative feedback in you miss a deadline and are not granted an extension. Please do not feel disrespected if your request does not receive a reply, by continuing in the course, you accept this rule. This is your formal notification about requests for extensions. **If requesting an extension, you need to have a university excused absence and include DOCUMENTATION in your initial email.**

### **Instructional Technologies Utilized in this Course**

- Blackboard Ally
- Blackboard Collaborate Ultra
- Blackboard Learn
- Teams
- Zoom
- MS Office Suite
- Yuja

### **Expectations/Protocols**

**Labs:** Labs are distributed via Blackboard. Labs need to be completed and submitted before the due date listed in the schedule below. A printer and camera are required for the labs. Labs will vary. Some will consist primarily of material intended to introduce you to the structure and function of organs and/or organ systems. These will be “dry” labs, written exercises in which you will complete online quiz-like activities that will be computer-graded.

Dissections or “wet” Labs may require Lab Reports. Where required, Lab Reports must be completed and submitted with required photos to the digital drop box. There may also be long-answer questions or data tables, which you will complete and include in the online report. Some labs will use materials found within the home, and there will be a sheep brain, cow eye, pig kidney, and fetal pig included in the lab kit you must purchase, which will be dissected. For labs, which would normally involve microscopy a microscope lab kit can be purchased through the MSU bookstore. The rubric should be reviewed before completing the lab procedure. It is essential that you follow procedures carefully, submit all required photograph in which all required structures are clearly visible and labeled as specified, and answer all parts of all questions. Any labs that contain crossword puzzles (CWPs) need to be printed and filled out by hand, then either photographed/scanned with student name and date of completion written on the document.

### **Instructor/Student Communication**

- Students are accountable for all academic communications sent to their Mayville State University e-mail address. **Students should not use outside email.** Instructor is not responsible for emails not received (by instructor themselves or by students) if outside email is used.
- Faculty response time can be up to 72 hours during the work week if a specific question is asked (most emails are answered within 24 hours during the week). If no questions is explicitly asked, a response may not be deemed necessary. Emails will not be checked on the weekends. An email sent on a Friday

afternoon may not be responded to until the following Tuesday (or longer if there is a holiday). Please plan accordingly. Any request for an extension **REQUIRES** a university excused absence and documentation in the initial email. Do not email asking for an extension without including your documentation.

### Method of Evaluation/Grading

1) Grades for labs, and lab practical's can be anticipated within 2 weeks of the due date. Turning an assignment in early does not mean grading will be done early. Sometimes, a set of assignments will take longer to grade, especially if the assignment is heavy in text (some labs may fall into this category) and may take an additional week.

2) In regard to late submissions, they are not accepted. Make-up practicals, missed labs/quizzes are **ONLY** permitted if there is a **UNIVERSITY EXCUSED ABSENCE AND THERE IS DOCUMENTATION**. Being busy, over sleeping, taking an extra shift, or general issues are **NOT** university excused absences. Please do not ask for extensions based upon these issues. If a university excused absence is in place with documentation, the student has 1 (one) week to complete the activity. This is one week from the day of the due date, **NOT** a week from when the student returns or contacts the instructor. After 1 (one) week, no points will be awarded. Determination of a university excused absence is based upon being sick and having gone to a medical professional (who can provide documentation), university sporting event in which you are actively participating in (which documentation is required), death in the immediate family (grand parent, parent, sibling, child, aunt/uncle for which you can provide documentation), military deployment (which documentation can be provided for), or legal (such as a court date that documentation can be provided for). Moving or travel is **NOT** a university excused absence. In terms of attendance and/or participation points, please see section above.

Grades will be TENTATIVELY based on two exams, lab assignments and lab quizzes. ***There will be no make-ups for lab practical exams, except under extreme circumstances (medical, legal or military). You can only make up one exam during the semester and it must be during the exam week.*** The grading scale is the typical 90% = A, 80%=B, 70%=C, 60%=D, <60%=F. **IT IS IMPORTANT FOR YOU TO CHECK YOUR GRADES ON BLACKBOARD. IF YOU FIND THAT I HAVE MADE A MISTAKE WHILE ENTERING YOUR GRADE YOU WILL HAVE ONE WEEK TO BRING IT TO MY ATTENTION, AFTER THAT GRADES ARE LOCKED IN BLACKBOARD.**

Practical Exams	100 (2 worth 50 points)
<u>Assignments</u>	<u>220 points</u> (11 worth 20 points)
<b>Total</b>	<b>320 points</b>

Grades (%):	90-100	A
	80-89	B
	70-79	C
	60-69	D
	< 60	F

Lecture and lab for BIOL 221 are **NOT** combined. They are two unique courses. These limits are hereby preset and by continuing in the course, you recognize these limits and will abide by these limits. Please refrain from sending emails about submitting late work or "redoing" or "reopening" assignments/quizzes/study guides/exams in order to

get extra points at the end of the semester. Those requests will be denied and may not warrant a response by the instructor.

### **Enrollment Verification**

The U.S. Department of Education requires instructors of online courses to provide an activity which will validate student enrollment in this course. The only way to verify that a student has been in this course is if he or she takes an action in the LMS, such as completing an assignment or a taking a quiz. Logging into the LMS is **NOT** considered attendance. Please see the enrollment verification activity and complete it by the date indicated. If it is not complete your enrollment in this course will be at risk.

### **Proctor Notification**

This course does NOT use proctors as the instructor is the proctor. Lab practicals are open source so a proctor is no necessary.

### **Late Arrivals**

The grading system for students adding this course after the first day of instruction will not be modified. The student will be graded on the activities that transpired from the beginning of the course. Students will be penalized for missed assignments and the student is still responsible for learning the course material that was covered during their initial absence.

### **Important Student Information**

Navigate to Blackboard > MaSU tab > Student Resources tab to find a document entitled, "Important Student Information," which includes information about:

- ✓ Academic Grievance Concerns and Instructor English Proficiency
- ✓ Starfish - Student Success System
- ✓ Students with Documented Disabilities
- ✓ Academic Honesty
- ✓ Emergency Notification
- ✓ Continuity of Academic Instruction for a Pandemic or Emergency
- ✓ Family Educational Rights and Privacy Act of 1974 (FERPA)
- ✓ Diversity Statement

## Course Timeline/Schedule

### Course Schedule:

**NOTE:** This is a **tentative** schedule. It may change as needed by the instructors.

<b>Lab Topic</b>	<b>Due Dates</b>
Lab 1 - Enrollment Verifications	5/26/23
Lab 2 - Neurons/Nervous System/Microscopy	5/30/23
Lab 3 - Gross Anatomy of the Central Nervous System	6/2/23
Lab 4 - Brain Dissection	6/7/23
Lab 5 - Reflex and Sensory will require help from another individual If no help is shown in photos no credit given	6/12/23
Lab 6 - Eye Dissection and Vision Once Lab 6 is submitted, Lab Practical 1 opens (Practical Due Date 6/19/23 5pm CST)	6/17/23
Lab 7 - Endocrine System	6/21/23
Lab 8 - Digestive System	6/26/23
Lab 9 - Urinary System/Kidney Dissection	6/30/23
Lab 10 - Reproductive System/Fetal Pig Dissection	7/6/23
Lab 11 - Genetics/Genomics DNA Extraction Once Lab 11 is submitted, Lab Practical 2 opens (Practical Due Date 7/13/23 5pm CST)	7/11/23

### Lab Practicals

Two open-book exams must be completed during the semester. The first will be associated with materials covered in the labs up to and including tissues, and the final exam will cover the remaining labs. Materials to be considered in writing the exams will include both objective materials learned during the labs, and applications associated with the

structures and systems studied. Identification of structures in photographs and line art is included in the exams. **You do NOT need to make a Yuja recording for Lab Exams.**

**As a student you are expected to:**

- Begin the lab course when the semester begins.
- Order your lab kits from the MSU Bookstore BEFORE the course starts. Check your lab kit for all enclosed items when it arrives.
- Answer questions appropriately: Some lab report answers may be given without full sentence structure where appropriate to the questions asked, but must clearly answer all parts for the question, contain correct spelling and display appropriate grammar and word usage. Answers to other questions, such as essay questions or short answer questions, which ask students to “explain”, “compare” or “describe”, should display appropriate sentence structure and logical development of thought. **Every single answer needs to be put into your own words. Copy and paste is plagiarism and will receive a score of ZERO.**
- Check your Mayville State email and the ANNOUNCEMENTS forum on the course home page a minimum of once daily to remain current on course information and changes.

**Additional Information:** This classroom is a place where you will be treated with mutual respect, and the course instructors welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability – and other visible or nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. MSU is committed to providing a safe learning environment, free of harassment and discrimination as articulated in our university policies located on our website at <http://www.mayvillestate.edu/about-msu/consumer-information/title-ix/>. MSU's policies require me as a faculty member to share information about incidents of gender-based discrimination and harassment with MSU's Title IX coordinator, regardless of whether the incidents are stated to me in person or shared by students as part of their coursework. Your instructor's pronouns are he/him/his.

**Starfish Statement:**

This class will participate in Starfish Early Alert and Connect, which promotes student success through coordination and communication among students, instructors, advisors, and campus support service departments. If I observe that you are experiencing difficulties in the course (attendance concerns, low test scores or participation, in danger of failing, etc.), I may send an email to your mayvillestate.edu email account through the Starfish system. My message will tell you about my concerns and the next steps to take to resolve the issue. Your advisor, the Director of Student Success, and/or I will work with you to create success strategies to address any difficulties you are having. In addition, if I observe that you are doing well in my course, you may also receive “kudos” from me acknowledging your efforts.

Starfish may involve taking advantage of various campus support services, such as academic tutoring or advising. If I recommend that you use campus support services, I, your advisor, or the Director of Student Success will redirect you to that support office so they will be better prepared to assist you. Starfish provides essential notices by email, so please check your mayvillestate.edu account frequently and respond quickly if you receive an email from Starfish.

Please see the Starfish webpage for additional details: <https://mayvillestate.edu/academics/starfish/>.