Biology 220L: Anatomy and Physiology I Lab (Online) Summer 2015

Joseph Mehus

Details: Online - 1 Credit

Instructor: Joseph Mehus
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Office Hours: By appointment/arrangement
Preferred Method of Contact Email

Required Texts:
Lab Protocols will be provided to students. Lab kits need to be purchased from Mayville State University Bookstore. It is VERY beneficial to have the textbook (Visual Anatomy and Physioloy, Martini,Ober, Nath 1st ed) when filling out lab materials, worksheets, and quizzes. Online sources may be used to fill out lab assignments.

Communication:
It is important that we communicate about the course, and about the life situations, which have an impact on your participation in it. It is recommended that you use the email account provided to you as an online Mayville State University student, rather than changing that communication tool in your personal profile in the Moodle learning management system. Mayville State University does not recommend the use of another email address or the forwarding of email to a personal email account, as this practice may compromise the security of your identity and personal information. Under most circumstances, student emails will be answered with 72 hours (email may not be checked over the weekends).

Course Description:
BIOL 220L ANATOMY AND PHYSIOLOGY I LAB (CCN) 1 S.H.
The equivalent of two hours of lab per week. Laboratory topics to be covered are designed to complement the materials studied in BIOL 220. Possible activities include those related to cell structure and metabolism, micro- and macroscopic observations and interpretations of cellular, tissue, integument, skeletal, muscular, cardiac systems, and dissections of animal specimens. Activities related to the study of physiology are also included. Spring on campus; Fall, Spring, Summer online

Course Objectives and intent of the course are that successful students will:
• Understand the organization of the human body and anatomical terminology
• Understand the chemical basis of life, cell structure and organization
• Understand the characteristics of the four tissue types.
• Understand the organization and function of the skeletal system.

• Be able to identify the bones of the body.
• Be able to identify the major muscles found in the body.
• Understand the organization and function of the circulatory system, including tracing the path of blood through the heart.
• Understand the organization and function of the lymphatic system and its role in the immune system.
• Understand the inner workings of the immune system and the function of the different cell types.
• Understand the organization and function of the respiratory system.

Detailed Description 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. Quizzes may also include "essay-type" questions. 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 white rat, pig heart included in the lab kit you must purchase, which will be dissected. For labs, which would normally involve microscopy, the digital images will be provided, with procedures modified to concentrate on interpretation of the visual information**. Lab quizzes may be part of some labs, and when labs are completed, the quiz must be taken. Both labs and lab quizzes have the same due dates/times. So waiting until the last minute will NOT work for you!!! You will need to finish the lab early so that you can take the lab quiz that may follow.** A scoring guide or rubric may be provided for each wet lab, which will help you to understand what is expected in the lab report, and to do well in the lab. 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 answer all parts of all questions.

Lab Policies

- ***Labs must be completed.*** Missing three (3) or more labs will result in a ***failing grade***.
- There will be ***no lab make-ups under any circumstances*** once the week of the lab is over.
- ***You will not be able to make up the missed points.***
- You must submit lab information/materials/photographs/assignments to get credit**.** Please read the labs carefully to make sure you are submitting everything you need.
- Safety: Dissection tools are sharp. Handle with care. Also, when doing your labs, you should not eat, drink or smoke. Try to minimize contact between your hands and mouth during the lab procedures, especially when working with chemicals or reagents.
- Treat all lab materials and specimens with care and respect.

The entire Academic Program Student Learning Outcomes (SLO) document can be found in your Moodle course shell. The document has an index so you can quickly find the degree you are pursuing. **These learning objectives are in support of the institutional student learning objectives, especially SLO#2, which have been established for a biology majors and essential studies.**

- SLO #1: Students will demonstrate knowledge of human cultures and the physical and natural world through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts. This is focused by engagement with big questions, both contemporary and enduring.
- **SLO #2: Students will demonstrate intellectual and practical skills, practiced extensively across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance.**
- SLO #3: Students will demonstrate personal and social responsibility, anchored through active involvement with diverse communities and real-world challenges.
- SLO #4: Students will demonstrate Integrative and Applied Learning, including synthesis and advanced accomplishment across general and specialized studies. This is demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.

Moodle Class Material:
We will utilize the Moodle website (http://lms.ndus.edu/course/view.php?id=6191) to distribute Powerpoint slides, study guides, and other printed materials. It will also be used to administer quizzes.

Enrollment Verification/Proctor Notification
Students will be required to submit introductions to confirm their enrollment in the course. This course does NOT use proctors as the instructor is the proctor. Students will record their computer screen and themselves using the Tegrity program found in Moodle

Learning Experiences
Describes the actions students will be taking to interact with the content. For example:

- Read all assignments prior to class, including chapters as noted, research articles, etc.

Assignments will be given on moodle. Submit all assignments during the lab period and grades will be given at that time.

Grading:
Grades will be 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. You must take both lab practicals to pass the course.*** 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 MOODLE. 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 MOODLE.

Practical Exams	100 (2 worth 50 points)
Lab Quizzes	75 (5 worth 15 points)
Assignments	175 points (5 worth 10 points, 5 worth 25 points)
Total	350 points

INTASC:

	INTASC PRINCIPLES
1	The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for the student.
2	The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.
3	The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to the diverse learner.
4	The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking problem solving, and performance skills.
5	The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
6	The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
7	The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.
8	The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
9	The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
10	The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Instructional Strategies:

Strategies We will use the following methods to assist you in your learning anatomy and physiology. **(INTASC 1, 2, 3, 4, 7, 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

Important Student Information

"Important Student Information" can be found in your Moodle course shell.

- ✓ English Proficiency and Other Academic Concerns
- ✓ Students with Disabilities
- ✓ Academic Honesty
- ✓ Emergency Notification
- ✓ Continuity of Academic Instruction for a Pandemic or Emergency
- ✓ Family Educational Rights and Privacy Act of 1974 (FERPA)
- ✓ Dropguard

All Lab Reports, Lab Quizzes and Lab Exams must be completed by the scheduled due dates as listed on the course schedule posted on the course Moodle site (and found at the bottom of this syllabus). Activities will be turned off as of 5pm CST on those due dates and no credit will be available for those activities after the due dates. If an emergency situation occurs, which affects your participation in this course, contact me immediately. Be prepared to provide proof. Being busy is not an emergency. For the purposes of this course an "emergency situation" is an unexpected, unpreventable and significant occurrence, which realistically prevents you from completing required coursework by its due date. You are expected to be aware of due dates and manage the required coursework within your personal schedule and obligations. For example, not submitting any coursework for 3 weeks and then not being able to submit it during week 4 because of an emergency that week is not acceptable.

Course Schedule:

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

Lab Topic	Due Dates
Lab 1 – Anatomical Terminology	**5/31/15**
Lab 2 - Chemistry	**6/7/15**
Lab 3 – Diffusion/Osmosis	**6/14/15**
Lab 4 – Cell Structures/Functions	**6/21/15**
Lab 5 – Tissues **Once Lab 5 is submitted, Lab Practical 1 Opens (Due Date 7/1/15 5pm CST)**	**6/28/15**
Lab 6 – Integumentary System	**7/5/15**
Lab 7 – Axial Skeleton	**7/12/15**
Lab 8 – Appendicular Skeleton	**7/19/15**
Lab – 9 Musculature **Rat Dissection**	**7/21/15**
Lab 10 – Heart **Heart Dissection** **Lab Final Due(7/31/15 5pm CST)**	**7/28/15**

Lab Examinations

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 Tegrity recording for Lab Exams**.

As a student you are expected to:

- Begin the lab course when the semester begins.
- Check your lab kit for all enclosed items when it arrives. **Contact the MSU Bookstore immediately if all items are not present and intact**
- 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 three times weekly to remain current on course information and changes.

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' exceled in oral communication as long as they took the time to use their own words to explain terminology.