

Instructor: _____
Office/Campus: _____
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Office Hours: _____
Science Department Web Site: www.midlandstech.edu/science

COURSE SYLLABUS
MIDLANDS TECHNICAL COLLEGE
SCIENCE DEPARTMENT
Fall/Spring Semester

COURSE: Anatomy and Physiology II

COURSE NUMBER: BIO 211

CREDITS HOURS: 4.0
CONTACT HOURS: 6.0

LECTURE: 3.0
LECTURE: 3.0

LABORATORY: 1.0
LABORATORY: 3.0

COURSE DESCRIPTION:

This course is part II in an intensive coverage of the body as an integrated whole. Emphasis is placed on the manner in which systems interact to maintain homeostasis. The following systems will be covered: Endocrine, Lymphatic, Immune, Circulatory, Respiratory, Digestive, Urinary, and Reproductive. Laboratory exercises will include dissections, computer labs, models, and experimentation.

PRE-REQUISITES: BIO 210

REQUIRED MATERIAL:

LECTURE TEXT:

Human Anatomy and Physiology W/SYS 9 CD & Atlas, Marieb, BC, 7th edition

LAB:

A Photographic Atlas for the Anatomy & Physiology Laboratory, Van De Graaff, 5th Edition, 2003, Morton
Anatomy & Physiology I & II Laboratory Guide, Porter & Borg, 4th Edition, MTC

OPTIONAL MATERIAL:

Lecture notes or other material designated by the instructor are optional.

Photographic Atlas of Histology, Leboffe, 1st edition, 2003
Dissection Guide & Atlas to the Fetal Pig, Smith & Schenk, 2nd edition, Morton
Rapid Review Anatomy Reference Guide, Anatomical Chart Co., 1996
Mammalian Anatomy: The Cat, Sebastiani & Fishbeck, Morton Pub.

ATTENDANCE POLICY:

Students will be allowed to miss twice the number of times a lecture or laboratory section meets per week.

If the lecture meets 3 times per week, 6 absences are allowed.
If the lecture or laboratory meets 2 times per week, 4 absences are allowed.
If the laboratory meets once a week, 2 absences are allowed.

If the student misses more than 10 minutes of class by either arriving late or leaving early, then the student will be counted as absent, missing fewer than 10 minutes is a tardy. Three tardies count as one absence.

When a student exceeds the maximum allowable absences, a grade of "W" will be assigned if the student is passing the course or "WF" if the student is failing after midterm. A "WP" is calculated into the grade point average as an "F".

ASSIGNMENTS AND MISSED TESTS:

Students who are absent from a class are responsible for all work done during that class period and for all assignments made during the missed class period. Students adding courses after classes begin are responsible for work covered from the first day of classes. All classes missed are counted as absences. Follow the guidelines of the instructor regarding missed tests.

LEARNING OBJECTIVES:

Learning objectives are on reserve in the Library on both campuses or available from your instructor.

DISABILITIES: Students with disabilities requiring in-class accommodations should call the Counseling/Disabilities Resource Center at 738-7637 (Beltline) and 822-3505 (Airport).

The Science Department Chair, Coordinators, and faculty are here to help you. If you are having any problems in your classes, please contact the person who can help you. If we don't know you are having problems, we can't help you. Dr. Perry Carter, Department Chair - 822-3443/Dr. Rick Corbett, Airport Coordinator-822-3553/Dr. Bert Knesel, Beltline Coordinator-738-7660.

BIO 211: TENTATIVE WEEKLY SCHEDULE

WEEK	LECTURE CHAPTER	LAB WEEK	EXERCISE
1.	Endocrine Glands & Receptors Hormones	16 16	1. 11-1 Endocrine System
2.	Blood: Components Blood Coagulation Lymphatic System	17 17 20	2. 11-2 Blood 11-3 Lymphatic System
3.	Immunity: Nonspecific Defenses Specific Defenses	21 21	3. Quiz 1 11-4 Endocrine Oral Reports
4.	EXAM 1 Cardiac Anatomy	16,17,20,21 18	4. 11-5 Heart Anatomy
5.	Cardiac Physiology Cardiac Regulation	18 18	5. 11-6 EKG 11-7 Blood Vessels
6.	Vessel Anatomy Vessel Physiology	19 19	6. 11-8 Blood Pressure & Exercise
7.	Blood Pressure Control & Heart Disease	19	7. Quiz 2 11-9 Spirometry & Scientific Method
8.	Respiratory Anatomy & Physiology Respiratory Regulation	22 22	8. 11-10 Respiratory System Anatomy
9.	EXAM 2 Gastrointestinal Anatomy & Physiology	18,19,22 23	9. 11-11 Digestive System Anatomy 11-12 Enzyme Experiment
10.	Metabolism	24	10. Quiz 3 Kidney Anatomy Nutritional Analysis Homework
11.	Urinary Anatomy & Physiology Fluid and Electrolyte Balance Acid and Base Balance	25 26 26	11. 11-14 Urinary Dissections 11-15 Urinalysis 11-16 Buffers
12.	EXAM 3 Male Anatomy & Physiology	23-26 27	12. 11-17 Reproductive System Anatomy 11-18 Meiosis and Development
13.	Female Anatomy & Physiology Pregnancy & Development	27 28	13. Quiz 4 (Urinary & Reproductive) 11-19 Genetics Problems
14.	Genetics	29	14. Quiz 5 (Genetics & Development) 11-20 Genetic Disorder Oral Report
TBA	CUMULATIVE FINAL EXAM (not optional)	16-29	CUMULATIVE OPTIONAL FINAL

Tentative Lecture Exam Dates

Lab Quiz Dates

Exam 1 _____
 Exam 2 _____
 Exam 3 _____
 Exam 4 _____
 Exam 5 (Final) _____

Quiz 1 _____
 Quiz 2 _____
 Quiz 3 _____
 Quiz 4 _____
 Quiz 5 _____ Final _____

Tentative Exam Dates		Grade	Lab Quiz Dates		Grade
Exam 1			Quiz 1		
Exam 2			Quiz 2		
Exam 3			Quiz 3		
Exam 4			Quiz 4		
Final			Quiz 5		
			Final		
Average =			Average =		
Average x 0.75 = Lecture Points			Lab Average x0.25 = Lab Points		
Course Average = Lecture Points + Lab Points					

If Course Average is:	The Course Grade is:	If Course Average is:	The Course Grade is:
90-100	A	60-69	D
80-89	B	<60	F
70-79	C		

BIO211 STUDENT RESPONSIBILITIES
LABORATORY POLICIES AND SAFETY PRECAUTIONS

I. Safety Precautions

1. No drinks or food in lab or left in the hallway at any time due to safety considerations.
2. No visitors or children in lab or lab prep room at any time.
3. Read the safety contract, know where and how to use the safety features in the lab (eyewash station, shower, fire extinguisher) and sign the contract before the third week of classes.
4. Report injuries immediately to your lab instructor.
5. Protective eye wear and gloves (provided by the student) are required when dissecting.

II. Policies

1. No visitors, food or drinks in any science lab.
2. Use cleaning solution and paper towels to clean your workstation before and after each lab.
3. Paper towels, cleaning solution bottle, distilled water bottle, and microscope lens cleaning solution and paper are to be returned to the bin located in the center of each counter top.
4. Return chair height and arms to lowest position and push under the bench.
5. Do not write on or remove labels from any location in lab
6. Put model parts in place before returning to cart or designated location in lab.
7. If muscles are left in disarray the corresponding lab quiz will consist of disassembled models!
8. Move and use the models carefully. Models are very expensive and not easily replaced. Do not use pens or pencils as pointers on models. Plastic straw stirrers are available for this purpose.
9. Make sure models do not leave the lab.
10. Remove any labels you placed on models.

III. Success in Anatomy and Physiology Labs

1. The laboratory experience is designed to supplement and complement material covered in lecture, and is an integral part of the course. The laboratory instructors will give a sufficient amount of information and guidance to allow students to complete each lab, but success in lab primarily involves the individual effort of each student.
2. Do not ask or expect to leave class early.
3. Read laboratory exercises on the syllabus before coming to class.
4. Bring all necessary materials to lab, including your text.
5. Do not disturb any equipment or demonstrations that have been set up, until your instructor has told you how to proceed with the assignment.
6. Students are expected to carefully follow lab directions given by the instructor.
7. Do not hesitate to ask your lab instructor for clarification of any instructions you do not understand. However, do not expect your lab instructor to simply give you answers to information you should be obtaining through the completion of the various lab exercises.
8. At the end of each lab, leave your work space in good order by discarding waste materials, cleaning and disinfecting your lab table, returning all materials used to their proper place, and sliding your chair back under the table.
9. Laboratory exercises must be completed during the assigned lab period unless otherwise designated by your instructor.
10. Open labs will be scheduled at times during the week. Availability of rooms, materials, tutors, and funding limit the number of labs that can be offered. Many students will be attending each session.
11. Use the open labs for studying what you have learned in lab, not as a substitute. There is adequate time in lab to learn the lab objectives and open labs may not be available to fit into your schedule.

IV. Lab Quizzes

1. Lab quizzes are practicals set up in stations. You will meet outside the Practical Lab door (Lexington Hall 132) on lab quiz days. The lab is on the airport side of the building. No students are permitted in the prep room area and no one may enter the lab without the lab instructor. The optional final exams may be held in the regular lab.
2. Each student must take the quiz with his/her regular lab class.
3. Once entering the lab, students may not talk to other students. Each student will take a station and wait until the instructor says to move to the next station. You will always move to the next higher numbered station. After completing the final test question, move to the first station. You will be permitted to return to stations – only one student per station- but only after all students have had an opportunity to visit each station. The time allowed to revisit stations will be determined by the instructor.
4. Do not touch, move, probe, etc. items on lab practical. Notify the instructor if there is a problem.

5. Talking among students, more than one student per station, and not covering an answer sheet gives the appearance of cheating. Behavior that gives the appearance of cheating will be addressed as such.
6. Points will be deducted for spelling. Lab quizzes will not be graded immediately but will be returned at the next lab class. Students will record their grades and must return the test to the instructor. Students will not provide quiz information to other BIO 210 students. An optional final quiz will be given to replace a missed quiz or a low grade if all quizzes were taken.
7. No bonus or extra credit will be given in lab.

V. Use and Care of the Microscope

1. When using the microscopes:
 - a. Your instructor will give you details on how to lift scope from the cabinet, use and store the microscope. Follow these instructions and ask questions as needed.
 - b. Clean all microscope lenses with the solution & paper provided before and after using the scopes. This is especially important when using dyes.
 - c. Make sure to use the lever on the stage clip to position the slide on the scope. Lifting up the slide without using the lever results in damage to the clip.
 - d. Handle the slides carefully and return to appropriate color-coded slide box in numerical order and return slide box to proper drawer.
2. If scope is not working:
 - a. Check light adjustment knob and power switch.
 - b. Make sure power cord is inserted at back of scope.
 - c. Inform your lab instructor.
3. Returning microscopes to proper storage position
 - a. Light off and slide off
 - b. Stage or nosepiece all the way down
 - c. 4x objective in place
 - d. cord to side ******(note that cord should remain in bundle and doesn't need to be uncoiled to reach outlet)
 - e. Eyepieces to back of scope, do not move head
 - f. Plastic covers placed over scope
 - g. Place in cabinet with arm and scope # facing the open door of cabinet and check that scope # corresponds to cabinet #.
4. All students will spend time on the microscope to learn the slides. Do not substitute viewing the slides on the plasma screen or using microscopes set up by other students or instructors. You will learn best by doing the work. You need to be efficient with the microscope for BIO 211 and 225.
5. Do not use the instructor slide boxes.

VI. Dissecting

1. Students will provide gloves and eye protection (glasses are acceptable) for dissecting.
2. Dissectible must be taken from appropriate instructor's box.
3. Make sure you understand safety precautions when dissecting and listen to dissection instructions before beginning.
4. If saving, label a storage container with student's names, lab instructors name, and day of lab. Follow the lab manager's directions on using the preservative.
5. Brains can be stored collectively in the lab save box containing carosafe (a box will be available for eyes). Some of these will be taken for lab quizzes.
6. Each student is responsible for the dissection. If saving, put in correct location. These may be thrown away if not stored in appropriate location.
7. Dissections cannot be taken from the lab. Open lab has dissections.
8. All instruments, pins and trays must be washed, dried, and returned to drawer.
9. Inform the instructor of missing or broken instruments in the dissection kit and instructor will find replacements in prep room.
10. At the end of the semester, all dissectible material must be discarded and containers washed, dried, and stacked in back of lab.
11. All dissected specimen to be discarded will be placed in the black garbage bag in the "Dissectible Waste" trashcan. Gloves, paper towels, etc. will be discarded in the regular trashcan.
12. Lab personnel and other instructors are not responsible for finding lost dissections nor will they be cleaning after each student.

MIDLANDS TECHNICAL COLLEGE
SCIENCE DEPARTMENT

CODE OF CONDUCT

Student rights and responsibilities are outlined in the Student Handbook. We are extremely proud of the quality of students in the Science Department however, there have been occasions where disciplinary action is necessary to prevent disruptive and dishonest behavior. The following items are specific violations and consequences supported by the Science Department. Your instructor will circulate a form for your signature stating that you understand the Science Department Course Syllabus, which includes this document.

1. Any student who exhibits behavior that is disruptive to the learning process such as talking, discourtesy to faculty or fellow students to include obscene language or gestures, or uncooperative actions will be asked to leave the classroom. The student will be counted absent for this class. Depending upon the nature of the offense or if it occurs during an exam, the instructor may require that the student see the Science Coordinator, Chair of the Science Department, or the Director of Campus Life before returning to class. Campus Security will be called for any threatening or violent behavior.
2. Cell phones, pagers, headphones, personal stereos, and similar devices are not permitted in class. Permission must be obtained from the Science Coordinator or Instructor for students who are emergency personnel or where there are extenuating circumstances. Campus Security can locate a student and will interrupt a class if there is a situation that needs immediate attention.
3. Any student proven to have engaged in academic dishonesty will be given a grade of zero on the exam or assignment. This includes, but is not limited to, giving or receiving information during an exam, use of unauthorized materials during an exam or assignment, plagiarism, or changing answers after a grade has been assigned. An instructor must have reasonable proof that dishonesty has occurred. Until an incident is verified, the student will be assigned a grade of "I" for the work. Witnesses of cheating should report this immediately to the instructor. The grade will be discussed confidentially with the student. If the student denies that academic dishonesty occurred, the Chair of the Science Department or Science Coordinator will meet with the instructor and student. The instructor will be supported if departmental guidelines for handling cheating incidences were followed. However, the student is referred to the Student Handbook for the policy on filing a grievance. In any incident involving academic dishonesty, a report will be filed with the Director of Campus Life.
4. Students with complaints about instructors should follow the appropriate chain of command as outlined in the "Science Department Conflict Resolution" form. A form can be obtained from the Science Department. Signatures must be obtained at each level before the complaint will be validated. There may be some circumstances where the first contact is with the Science Coordinator who will discuss the problem with the instructor. All efforts possible will be made to resolve conflicts internally. However students should remember that matters can also be handled through the Academic Appeal/Grievance process detailed in the Student Handbook.