



BIO 110- I – General Anatomy and Physiology (online)

Science Department

Semester: Summer 2014

Catalog Course Description: This course is a general introduction to the anatomy and physiology of the human body. Emphasis is on the organ systems of the human and their interrelationships.

Prerequisite(s): RDG 100 or ESL 100
Credit Hours: Lecture: 3.0
Departmental Website: <http://www.midlandstech.edu/science>

Instructor: Dr. GERALYNE LÓPEZ-DE-VICTORIA
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Class Schedule: Online

Office Hours: By appointment

Textbook(s): Lecture: Longenbaker Mader's Understanding Human Anatomy & Physiology
8th edition or latest edition with Connect Access Code- McGraw Hill

Additional Textbooks/Readings: The instructor may provide additional material on the Desire 2 Learn (D2L) course website or through the textbook publisher's website.

General Education Core Competency Statement: This course is designed to meet the college's general education core competency for Scientific Reasoning.

Course Requirements: This is an online course that requires computer and internet access daily. Students must **log-in everyday** to complete homework assignments, quizzes, check e-mail, and do assessments, among others. The homework will consist of reading assigned chapters, answering questions, and taking quizzes.

All tests, including the final exam must be taken at the assessment centers on-campus. Please make arrangements on time to ensure that you are able to take all exams by the due date and time posted on the course website.

Course Objectives: This course is a general introduction to the anatomy and physiology of the human body. Upon completion of this course the student will have a basic working knowledge of the organ systems of the human and their interrelationships. Chapter objectives can be found on the course website.

Course Outcomes and Competencies:

Intended Course Outcome: Students in Biology110 will learn the basic principles of human anatomy and physiology.

Course Competency (Performance Measure): Students will demonstrate knowledge by applying basic biological principles to understand the relationship between the structure and function of cells, tissues, and organs within organ systems and to describe the integration of organ systems in each of the following areas:

- Organization of the Human Body
- Support, Movement, and Protection

- Integration and Coordination
- Maintenance of the Body
- Reproduction and Development

Area: Organization of the Human Body	
Chapter	Learning Objective
1	Describe the levels of organization of the human body, body cavities and membranes, homeostasis, the mechanisms that maintain homeostasis, and disease. Define the anatomical terms that describe relative positions of body parts, regions of the body, and the planes of section.
2	Compare and contrast organic and inorganic molecules including types of bonds present, important substances formed within each class (carbohydrates, lipids, proteins, nucleic acids, water, salts, acids, bases, molecular oxygen, and carbon dioxide) and important characteristics and examples of each.
3	Describe the components of the cell and the function of each during each phase of the cell cycle (include membrane transport mechanisms, protein synthesis, DNA replication, and mitosis).
4	Describe the general characteristics and functions of each of the 4 major tissue types and extracellular junctions, glands, and membranes.
Area: Support, Movement, and Protection	
Chapter	Learning Objective
5	Describe the structure and function of each component of the integumentary system.
6	Describe the structure (major bones of the skeletal system, shapes of bones, anatomy of a long bone, joints), the functions, and the growth and development of the skeletal system.
7	Describe the structure, functions, and location of skeletal, cardiac, and smooth muscle.
Area: Integration and Coordination	
Chapter	Learning Objective
8	Describe the structure and function of the central and peripheral nervous system including the parts of the brain, the structure of the spinal cord, cranial and spinal nerves, and mechanisms of nerve impulse generation and propagation. Compare and contrast the sympathetic and parasympathetic divisions of the autonomic nervous system.
9	Describe the structure and function of general sensory receptors and sense organs.
10	List the endocrine organs and the hormones released from each. Describe the target, action, and regulation of release of each hormone.
Area: Maintenance of the Body	
Chapter	Learning Objective
11	Describe the composition and function of blood, hemostasis, and capillary exchange.
12	Describe the structure and function of the heart and blood vessels, regulation of blood pressure, and routes of circulation.
13	Describe the molecules, cells, tissues, and organs that are part of the lymphatic and immune systems and how they provide specific and nonspecific defenses against infection.
14	Describe the structure and functions of the respiratory system, the mechanics of breathing, and mechanisms of gas exchange and transport.
15	Describe the structure and function of the digestive system and accessory organs, the mechanisms of chemical and mechanical digestion, and the regulation of secretion and motility in the gastrointestinal tract.
16	Describe the structure of the urinary system and the role of the kidneys in excretion, fluid and electrolyte balance, maintenance of blood pressure, and maintenance of acid-base balance.
Area: Reproduction and Development	
Chapter	Learning Objective
17	Describe the male and female reproductive systems, the effects of sex hormones, spermatogenesis, oogenesis, the menstrual cycle, and sexually transmitted diseases.
18	Describe the structures involved in and the processes of fertilization, pre-embryonic, embryonic, and fetal development, and birth.
19	Explain normal patterns of chromosomal inheritance, autosomal dominant, autosomal recessive, and sex-linked allelic inheritance, and the application of technology to diagnose and treat genetic disorders.

Measurement Instrument: Students will complete a set of examination questions based on the learning objectives listed above. The success criterion is that 85% of the students will answer 70% of the questions correctly.

Program and course assessment activities are deployed and results collected in accordance with the College's assessment schedule. Refer to the information in the syllabus regarding the applicability of assessment activity for the current semester.

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

With the online class this becomes two weeks of assignments and/or quizzes, including tests. These do not need to be consecutive. Students missing more than two weeks of work and/or two or more quizzes/ tests will be withdrawn by the instructor. Please refer to the course information on the course website for details on how the absences and tardies will be recorded for this online class.

You are responsible for all material and announcements posted at **any** time during the semester. You must log in daily the course web site to check for any updates, changes in schedule, emails from the instructor etc.

This is an online course with set deadlines. This is not a self-paced course. Homework, assignments, quizzes, tests, and any other forms of assessment must be completed by the deadline. The instructor will **not** extend the due dates to accommodate each student individually. Students will receive a grade of zero for any work missed.

Students must have a computer and have access to the internet daily. Students must also be able to come to campus to take their exams, no exceptions. Information about the assessment center and hours of operation are posted on the course and the college's website.

Withdrawal: Students may withdraw from a course anytime before the last week of classes (see the current semester college calendar, available on the MTC web site, for official dates). Students who wish to withdraw from a course must submit a withdrawal form to records. The date of withdrawal may affect a number of things, including financial aid/ tuition reimbursement, tuition refunds, and course grades. The effective date of withdrawal depends upon the date the withdrawal form is submitted to records. It is the student's responsibility to be aware of relevant dates, to make an informed decision, and if necessary, to submit withdrawal forms in a timely fashion.

For questions regarding the effect of withdrawal on financial aid or tuition reimbursement students should contact Student Financial Services. Deadlines for tuition refunds may be found on the current semester college calendar, available on the MTC web site, or by calling the cashier's office.

Students who withdraw before midterm will receive a grade of W. Students who withdraw after midterm and have an overall class average of 60% or greater will receive a grade of W. Students who withdraw after midterm and have an overall class average below 60% will receive a grade of WF, which is calculated as an F.

Grades of W or WF are also assigned when a student exceeds the maximum number of absences allowed in a course. These grades are entered on the final grade roster along with the last date of attendance (LDA). Students should understand that the LDA does not constitute an effective date of withdrawal and should not consider a decision to stop attending class to be equivalent to withdrawal.

Course Grading Scale:

The final grade for this course will be determined as follows:

- Six (6) lecture exams and a cumulative final exam will count for 75% of your final grade.
- Chapter quizzes will count for 10% of the final grade.
- Homework will count 15% of the final grade.
- A grade of zero will be recorded for any missed exam, quiz, or assignment.

A (90-100)

B (80-89)

C (70-79)

D (60-69)

F (<60)

The faculty, coordinators and Science Department Chair are here to assist you. If you are having any difficulty with your class please talk to your instructor first. You can discuss your concerns with the Science Coordinator and then with the Department Chair, if necessary, after you have addressed your concerns with your instructor. Dr. GERALYNE LÓPEZ-de-

Victoria is Department Chair and can be reached through Ms. Pam McPherson, Departmental Assistant at 822-3548. Dr. Gregory Mancini is Beltline Science Coordinator and can be reached at 738-7660.

PLEASE NOTE: Should change become necessary, the instructor reserves the right to adjust the requirements, pace, or scheduling of this course. Any changes will be announced in the course website before it becomes effective.

TENTATIVE WEEKLY SCHEDULE

WEEK / DATES	TOPIC	CHAPTER
1 May 21 – May 27	Organization of the Body Chemistry of Life	Ch 1 Ch 2
2 May 28 – June 3	Test 1 (ch 1 - 2) Cell Structure and Function Body tissues and Membranes	Ch 3 Ch 4
3 June 4 - 10	The Integumentary System The Skeletal System	Ch 5 Ch 6
4 June 11 -17	Test 2 (ch 3 – 6) The Muscular System The Nervous System	Ch 7 Ch 8
5 June 18 - 24	The Sensory System The Endocrine System	Ch 9 Ch 10
6 June 25 – July 1	Test 3 (ch 7 – 10) Blood The Cardiovascular System	Ch 11 Ch 12
7 July 2 - 08	The Lymphatic System The Respiratory System	Ch 13 Ch 14
8 July 09 - 15	Test 4 (ch 11 – 13) The Digestive System The Urinary System and Excretion	Ch 15 Ch 16
9 July 16 - 22	Test 5 (ch 14 – 16) The Reproductive System	Ch 17
10 July 23 – July 29	Human Development and Birth Human Genetics	Ch 18 Ch 19
11 July 30 - Aug 5	Test 6 (ch 17 – 19)	
Aug 6- Aug 8	Cumulative Final Exam	Ch 1 – 19



Academic Affairs Student Guidelines and Expectations

MTC Student Handbook:

Students are expected to read the *MTC Student Handbook* and abide by its policies. You can find the handbook online at <http://www.midlandstech.edu/handbook/>; copies are also available at various locations on campus. Some of the more important handbook policies that impact your academic success are listed below.

Academic Integrity:

- The students of MTC have adopted the following Honor Code:
As a member of the Midlands Technical College community, I will adhere to the college's Student Code. I will act honorably, responsibly, and with academic integrity and honesty. I will be responsible for my own academic work and will neither give nor receive unauthorized or unacknowledged aid. I will behave courteously to all members of the MTC community and its guests and will respect college property and the property of others.
- The Student Code (Appendix I of the *MTC Student Handbook*) defines academic dishonesty, which includes, but is not limited to, cheating on tests, plagiarism, collusion, and falsification. Such actions will result in discipline.
- Cheating on tests includes:
 - Copying from another student's paper.
 - Copying or presenting someone else's work as your own.
 - Using unauthorized materials during a test.
 - Collaborating with any other person during a test without permission.
 - Knowingly obtaining, using, buying, or selling in whole or part the contents of any test.
 - Bribing any other person to obtain information about tests.
 - Substituting for another student, or permitting another student to substitute for you.
- Plagiarism is taking another person's work and using it without giving the source credit in any graded assignment.
- The use of cell phones or other portable electronic devices for purposes of academic dishonesty in any form is strictly prohibited; students who violate this policy will be subject to the disciplinary procedures and sanctions outlined in the Student Code.
- For more information about academic dishonesty, see the Student Code.

Class Attendance and Participation:

Students are responsible for meeting all attendance and participation requirements outlined in each course syllabus.

Portable Electronic Devices:

Cell phones and other portable electronic devices may be used in classrooms only for maintaining access to *MTC Alerts!*, the college's emergency notification system. Other uses of portable electronic devices (for example, leaving class to make or receive phone calls, sending or reading text messages, accessing the internet, taking pictures or videos, listening to music, etc.) will be considered disruptive activities, and the student will be subject to disciplinary action.

Student Email Accounts (*MyMTC* Email):

- All MTC students are assigned a college email account called *MyMTC* Email. For access, follow the link on the *Enrolled Students* page or go to <http://www.midlandstech.edu/myemail>.
- *MyMTC* Email is the primary way the college communicates with students. You are responsible for checking your college email regularly for important information and announcements about registration, financial aid, cancelled classes, emergencies, etc.
- Students can use their college email accounts to communicate with faculty, staff, fellow students, and others, as well as to maintain personal calendars and task lists.
- In addition to using *MyMTC* Email, students may also be required to communicate with instructors through Desire 2 Learn (D2L, the college-wide learning management system), or through course-specific software, such as MyMathLab.

MyMTC:

The college conducts business with students through *MyMTC*, which provides many services and resources, including access to transcripts, grades, and program evaluations; information about financial aid status; and how to search and register for courses. To access *MyMTC*, follow the link on the *Enrolled Students* page or go to <http://mymtc.midlandstech.edu>.

Children on Campus:

Children are generally not permitted on campus except for special events. Children are not permitted in classes, labs, or advisors' offices. Children can never be left unattended on campus, including in the library, the Academic Success Center, or parking lots.

Inclement Weather Policy:

- If weather conditions or other emergencies cause the college to close or open late, announcements will be made over local radio and TV stations, on the MTC website, and on the college's information line (803-738-8324).
- Notices will be sent to students via *MyMTC* Email and *MTC Alerts!* when applicable.
- Check for separate announcements for day and evening classes because weather conditions can change during the day.
- Inclement weather schedules: In standard non-lab and non-clinical classes, if the college closing or reopening means that there is at least 30 minutes of a class remaining, plan to attend that class. For example, if the college opens at 10 a.m., classes that normally meet at 8 a.m. will not meet, but classes that normally begin at 9:35 a.m. will begin at 10 a.m. Similarly, if the college closes at 8 p.m., 6 p.m. classes will meet for their regular time, but 7:35 p.m. classes will not meet.
- Check your syllabus for specific information about the inclement weather policy for that course.

Campus Emergency Protocol:

- To report safety concerns or suspicious activities, call Campus Security at 7850 (on campus) or 738-7850 (cell phone or off campus).
- To report a security emergency, call Campus Security at 738-7199 or dial local 911 immediately.
- The college also provides emergency call boxes; look for these red call boxes in or near parking lots on all campuses.
- If a college-wide emergency occurs, the college will communicate additional information and instructions in a number of ways, including the MTC Information Centers, campus loud speakers, *MyMTC* Email, the MTC website, and *MTC Alerts!*. To sign up for *MTC Alerts!* and receive emergency notifications on your cell phone, go to: http://www.midlandstech.edu/Phone_Alert.htm.

Student Evaluation of Instruction:

Toward the end of the semester, students will be encouraged to participate in evaluating their courses. You can complete this confidential evaluation through *MyMTC* using your username and password. Announcements will be made during the term concerning how and when to complete the online evaluation.

Students Requiring Special Accommodations:

- If a student with a disability requires special accommodations, the student should go to Counseling Services in the Student Center on Beltline or Airport Campus for assistance. Documentation regarding a specific disability is required in order for special arrangements to be made. All information received will remain confidential.
- For more information, follow the *Disability Resource Centers* link under *Online Resources* on the *Enrolled Students* page.
- The staff of Counseling and Career Services works to ensure that all educational programming and services are accessible to otherwise qualified students with disabilities. If you have a concern regarding the accessibility of websites, instructional materials, online courses and other electronic or information technology please contact Counseling and Career Services. It is the student's responsibility to self-disclose as a student with a disability and to request accommodations prior to beginning a program or course. Please contact the staff of Counseling and Career Services at 803-822-3505 (AC) or 803-738-7636 (BC) or via email at disability@midlandstech.edu if you have any questions or concerns.

SCIENCE DEPARTMENT CODE OF CONDUCT

Student rights and responsibilities are outlined in the MTC Student Handbook. <http://www.midlandstech.edu/planner/>

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.

- 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 Assistant Vice President for SDS before returning to class. Campus Security will be called for any threatening or violent behavior.
- Beepers, cell phones, music players, other electronic devices, and similar devices are not permitted in assessment centers, classrooms, laboratories etc. Campus Security can locate a student and will interrupt a class if there is a situation that needs immediate attention
- 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. Any incident involving academic dishonesty will be reported to the Assistant Vice President for SDS. For more information, please refer to your MTC Student Handbook <http://www.midlandstech.edu/planner/>