



Muskegon
Community
College

Summer 2012

BIOL 106 L&L – S01.S02.S03

Anatomy and Physiology II

Lectures: Room 351, T & Th 4:00-5:50 PM

Lab: Room 245, Th from 6:00-9:45 PM

INSTRUCTOR:

Shawn Macauley, Ph.D.

Office: 243-C

Office Hours: I am available 11:30-12:00 M-R plus by appointment

Office Phone: 777-0272 (x272 on MCC campus)

E-mail: shawn.macauley@muskegoncc.edu

I. COURSE DESCRIPTION

- **BIOL 106 L&L –Anatomy and Physiology II.** This is a hybrid laboratory course and is a continuation of Biology 105 for students in nursing and other health-related fields that need an intensive study of the anatomy and physiology of the human organism. Emphasis is on the skeletal, muscular, nervous, digestive, cardiovascular, respiratory, urinary, endocrine and reproductive systems of the human organism. 4 credit hours; 6 contact hours
- Co-requisite: BIOL 106 Laboratory (You must be enrolled in both lecture and laboratory sections)
- Prerequisite: BIOL 105 with a C or higher.
- This course requires the dissection of animals.
- Major Course Goals

Upon successful completion of the course, the student will have done the following:

1. Identify the organs and explain the general function of the organs in each major body system.
2. Describe the major physiological processes that occur in the body systems.
3. Relate the anatomical structures of the body systems with the physiological processes that are occurring within each those systems.
4. Analyze the interrelationships between the various body systems and how they work together.
5. Interpret various forms of physiological data.
6. Explain how the body systems maintain homeostasis in the face of continually changing conditions.
7. Make predictions about what might lead to changes in normal homeostatic mechanisms and the different disease states could results from these changes.
8. Use relevant resources to analyze, hypothesize, and justify conclusions about homeostasis and physiological processes.
9. Work cooperatively with peers and learn to appreciate the different values, knowledge, and interpretations that each individual brings to the course.

II. REQUIRED MATERIALS

- Saladin, Kenneth. *Anatomy and Physiology: The Unity of Form and Function*, 6th Ed, 2012. ISBN 978-0-07-337825-1
- Connect Plus Access Card
Go to http://connect.mcgraw-hill.com/class/s_macauley_biol_106_summer_2012 to register your access code. Register for Connect before registering for Tegrity or APR 3.0.
- *Anatomy and Physiology Revealed 3.0* and *PhILS 3.0* (both packaged with Connect Plus).
- Tegrity Campus SEM 2.0 Access Card (packaged with Saladin 6 textbook). Click on “your recorded lectures” and enter your access code.

- Biology 106 Course Objectives and Lecture Supplement Summer 2012 is not available in the bookstore but will be available on BlackBoard before each lecture.
- ScanTron Answer Sheets (6)
- Laboratory non-latex gloves
- Safety Glasses
- Access to computer with PowerPoint, Word, and Internet for Blackboard, Connect, Tegrity, and course related websites.

III. SUGGESTED MATERIALS

Notebook, notecards, a quiet place to read, concentrate & study plus a dedicated study partner(s).

IV. EVALUATION

The lecture portion of this course will count as 70% of your overall grade (with lab accounting for the remaining 30%). Lecture grades will be based on the following:

- 5 Lecture exams¹ @ 100 pts = 500 pts.
 - 5 lecture quizzes² @ 25 pt = 100 pts.*
 - 2 Case Studies³ @ 25 pts = 50 pts.
 - Connect for Anatomy and Physiology Assignments⁴ = 30 pts.
 - 4 Anatomy and Physiology Revealed Assignments⁵ @ 5 pts = 20 pts.
- 4 Lab exams⁶ @ 50 pts = 200 pts
 Lab Report⁷ = 30 pts.
 7 Lab quizzes⁸ = 70 pts

¹Exams are scheduled for R 5/31, R 6/14, R 7/5, and R 7/19. The Final (non cumulative) Exam is R 8/2.

²Quizzes, administered through Connect, will be due as announced in class and posted on Connect. *The lowest lecture quiz grade will be dropped.

³Case Studies will be due no later than R 6/28 and R 7/26. Responses will be uploaded to Safe Assign as well as submitted at lab.

⁴Connect for Anatomy and Physiology provides on-line activities and assignments correlated with the textbook. Completion of exercises will be worth a maximum of 30 points. All assignments are due before the corresponding lecture exam.

⁵These four quizzes will be administered through Connect and Anatomy & Physiology Revealed 3.0 and are due before you take the corresponding lab exam.

⁶These four lab exams will be in lab either May 29/31, June 12/14, July 3/5, and July 17/19.

⁷A Lab Report will be assigned for one of the labs. A grading rubric and requirements will be provided.

⁸Most labs will begin with a lab quiz.

V. GRADING SCALE (OUT OF 1000 TOTAL POINTS AVAILABLE)

1000 - 920	A	799 – 780	C+	619 – 600	D-	Note: Final grades are not rounded up.
919 - 900	A-	779 – 720	C	599 and ↓	E	
899 - 880	B+	719 – 700	C-			
879 - 820	B	699 – 680	D+			
819 - 800	B-	679 – 620	D			

VI. COLLEGE AND COURSE POLICIES

Exams: Examinations will be given at 4:00 PM at the lecture periods on the dates listed in the class schedule. Exams will include materials covered in lectures and labs as well as assigned readings in the textbook which may not be specifically discussed in class. If you are unable to attend the lecture exam period, you may schedule your exam in the Testing Center by the end of Friday after the exam. Failure to

take an exam within 24 hours will result in a grade of zero for the exam. If you have a valid excuse and inform me ahead of time by email and provide written documentation within 24 hours of the missed exam (proof of funeral, hospitalization, *etc.*), you may make up the exam by taking an alternative exam. If given at least 2 weeks notice, you may be able to take an exam early if you have a school sponsored activity (with documentation). You will not receive your exams back but you may stop by my office (during my office hours/by appointment) to look them over. Remember to bring two #2 pencils, your ScanTron sheet, simple TI-30 type calculator (cell phones can't be used on exams) and your MCC student ID (which has your seven digit student number on it) to each exam. Exams and quizzes will be available for review for 2 weeks following each assessment after which they will be shredded.

Labs: Labs, and thus participation points earned, can not be made up for any reason. There will be weekly quizzes related to lecture materials that will be due before each weekly lab session. Leaving lab early (unless made up) will result in that lab being counted as a missed lab with the PreLab and Lab Quiz grades changed to zeros. Missing 2 labs for any reason will result in a grade of E per departmental guidelines.

Statement on Student Assessment and Accreditation: Muskegon Community College is fully accredited by the Higher Learning Commission located in Chicago. The College is currently seeking reaccreditation by completing a two-year process called a self-study. Accreditation helps ensure students that they are receiving a quality education and can transfer to other colleges and universities with ease and confidence. MCC is committed to an essential part of the reaccreditation process: assessing student learning. You may be asked to participate in assessing student academic achievement this semester by doing such things as:

- Evaluate your class and your instructor by completing a Student Opinion Survey, usually given toward the end of the semester.
- In some classes, you will find that one hour of class time may be devoted to completing a test of your general knowledge. Your performance on this test will not affect your grade in this course or your status in the College.
- You may also be asked to be part of a group of students who will be interviewed or surveyed about their views of the College's strengths and weaknesses.

If you have any comments you would like to make about the quality of education at MCC, please email the College's assessment coordinator at this address: studentscount@muskegoncc.edu

Statement on MCC Email: All email communication originating from MCC to students will be via their email account. CHECK YOUR MCC EMAIL FREQUENTLY and be sure to empty your delete box as this information adds to your limited space and can interfere with your receiving timely emails. It is possible to forward your MCC email account to an account you use more frequently.

Statement on Student Behavior: Muskegon Community College is a community of scholars whose members include administrators, faculty, staff, and students. Mutual respect and civility are expected in the classroom or other college academic settings, as well as, in any communication.

- MCC has the duty of providing students with privileges, opportunities, and protections that best promote learning;
- Students have the right to a non-threatening learning environment;
- Students have the responsibility to refrain from infringing on the right of others to learn or the right of teachers to teach; and
- Any student whose behavior disrupts learning may be subject to disciplinary action as outlined in the Muskegon Community College *Student Handbook/Planner*.

Academic Integrity Policy: Muskegon Community College expects that all faculty and students will adhere to high standards of personal and academic honesty. This means that all academic work will be done by the student to whom it is assigned without unauthorized aid of any kind. Faculty members, for their part, will exercise care in the planning and supervision of academic work so that honest effort will be positively encouraged.

Academic dishonesty consists of, but is not limited to:

- A. **Cheating.** Cheating is defined as using or attempting to use, giving or attempting to give, and obtaining or attempting to obtain, materials or information, including computer material pertaining to a quiz, examination, or other work that a student is expected to do alone.
- B. **Plagiarism.** Plagiarism is defined as the use of another's words or ideas without acknowledgement.
- C. Penalties for violation of these standards of conduct may result in sanctions of up to and including suspension or expulsion from MCC.

Dishonesty of any kind will NOT be tolerated in this course. It is expected that all students adhere to college policy in this manner. Any violation will result in a zero (0) for that assessment and the student will be subject to the measures described in the student handbook.

Statement on Dispute Resolution Process: Should a student not agree with a faculty member's decision or actions as they may relate to this policy, the following steps shall be followed:

1. A student suspected of academic dishonesty shall be notified in writing within two school days of the time the violation is discovered. Copies of the written notification shall also be filed with the department chair and Vice President of Student Services.
2. The student should try to reach resolution of the matter through direct discussion with the involved faculty member within three (3) school days of the written notification.
3. If the matter is not resolved in Step 2, the student shall bring the matter to the attention of the department chairperson of the involved faculty member.
4. If the matter is not resolved at the department chairperson level, the student shall bring the matter to the attention of the Vice President for Academic Affairs who shall render a decision within five school days of the receipt of the dispute information.
5. If a satisfactory solution is not reached at the Step 4 level, the student may file a written request with the Vice President of Student Services for a hearing before the disciplinary board. This meeting shall be held not more than 20 days following the written request. A student may request a hearing before the disciplinary board. The disciplinary and judicial procedures are outlined in the Muskegon Community College *Student Handbook/Planner*.

Blackboard: While most lecture handouts are included in your purchased packet, lecture notes and handouts will be available for download on Blackboard. This is especially helpful if you want to print the slides larger or in color.

To access Blackboard:

- Go to <http://mccbb.muskegoncc.edu>
- Click "User Login"
- Your username and password are the same as your network login.
- Select BIOL 106
- *Connect* will be linked from Blackboard as well.

Notes About The Lecture:

- It is expected that you view all lectures as soon as possible after they are posted.
- Reading the textbook prior to viewing lectures is strongly encouraged.
- There is a great deal of material to cover and it will be presented relatively quickly.
- There will be a fair amount of material that you will need to learn on your own.
- All exams must be taken on time.
 - Only documented, extreme situations will warrant taking the exam at an alternate time. Online students must take the exam in the testing center within 24 hours of the exam.
 - Please call or email the day of the exam (or before) to arrange a make-up exam.
 - The make-up exam may not be the same exam and may include all essays and/or short answer questions.
- Lecture exams will cover material presented in lecture and the lecture objectives. Questions may consist of multiple choice, fill-in, matching, true and false, case studies, diagrams, and short answer/essays questions.
- Points will be deducted for misspellings on any exam (1/2 credit for one missing or extra letter, no credit for 2 or more errors).
- Any talking during exams to anyone but the instructor will result in an automatic zero. Please direct all questions, comments, and/or observations to the instructor.
- Beverages are allowed during exams provided there are no labels on the bottles. Stainless steel coffee mugs and to-go coffee cups are allowed pending inspection.

Attendance Policy: Attendance at all labs is required. Please BE ON TIME!!!! Dependability, promptness, and self-discipline are marks of maturity. Since most employers do not tolerate habitual tardiness, students have the opportunity to practice these virtues in this class. It is rude to interrupt class by entering the classroom after class has already started. Therefore, except in those cases which are unavoidable, you are expected to be in the room ready to begin at the time class is scheduled. Please contact me if you will be absent from class for any reason (email is best). College level work proceeds at such a pace as to make regular attendance a necessity. As a general rule, there is usually a very strong positive correlation between attendance and course grades. You are responsible for any material missed during an absence. The two lowest lecture quizzes will be dropped. More than 1 missed laboratory (for any reason) will result in a failing grade in the class per departmental policies.

Students with Disabilities: If you have a diagnosed disability (learning disability, visual or hearing impairments, emotional or psychological condition, *etc.*) that interferes with your learning, test taking, or completing assignments outlined in the syllabus, please contact Janice Alexander in Special Services in Room 101. She will help you secure the correct documentation, identify appropriate accommodations, and authorize and assist me in accommodating your exceptionality. Special Services will disclose the information you request only to whom you identify. Neither they nor I can authorize or provide accommodations unless you specifically request these services each semester. We strive for you have an equal opportunity to learn and fair assessment of your learning. Your abilities, skills, and effort should determine your success or failure, not your disability.

To do well in this course: College work is supposed to be challenging; if it wasn't, everybody would have a college degree and your diploma would be worthless. This means you may actually have to occasionally show some discipline and study. In addition, be sure to:

- Attend** all lectures and labs, and BE ON TIME; Exhibit professional behavior
- Take good notes and look at them often; Stay **organized**.
- Read** the assigned sections of the text book before class
- Study** your notes a little EVERYDAY, not just before the exam
- Ask questions** when there is something you don't understand
- Make sure your cell phone is turned **off** in class to avoid disrupting learning.

Finally, you may not always earn the grade that you want or think you deserve. Everybody won't make an "A." If you have concerns about your grades, before scheduling an appointment, ask yourself these three questions: 1) Do I have all the class and lab notes?; 2) Have I studied the class notes more than once?, and 3) Have I done all of the required readings? If you can answer yes to all three of these questions, I will be happy to meet with you.

STUDENT CONTACT INFORMATION – INTRODUCE YOURSELF TO THREE OTHER STUDENTS AND OBTAIN THE FOLLOWING INFORMATION.		
Student Name	Telephone	Email

VII. COURSE CALENDAR

Date	Topic and Saladin Textbook Section	Readings From 6th Ed.	Lab
T May 15	Water Balance and Fluid Compartments 24.1 Axonal Transport 12.2 Electrophysiology of Neurons 12.4	931 445 451-460	Lab 1 – iWorx Training
R May 17	Synapses 12.5 Neural Integration 12.6	460-466 466-472	
T May 22	Electroencephalograms and Sleep 14.5 Sensory Physiology: Taste & Smell 16.3	534-538 591-596	Lab 2 (3 hours) – Nervous System
R May 24	Hearing & Balance 16.4 Vision 16.5	596-610 610-627	Lab 3 Pt 1 (45 min)- Sensory Physiology & Reflexes

T May 29	Autonomic NS Physiology 15.3-15.4 Hormone Chemistry and Actions 17.4 Stress and Adaptation 17.5 Signaling and Endocrine Disorders 17.6-17.7	572-577 655-665 665-666 666-671	
R May 31	Exam 1 – Chapters 12, 14, 15, 16 (Room 1100)		Lab 3 Pt 2 (90 min)- Sensory Physiology & Reflexes Lab 4 Pt 1 (120 min)- Skeletal System
T June 5 R June 7	Skeletal Muscle Contraction 11.3-11.4 Behavior of Whole Muscles 11.5 Muscle Metabolism 11.6 CASE STUDY I ASSIGNED	408-418 418-422 423-428	Lab Exam 1 (90 min)- Labs 1-3 Lab 5 (135 min)- Articulations and Muscular System
T June 12	Bone Development 7.3 Calcium Homeostasis 7.4	214-220 220-225	
R June 14	Exam 2 – Chapters 7, 11, 17 (Blue and Gold Room)		Lab 5 Pt 2 (60 min)- Muscular System Lab 6 Pt 1 (165 min)- Muscle Physiology (iWorx)
T June 19 R June 21	Cardiac Muscle Contraction 11.7, 19.3-19.4 Cardiac Cycle and Heart Sounds 19.5 Cardiac Output 19.6	428, 725-734 734-740 740-744	Lab 6 Pt 2- Muscle Physiology (iWorx)
T June 26 R June 28	Blood Pressure 20.2 – 20.4 Leukocytes 18.4 Platelets 18.5 CASE STUDY I DUE	758-771 696-702 702-709	Lab Exam 2 (90 min)- Labs 4-6 Lab 7-Blood
T July 3 R July 5	Lymphatic/Immune System 21.1-21.6 Exam 3 – Chapters 18-21 (Room 1100)	808-847	Lab 8- Cardiovascular Physiology (iWorx)
T July 10	Liver, Gallbladder and Pancreas 25.4 Digestive Physiology 25.6	974-980 984-989	

R July 12	Respiratory Physics & Control of Breathing 22.2 Gas Transport and Exchange 22.3-22.4 Short Paper Due CASE STUDY II ASSIGNED	866-877 877-890	Lab Exam 3 (90 min)- Labs 7-8 Lab 9-Respiratory Anatomy
T July 17 R July 19	Urinary Physiology 23.3-23.5 Exam 4 – Chapters 22, 23, 25 (Blue and Gold Room)	904-916	Lab 10- Respiratory Physiology (iWorx)
T July 24	Electrolyte and Acid/Base Regulation 24.1-24.3	931-947	
R July 26	Glucose Metabolism 2.3, 26.2 Lipid and Protein Metabolism 26.3 CASE STUDY II DUE	58, 1012-1019 1020-1023	Lab 11- Urinary Physiology
T July 31	Male Reproductive Physiology 27.3, 27.5 Female Reproductive Physiology 28.2, 28.4-28.6	1047-1050, 1055-1058 1075-1077, 1085-1095	Lab Exam 4 (Tuesday 7-31)
R Aug 2	Final Exam – Chapters 24, 26-28 (Room 1100)		

As always, the syllabus is subject to change to meet the needs of the class. While the content on each exam may vary to meet class needs, the exam dates will not change 😊