BIOSCI 202 — Anatomy and Physiology 1: Lecture Sections 401—404

General Course Outline — Fall

This is a generic course outline. When classes begin there will be a specific syllabus for each lecture section and each laboratory section.

Instructors: Staff
Office: TBA

Office Hours: TBA
email: Phone: 414-229-xxxx
Fax: (414) 229–3926

Student Resources:
The following items are all required for the course and used throughout the semester. Many of these are available for purchase at uwm.eCampus.com. All will be used for graded components of the course. Check D2L for details.

Text: Anatomy & Physiology (customized for UWM). Published at Acrobat.com

In-class student response system: TopHat, Inc. (NOTE: if you already have a valid, current subscription to TopHat from another course or a previous course, you will NOT need an additional subscription for this course.

Additional details on completing your registration for these resources can be found on the course D2L site.

In case of financial hardship regarding access to and acquisition of course materials, please consult with your instructor as soon as possible.

NOTE: All lecture assignments require access to and use of UWM's D2L web site. If you need help with any of the D2L functions, please view the student help files or check with the Help Desk (229-4040 or help@uwm.edu).
If you have issues related to internet access and computer usage that are NOT technical, please see your instructor as soon as possible.

COURSE DESCRIPTION:
This course will introduce the structure and function of the human body. We will explore in depth the cellular organization of the body and the integration of those cells into tissues, organs, and systems. The course is organized into 4 units: Organization of the Body, Support and Movement, Physiology of Support and Movement, and Integration and Control. In this semester, we will explore the integumentary, skeletal, muscular, nervous, and endocrine systems. Students will engage in a variety of learning activities in the classroom, in laboratory exercises and investigations, and in reflective inquiry to explore and master the concepts in the course.

The expectation is that students are responsible for their own learning and that the instructor's role is to provide context and perspective that will enhance student learning. The assignments and in-class activities are designed to achieve that goal.
COURSE REQUIREMENTS:
All reading and pre-class assignments in the syllabus are due before the first class of the week that they are assigned. Take-home assignments and other written assignments are due in the appropriate course drop box before the end of the day listed as the due date in the syllabus. There may be occasional extra assignments of timely readings or out-of-class activities.

Attendance and participation: Attendance at every class is expected, and a significant portion of the grade will be based on in-class activities throughout the semester. In case of any extended absence, students should make appropriate arrangements with the instructor or their advisors.

Course organization: The course will be organized to align with key learning objectives. Students will demonstrate mastery of these objectives by completing course assignments. There is a document with instructions and detailed information for each of these assignments in the content page of the lecture section D2L site.

Time commitment: For each credit hour earned in the course, students are expected to invest at least 3 hours of work per week in addition to their time in lecture and laboratory sections. For this 4-credit course, students are expected to complete at least 12 hours of outside study time per week to meet the learning goals of this course. This follows UWM policies:

Study leading to one semester credit represents an investment of time by the average student of not fewer than 48 hours for class contact in lectures, for laboratories, examinations, tutorials and recitations, and for preparation and study; or a demonstration by the student of learning equivalent to that established as the expected product of such a period of study.” (UWM Faculty Document #2838; http://www4.uwm.edu/secu/docs/faculty/2838_Credit_Hour_Policy.pdf)

Course Components and Weightings:

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<thead>
<tr>
<th>In-Class Activities</th>
<th>20%</th>
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<tbody>
<tr>
<td>On-line Assessments</td>
<td>20%</td>
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<tr>
<td>Take Home Assignments</td>
<td>20%</td>
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<tr>
<td>Laboratory Component</td>
<td>40%</td>
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<td>Total</td>
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Grades will be based on successful completion of all components in the course.

- The weighted grades are added to determine the final grade.
- Students must complete all requirements to receive a comprehensive grade.
- All work in the lecture and laboratory sections must be the student’s own work, except when students are assigned or given permission to work in groups.
- Policies on group collaborations are posted on the course D2L website.

Extra credit work is not accepted; this means that material that is not assigned as a part of the course cannot substitute for work that is assigned. Instead, students are encouraged to revise previous assignments to improve their performance and their grades, and to submit them before the deadlines listed in the syllabus. Make-up work and extra help may be arranged individually with the instructor. Policies on late coursework and make-up assignments are posted on the course D2L site. Students in need of additional assistance or accommodations should contact the instructor as soon as possible.

Incompletes. A notation of "incomplete" may be given temporarily as a final grade to a student who has performed successfully in the course, but who, because of illness or other unusual and documented cause beyond the student's control, has been unable to take or complete some limited amount of the term's coursework. http://www4.uwm.edu/secu/docs/other/S31.pdf
**Other Relevant UWM Campus Policies**

**Special needs and requests:** Students with special needs and requests for accommodations in the classroom (or other needs that affect their ability to complete their coursework successfully) should contact their instructors, the Accessibility Resource Center (http://www4.uwm.edu/sac/) or the Office of Student Life (http://www4.uwm.edu/dos/). Students with pressing issues of physical or emotional health and well-being should contact the Norris Center (http://www4.uwm.edu/norris/).

**Academic Integrity:**

All work submitted to fulfill the academic requirements in the lecture and laboratory sections must be the student’s own, except when students are assigned or given permission to work in groups. In these cases, all the work submitted by the group must be original and written for this assignment by the students in this group. Policies on group collaborations are posted in the CONTENT page of the course D2L site.

All students in the course must complete and post to the designated D2L drop box the Academic Integrity Pledge posted on the course D2L page and submit to the appropriate D2L drop box the certificate of completion of the on-line plagiarism workshop at Indiana University. The URL for this workshop is located in the body of the Academic Integrity Pledge document. D2L will not allow access to other assignments if these steps are not completed.

UWM Policies on academic integrity and misconduct may be reviewed at http://www.uwm.edu/Dept/Acad_Aff/policy/academicmisconduct.cfm. Academic misconduct in any part of the course may result in a grade of F for the whole course.

**Safety Policies: Lab**

The laboratory component of the course may require special instruction in safety procedures for working with equipment and materials. Students will only be allowed to participate in the laboratory activity when the section’s laboratory instructor is satisfied that students have learned and are following appropriate safety procedures.

**Safety Policies: Weapons on Campus**

Current Wisconsin “concealed carry” law and the Second Amendment to the US Constitution notwithstanding, we have been informed that no weapons are permitted in any building on the UWM campus. For more information, please consult the Concealed Carry Memorandum and FAQs issued by the Office of General Council for the UW System Administration.


**Other Applicable University Policies and Procedures**

This course will be conducted in accordance with University of Wisconsin–Milwaukee policies on discriminatory conduct, sexual harassment, grade appeal procedures, military leave, religious observances, and general complaints.

Students may review these policies and procedures at:

http://www4.uwm.edu/sexualharassment/documents/


http://www4.uwm.edu/academics/military.cfm

https://www4.uwm.edu/secu/docs/other/S1.5.htm

https://www4.uwm.edu/current_students/records_grades/grades.cfm.
These policies apply to all participants in this class — students, instructors of record, and teaching assistants.

**Course Assignments Policies**

- Due dates for course work are listed in the syllabus.
  - Unless due dates are changed by **mutual agreement** in class, the work is due as indicated.
  - There will be a drop box on the course D2L page that will be available a few days before the due date and will close at the deadline.
- If any particular assignment's due date presents a hardship, see your instructor as soon as possible—preferably **before** the due date.
  - Note: this is the most frequent excuse that people give for plagiarism and other acts of academic misconduct; academic misconduct is *never* justified nor accepted.
- Unless prior arrangements are made, a late penalty will be assigned to all work passed in after the due date in the syllabus.
  - This penalty is assessed according to the formula below:
    
    
    \[ G_f = G_o e^{rt} \]
    
    - Where \( G_f \) is the final grade assigned to the work; \( G_o \) is the grade earned by the performance; \( r \) is the rate of \(-10\%\) per day late; and \( t \) is the number of days late (\( e \) is the base of the natural logarithm, of course).
  - However, even if the work is **very** late, students will receive **some** credit for an assignment completed acceptably. Therefore, it is still better to turn in an assignment late than not to turn it in at all!
- For questions and concerns about assignment due dates, please make an appointment, call, or email Dr Petto.

**Portable Electronic Devices**

Portable media players and recorders are prohibited, except for students who require them for documented disabilities. Use of cellular phones, PDAs, and related electronic devices during exams will constitute a presumptive case of academic dishonesty. Students may use laptop computers, tablets, PDAs and so on for viewing the pre-posted lecture presentation, for making notes and annotations during the lectures, for participating in on-line chats related to the lecture material, and for on-line classroom response questions.
**Department of Biological Sciences**

**BIOSCI 202 — Anatomy and Physiology 1**

*AJ Petto, PhD*

**Schedule of Class Meetings and Assignments**

****Deadline to Withdraw Without Charge With Full Refund—Sep 2****

****Begin Late Registration Period ($50 Fee in Effect)—Sep 3****

**UNIT 1 — THE ORGANIZATION OF THE BODY**

**Week 1**

**Essential Question:** What is anatomy and how do we understand it?

**Read:** Saladin, Chapter 1 and Atlas A. Review Chapter 2.

**In-Class:** Understanding science; biological variation; drawing conclusions

**Lecture:** Hierarchies, patterns of organization, scientific conventions.

**Begin Case Study: The Ulcer Bug**

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**Post Chapter 1 comments to Classroom Salon by 1200 PM, Friday September 6.**

**CONNECT:** Chapter 1 and Atlas A: Sept 13

**LearnSmart:** Major Themes of Anatomy and Physiology: Sept 13.

**LearnSmart LABS:** Scientific Method: Sept 13

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**Post Chapter 5 to Classroom Salon by 1200 PM, Monday September 9.**

**CONNECT:** Chapter 5: Sept 13

**LearnSmart:** Histology: Sept 13.

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**Week 2**

**Essential Question:** What are the different types of cells, and what makes them different?

**Read:** Saladin, Chapter 5.

**In-Class:** Injury and disability; anatomical descriptions and directions; experiencing the coelom.

**Lecture:** Cells and tissues; growth and repair; apoptosis.

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****Sept 17—Last Day for Adding/Changing Registration Without Penalty Fee****

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**Post to Chapter 2 comments to Classroom Salon by 1200 PM, Monday September 16.**

**CONNECT:** Chapter 2: Sept 16

**LearnSmart:** The Chemistry of Life: Sept 16

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**Post Chapter 3 comments to Classroom Salon by 1200 PM, Wednesday September 18.**

**CONNECT:** Chapter 3: Sept 19

**LearnSmart:** Cellular Form and Function Sept 19.

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1 You will receive a separate schedule for the meetings of your laboratory section at your first meeting.
Week 3
Essential Question: How do cells work to make us do what we do?
Read: Saladin, Chapter 2 and Chapter 3.
In-Class: Electron transport demo; membrane activity.
Lecture: Carbon-based life; exchange and storage of energy, cellular organelles.

Ulcer Bug Case Study Due 1159 PM, Friday September 20.

Post Chapter 4 comments to Classroom Salon by 1200 PM, Monday September 23.
CONNECT Chapter 4: Sept 26.
LearnSmart Labs: Mendelian Genetics: Sept 30
LearnSmart Labs: Human Genetics: Oct 4

Week 4
Essential Question: What do genes have to do with structure and function of the body?
Read: Saladin, Chapter 4.
In-Class: Meiosis activity; human variation survey; data workshop from Week 1 of Lab.
Lecture: Biologic variation and continuity; transcription, translation, expression; the cell cycle.

***Sept 30—Last Day to Withdraw Without Record***

UNIT 2 — SUPPORT AND MOVEMENT

Post Chapter 6 comments to Classroom Salon by 1200 PM, Monday Sep 30.
CONNECT Chapter 6 and Atlas B: Oct 1

Week 5
Essential Question: What are the main features of different connective tissues and how do they differ?
Read: Saladin, Chapter 6 and Chapter 8 (pp. 234–250); Atlas B
In-Class: Integument and the axial skeleton.
Lecture: Skin and Bone; anatomical landmarks.

Post Chapter 8 comments to Classroom Salon by 1200 PM, Monday October 7.
CONNECT Chapter 8: Oct 8

***First Anatomy & Physiology Revealed (Take Home) Assignment: Histology Due — 11:59 PM Oct 4***

Post Chapter 9 comments to Classroom Salon by 1200 PM, Wednesday October 9.
CONNECT Chapter 9 Oct 10
LearnSmart Joints: Oct 10.
Week 6
Essential Question: What does the skeleton do?
Read: Saladin, Chapter 8 (pp. 250–277) and Chapter 9.
In-Class: Sex differences of the skeleton; posture, position, proportion activity.
Lecture: Bones and their movements at joints.

Post Chapter 10 comments to Classroom Salon by 1200 PM, Monday October 14.
CONNECT Chapter 10: Oct 15

Week 7
Essential Question: How do muscles produce movement?
Read: Saladin, Chapter 10
In-Class: Exploring the rotator cuff; who “throws like a girl”?
Lecture: Muscle shape, size, and orientation; origins and insertions; muscle stimulus.

UNIT 3 — SYSTEMS PHYSIOLOGY

Post Chapter 7 comments to Classroom Salon by 1200 PM, Monday October 21.
CONNECT: Chapter 7: Oct 22
LearnSmart: Bone Tissue: Oct 22.

Week 8
Essential Question: What does the skeleton do?
Read: Saladin, Chapter 7
In-Class: Bone cells, growth, and repair.
Lecture: Physiology of bone maintenance and change; organization of the skeleton.

***October 25—Last Day to Withdraw With ‘W’ on Transcript***

Post Chapter 11 comments to Classroom Salon by 1200 PM, Monday October 28.
CONNECT Chapter 11: Oct 29
LearnSmart Muscular Tissue: Oct 29.
LearnSmart Labs: Stimulus and Force: Nov 2
LearnSmart Labs: EMG: Nov 10

Week 9
Essential Question: How do muscles use and replenish the energy used in contractions?
Read: Saladin, Chapter 11
In-Class: Muscle fatigue, Fast– and slow–twitch fibers (and the “white meat” of the Thanksgiving turkey).
Lecture: Energy use in muscles; effects of pH, serum calcium concentrations, oxygen debt.

****Assignment 2 from Anatomy and Physiology Revealed: Musculoskeletal System
Due 1159 PM November 8***
Unit 4 — Integration and Control

Post Chapter 12 comments to Classroom Salon by 1200 PM, Monday Nov 4.
CONNECT: Chapter 12: Nov 6
LearnSmart Nervous Tissue: Nov 6.

Week 10

Essential Question: What are nerves, and how do they work?
Read: Saladin, Chapter 12
In-Class: Myelination demonstration; synaptic transmission.
Lecture: Nervous system cells and tissues; chemical communication; synapse features and functions.

Post Chapter 13 comments to Classroom Salon by 1200 PM, Monday Nov 11.
CONNECT: Chapter 13: Nov 12

Week 11

Essential Question: What is the structure of the nervous system, and what does it do for us?
Read: Saladin, Chapter 13
In-Class: Networks and pathways
Lecture: Networks and pathways; emergent features of neural organization.

Begin Special ANS (Chapter 15) Assignment on D2L Discussion Board: Due Dec 2

Post Chapter 14 comments to Classroom Salon by 1200 PM, Monday Nov 18.
CONNECT: Chapter 14: Nov 19
LearnSmart Brain and Cranial Nerves: Nov 19
CONNECT: Chapter 15: Nov 26
LearnSmart Autonomic Nervous System and Visceral Reflexes: Dec 2.

Week 12

Essential Question: What is your brain for?
Read: Saladin, Chapter 14
In-Class: Subtractive logic in neurosciences; exploring the homunculus of sensation and movement.

****Complete Special On-Line ANS Problem Set on D2L Discussion Board****
****Due by 1159 PM Dec 2****
Post Chapter 15 comments to Classroom Salon by 1200 PM, Tuesday Dec 2.

Week 13

Essential Question: Mind and Body
Read: Saladin, Chapter 15; begin Chapter 16
In-Class: Unconscious control and biofeedback.
Lecture: Autonomic divisions of the nervous system.

****Thanksgiving Holiday Recess — No Classes on November 27–Dec 1****
**Week 14**

**Essential Question:** The Senses  
**Read:** Saladin, Continue Chapter 16  
**In-Class:** Habituation in receptors; dynamic equilibrium.  
**Lecture:** Classification and histological features of receptors; the interpretation of their signals; pathways for receptor output.

***Last Day to Turn in Make-Up Work — December 7, 1159PM***

**Week 15**

**Essential Question:** How do glands and their hormones regulate bodily functions?  
**Read:** Saladin, Chapter 17.  
**In-Class:** Hormonal integration of ovulatory cycle; stress and adaptation.  
**Lecture:** Key features of the endocrine system; integration and feedback mechanisms; modulation of target cell responses.

*****Last Day of Classes: Thursday, Dec 12, 2013*****

****Assignment 3 from Anatomy and Physiology Revealed: Neurology  
due 1159PM December 16****