



**Intro to Human Anatomy & Physiology
Rio Salado BIO 160**

Course Syllabus 2012-2013

Instructor: Kelly Alderman
Deer Valley High School



Instructor:

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Course Title:

BIO 160 Intro to Human Anatomy & Physiology (Rio Salado/DVHS Dual Enrollment)
Anatomy & Physiology (DVHS Credit Only)

(For dual enrollment students)

Period 1: Section 46482, Fall 2012-Spring 2013
Period 6: Section 46489, Fall 2012-Spring 2013
Period 7: Section 46495, Fall 2012-Spring 2013
4 Lecture & Lab (for dual enrollment students)

Official Course Description:

Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body. Prerequisites: None.

Official Course Competencies:

1. Describe principles of scientific method. (I)
2. Describe the structural organization of the body. (II)
3. Describe homeostasis and homeostatic control mechanisms. (III to XV)
4. Describe specific chemistry concepts of the body. (IV to XV)
5. Describe the structure and function of the integumentary system and body membranes. (V)

6. Describe the structure and function of the skeletal system and joints. (VI)
7. Describe the structure and function of the muscular system. (VII)
8. Describe the structure and function of the nervous system. (V to XV)
9. Describe the structure and function of the endocrine system. (V to XV)
10. Describe the structure and function of the cardiovascular system. (X)
11. Describe the structure and function of the lymphatic system and immunity. (XI)
12. Describe the structure and function of the respiratory system. (XII)
13. Describe the structure and function of the digestive system. (XIII)
14. Describe the structure and function of the urinary system. (XIV)
15. Describe the structure and function of the reproductive system. (XV)

Required Course Materials

There are no required items for this course.

Time Requirement

You will need to dedicate significant time to this college course. For each credit hour, plan to spend at least two hours a week on homework in addition to class presentation time.

Extra Credit Policy:

Extra Credit is not available for this class. It is the belief of Rio Salado College that all work done for a class should receive regular credit and is more than sufficient to assess the understanding of material presented in the course.

Plagiarism Warning:

Plagiarism includes, but is not limited to, the use of paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling or sharing of term papers or other academic materials. Information gathered from the Internet and not properly identified is also considered plagiarism. We expect every student to produce his/her original, independent work. Any student whose work indicates a violation of the MCCC Academic Misconduct Policy (including cheating and plagiarism) can expect sanctions as specified in the college catalog (2.3.11), or online at the following

site: http://www.maricopa.edu/publicstewardship/governance/adminregs/students/2_3.php

Rio Salado College uses software that uncovers plagiarism from student to student and other data sources on the Internet. If a student is found to have plagiarized content, grade consequences will be applied in accordance with departmental policies.

Civility Policy:

The faculty of Rio Salado place a high value on the importance of general ethical standards of academic behavior and expect that communication between students and instructors or among students shall maintain the level of formality and mutual respect appropriate to any college teaching/learning situation. Language or behavior that is rude, abusive, profane, disruptive, or threatening will not be tolerated. Activity of this type is Academic Misconduct as defined in MCCC Policy AR 2.3.11. Students engaging in such behavior will be removed from the course with a failing grade. Additional sanctions may be applied pursuant to AR 2.3.11.

Refund Policy:

Refunds are not automatic. Students who drop courses within the refund period are eligible for a reimbursement of appropriate tuition and fees. Please see the refund policy online for deadlines and details.

Disability Statement:

Rio Salado College will make reasonable accommodations for persons with documented disabilities. Notify Disability Services and Resources and your instructor of any special needs. Contact Disability Services and Resources at (480) 517-8562.

Tuition Assistance is available to students enrolled in a Rio Salado College dual enrollment course who demonstrate financial need. Please refer to: <http://www.riosalado.edu/dual/>

The student is responsible for the information outlined in the syllabus. The student is also responsible for knowing the Rio Salado College policies in the college catalog and the student handbook. Please refer to: <http://www.riosalado.edu/dual/>

Course content and syllabus may vary from the course calendar listed above in order to meet the needs of the particular group in this course section.

This dual enrollment college course is intended for high school students at the junior and senior level

Standards And Expectations

Course Material Requirements

1. Colored pencils, highlighter, paper, pencils (pref. mechanical)
2. Vinyl Gloves for dissection that are NOT powdered
3. 3-ring notebook with dividers for each unit

Course textbook available for check out: *Essentials of Human Anatomy & Physiology* by Elaine Marieb 9th Edition

**Online course companion http://wps.aw.com/bc_marieb/ehap_9/79/20307/5198647.cw/index.html

Grading Standards:

Students will be evaluated based on the following:

Exams & Quizzes	40%	*You must earn a cumulative D- (60%) or higher
Labs & Classwork	30%	on assessments (exams, quizzes, and the
Cumulative Final Exam	20%	cumulative final) or you will lose college credit (dual enrollment student).

The following scale will be used to determine your grade:

90 - 100% = A 80 - 89% = B 70 - 79% = C 60 - 69% = D 0 - 59% = F

Attendance Standards:

In order to maintain college credit, you are not allowed to miss more than six class periods per semester. Upon the seventh absence, you forfeit college credit and earn a letter grade of "F" for the course. This includes excused or unexcused absences or sweep. If a student is suspended (either off campus or on campus) the days will count against his/her overall attendance. All college visits/orientations are personal extracurricular decisions and are not exempt from the dual enrollment attendance policy.

Assignments & Late/Missed Work Policy:

1. Assignments are to be turned in at the **beginning** of the period on the day they are due.
2. **Late Assignments are not accepted!** Assignments on spiral paper will not be accepted.
3. All assignments must be neatly **written in pencil**. **NO PEN!**
4. Class work missed as a result of an unexcused absence cannot earn credit.

5. After an excused absence, you have 1 school day for each day missed to make up work/exams.
6. If you are going to miss an exam day see me! You should be prepared to take the make-up exam the first day you return. Make-up exams are often essay oriented. **There are no re-tests, however there is an option to do test corrections and receive a percentage of corrected answers.**
7. Lecture notes, labs, and assignments are found on my website <http://www.alderman.weebly.com>
8. Students can print off labs/assignments in place of copying class copy onto lined paper.
9. Designated assignments and quizzes will be submitted through my website.
10. Assignments which is considered a long-term project is due on the due date as time is state when the term project was assigned. Long term project may be turned in prior to the due date as well as turned in at the front desk in an event of an excused absence.

Classroom Expectations:

1. ELECTRONIC DEVICES: Many students want to have the privilege of carrying electronic devices on campus. With that privilege comes the responsibility of ensuring that those items are not used on campus during class or on a bus. If students are found listening to music or texting in class or otherwise not fully engage in learning, the device will be confiscated. Misuse of electronics devices may result in disciplinary procedures in addition to the confiscation of the device.
2. ID Card: Students must visibly wear I.D. card at all time while on campus or at any school activity for the safety and security of all students.
3. No food or drink consumption (except water) in class.
4. Students are required to clean up group area and remain seated until class is dismissed at the end of the period.

Equipment Use Policies:

You must be able to:

1. Follow all safety guidelines explained by the lab manual and by the instructor.
2. Dissect specimens accurately and humanely & work cooperatively with your classmates.
3. Properly handle and take care of all microscopes, slides, equipment, the lab area, computers, CD-ROMS, etc.
4. Pay for any equipment, dissections, or materials you break or misuse. The cost will be determined by what it takes to replace the item.

Course Outline:

- I. Scientific Method
 - A. Process of scientific inquiry
 - B. Experimentation and analysis
 - 1. gross
 - 2. microscopic
- II. Structural Organization
 - A. Anatomical position and directional terms
 - B. Body planes and quadrants
 - C. Body cavities
 - D. Regional terms
 - E. Structural units
 - 1. cells
 - a. structures
 - b. membrane permeability and transport
 - 2. tissues
 - a. epithelial
 - b. connective
 - c. muscle
 - d. nervous
 - 3. organs

4. systems

III. Homeostasis

- A. Components
- B. Feedback mechanisms

IV. Basic Chemistry of the Body

- A. Atomic structure and ions
- B. pH, acid, base, buffer
- C. Organic molecules

V. Integumentary System and Body Membranes

A. Integument (skin and derivatives)

- 1. structure
- 2. function

B. Membranes

- 1. classification
- 2. location

C. Wound healing

VI. Skeletal System and Joints

A. Bone Structure

- 1. types
- 2. classification
- 3. bony features

B. Bone Function

C. Bone formation, growth and remodeling

D. Joints

- 1. fibrous
- 2. cartilaginous
- 3. synovial

VII. Muscular System

A. Skeletal muscle

- 1. structure
- 2. general functions
- 3. major groups and related actions
- 4. general mechanism of contraction

B. Cardiac muscle

- 1. structure
- 2. function

C. Smooth muscle

- 1. structure
- 2. function

VIII. Nervous System

A. Structural and Functional Overview

- 1. organization
- 2. cell types
 - a. neuron
 - b. neuroglia
- 3. nerve impulse

B. Central nervous system

- 1. structures
 - a. brain
 - b. spinal cord
 - c. ventricles
- 2. functions
- 3. protection
 - a. cerebrospinal fluid
 - b. meninges

C. Peripheral Nervous System

- 1. divisions

- a. somatic
- b. autonomic
- 2. nerves
 - a. cranial nerves
 - b. spinal nerves
 - c. major peripheral nerves
- 3. functions

D. Special senses

- 1. eye
- 2. ear

IX. Endocrine System

A. General functions

B. Major glands

C. Hormones

- 1. target
- 2. actions

X. Cardiovascular System

A. Blood

- 1. composition
 - a. fluids
 - b. cells
- 2. functions
 - a. transport
 - b. hemostasis overview
- 3. blood groups

B. Heart

- 1. structures
 - a. chambers
 - b. valves
 - c. great vessels of the heart
 - d. coronary vessels
 - e. pericardium
- 2. blood flow pathway
 - a. route
 - b. systole and diastole
- 3. conduction pathway
 - a. route
 - b. normal EKG

C. Blood vessels

- 1. types
- 2. major arteries
- 3. major veins
- 4. circulatory routes
- 5. blood pressure

XI. Lymphatic System and Immunity

A. Lymphatic system

- 1. major organs
- 2. vessels
 - a. lymph
 - b. drainage
- 3. general functions

B. Immunity

- 1. nonspecific
- 2. specific
 - a. antibodies
 - b. cells

XII. Respiratory System

A. Structures

1. air pathways
2. gas exchange
3. pleural membranes

B. Functions

1. general mechanism of ventilation
2. general mechanism of respiration
3. role in acid-base balance

XIII. Digestive System

A. Structures

1. gastrointestinal tract
2. accessory organs
3. peritoneum

B. General functions

1. digestion
2. absorption
3. elimination pathway and process

XIV. Urinary System

A. Structures

1. gross anatomy
 - a. organs
 - b. gender differences
2. nephron

B. Functions

1. urine formation overview
2. elimination pathway and process
3. role in acid-base balance

XV. Reproductive System

A. Male

1. structures
 - a. testes
 - b. accessory glands
 - c. ducts
 - d. sperm pathway
2. functions
 - a. sperm formation
 - b. semen production
 - c. hormonal regulation

B. Female

1. structures
 - a. ovaries
 - b. accessory structures
 - c. ovum pathway
 2. functions
 - a. ovum formation
 - b. hormonal regulation
 3. menstrual cycle
 4. pregnancy
 5. menopause
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Introduction to Human Anatomy & Physiology

Ms. Alderman

Signature Form

Student's Name _____ Per _____ Home Phone: _____

Congratulations on your decision to take BIO160: Intro to Human Anatomy & Physiology. I am sure at times you will find the topics discussed in class challenging, exciting, frightening, depressing, and yes, even sometime gross! As a result, you must handle yourself in an appropriate manner. We are very fortunate to have extensive equipment, dissections, and multimedia resources to aid your learning. You must help me take care of these resources.

Therefore you must be able to:

1. Follow all safety guidelines explained by the lab manual and by the instructor.
2. Dissect specimens accurately and humanely & work cooperatively with your classmates.
3. Properly handle and take care of all microscopes, slides, equipment, the lab area, computers, CD-ROMS, etc.
4. Pay for any equipment, dissections, or materials you break or misuse. The cost will be determined by what it takes to replace the item.

Failure to follow these guidelines can result in you being dropped from the class without a refund given.

Initial/Check:

I have read and understand the guidelines listed above. I realize I will need to pay for any materials I break/misuse. I understand that I can be dropped from the class, with no refund, by the instructor for not following these requirements. I understand a passing letter grade **CANNOT** be given until all materials, books, etc. are returned and fines paid.

I understand this class is intended for those wanting to earn **4 hours of college credit**. The cost is \$76/credit hour and a \$15 registration fee for a total of **\$319**. An **ACCURATE printed online registration form** at www.riosalado.edu/dual, a **copy of citizen documentation (birth certificate or both sides of driver's license)** and **payment method are due to Ms. Alderman by Friday, August 17th**. The college credits earned through Rio Salado transfer to all the Maricopa Community Colleges, NAU, ASU, and U of A and also to many out of state colleges & universities. To determine the transferability outside the state, please call that particular college or university.

I have read and understand the syllabus for anatomy and physiology. I know the syllabus is subject to modification as determined by the instructor.

I understand this is a college class, which just happens to meet at Mountain Ridge High School. Realizing this is a college class, I expect the class to require more reading and studying than high school classes. As a student of Rio Salado College, I understand that I am responsible for college policies outlined in the college catalog found at <http://www.riosalado.edu/schedule/Pages/default.aspx>.

Because this is a human anatomy & physiology class, I realize that diseases, cadavers, dissections, surgeries, organ transplants, and many other sensitive and sometimes graphic topics will be discussed and seen in lectures, slides, videos, guest speakers, field trips and/or labs.

I have read and understand the attendance policy for this class, realizing I forfeit college credit and earn a college letter grade of "F" when I reach my 7th absence. I also understand that violating The MCCC Academic Misconduct Policy (cheating, plagiarism), even one time, can result in semester failure. NO Refunds will be given.

I understand that Rio **CANNOT** release information about my enrollment, fees, or grades to my parents and/or guardians unless I list them below (To receive information, these individuals must know my RIO student ID).

Student Name PRINTED

STUDENT SIGNATURE

Date

Parent Name PRINTED

PARENT SIGNATURE

Date

Email/Phone (list preferred method of contact) _____