

BIO K212 - Anatomy & Physiology II

Monday (lab A219) 6-8:55 and Wednesday (lecture D226) 6-8:45

**Course Information**

* **Instructor Information**

Name: Todd Gwaltney

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Office Hours: Monday/Wednesday 5:30-6 (or by appointment)

* **Course Description**

**4 CREDIT HOURS**   
Prerequisite: [***BIO\* K211***](https://catalog.threerivers.edu/content.php?filter%5B27%5D=BIO*&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=6&expand=&navoid=310&search_database=Filter#tt7922)   
This course is a continuation of [***BIO\* K211 - Anatomy & Physiology I °***](https://catalog.threerivers.edu/content.php?filter%5B27%5D=BIO*&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=6&expand=&navoid=310&search_database=Filter#tt9056), and covers the following systems: endocrine, circulatory, lymphatic, respiratory, digestive (nutri­tion), urinary (including fluids and electro­lytes), and reproduction, as well as human development and genetics. Anatomy and Physiology is a two-semester course. Students must enroll in both [***BIO\* K211***](https://catalog.threerivers.edu/content.php?filter%5B27%5D=BIO*&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=6&expand=&navoid=310&search_database=Filter#tt8489) and [***BIO\* K212***](https://catalog.threerivers.edu/content.php?filter%5B27%5D=BIO*&filter%5B29%5D=&filter%5Bcourse_type%5D=-1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=6&expand=&navoid=310&search_database=Filter#tt3232) for transfer credit to other institutions. Three-hour lecture; one three-hour laboratory period per week.

* **Required Materials**

Text: (1) ***Fundamentals*** ***of*** ***Anatomy*** ***and*** ***Physiology***, Frederic H. Martini, 9th edition or newer, Prentice Hall Publisher.

(2) *Human Anatomy & Physiology I Laboratory Exercises Manual*

Other required materials

Dissecting kit, Non-latex disposable gloves, Lab coat & Safety goggles.

* **Learning Outcomes**

Upon successful completion of this class a student should be able to:

Course Outcomes: Human and Anatomy and Physiology II

1. The student will be able to compare the physiology of the endocrine system and the nervous systems using practical examples and/or practical applications.
2. The student will be able to compare the cellular components of the endocrine system with those of other tissues and systems and describe how endocrine organs are controlled.
3. The student will be able to compare the major chemical classes of hormones and describe the chemical composition of each class of hormones.
4. The student will be able to explain in detail the general mechanisms of hormonal action.
5. The student will be able to explain how hormones interact to produce coordinated physiological response.
6. The student will be able to name the major endocrine glands of the body describe their location in the body and the hormones they secrete.
7. The student will be able to identify the hormones that are especially important to normal growth, and discuss their roles.
8. The student will be able to explain the action of the hormones secreted by the various endocrine glands of the body.
9. The student will be able to discuss and give examples of both positive and negative feedback mechanisms.
10. The student will be able to describe the interrelationship of neural and hormonal control.
11. The student will be able to discuss the consequences of over secretion and under secretion of various hormones.
12. The student will be able to describe the effects that hormones have on behavior.
13. The student will be able to distinguish between physical and psychological stress.
14. The student will be able to describe the general stress response.
15. The student will be able to name the organs of the digestive system and give their location in the body.
16. The student will be able to describe the structure of the wall of the alimentary canal (G.I. Tract).
17. The student will be able to demonstrate knowledge of regulatory control of the nervous and endocrine systems over the alimentary canal (G.I. Tract).
18. The student will be able to describe the mixing and movements of material through the alimentary canal (G.I. Tract).
19. The student will demonstrate knowledge of the swallowing mechanism.
20. The student will demonstrate knowledge of the phases and the regulation of gastric secretion.
21. The student will demonstrate knowledge of the organs of digestion in the mouth and their role in the digestive process.
22. The student will be able to name, give the location and function of the salivary glands.
23. The student will be able to give the structural make-up and the functions of the pharynx and esophagus.
24. The student will demonstrate knowledge of the structural organization and the function of the stomach.
25. The student will demonstrate knowledge of the structure and function of the small and large intestines.
26. The student will demonstrate knowledge of the structure and function of the pancreas.
27. The student will demonstrate knowledge of the structure and function of the liver.
28. The student will be able to list the enzymes secreted by the various digestive glands or organs and describe the function of each.
29. The student will demonstrate knowledge of the hydrolysis of carbohydrates, neutral fats, and proteins.
30. The student will be able to explain how the products of digestion are absorbed.
31. The student will acquire knowledge of some common disorders of the digestive system.
32. The student will be able to define and explain: nutrition, nutrients, and essential nutrients.
33. The student will demonstrate knowledge of the basic food groups and their major sources.
34. The student will be able to explain how carbohydrates, lipids, proteins, and amino acids are utilized by the cells.
35. The student will be able to name the major vitamins needed by the body, give their chemical make up and describe the general function of each.
36. The student will be able to explain the consequences of vitamin deficiencies.
37. The student will be able to name and describe the general functions of the major minerals and trace elements essential to man.
38. The student will demonstrate knowledge of basic metabolism and temperature regulation.
39. The student will demonstrate knowledge of the composition and functions of the blood.
40. The student will be able to distinguish between the various types of cells found in blood.
41. The student will be able to list the major components of blood plasma and give their functions.
42. The student will be able to explain the formation of blood cells and how it is controlled.
43. The student will demonstrate knowledge of the clotting mechanism of blood.
44. The student will be able to explain the basis for blood typing and the methods used to avoid adverse reaction following blood transfusion.
45. The student will be able to describe how blood reaction may occur between fetal and maternal tissues and how such reaction can be prevented.
46. The student will demonstrate knowledge of the heart and blood vessels both structurally and functionally.
47. The student will be able to describe the cardiac conduction system.
48. The student will demonstrate knowledge of the cardiac cycle and the ECG.
49. The student will demonstrate knowledge of the regulation of heart function and blood pressure.
50. The student will demonstrate knowledge of the division of the circulatory system (circulatory circuits).
51. The student will be able to identify and describe the location of the major arteries and veins of the human body in both the pulmonary and systemic circuits.
52. The student will demonstrate knowledge of both hepatic and renal portal systems of circulation.
53. The student will demonstrate knowledge of fetal circulation.
54. The student will be able to define cardiac arrhythmia and describe several forms for arrhythmia.
55. The student will demonstrate knowledge of some disorders of the blood/cardiovascular system.
56. The student will demonstrate knowledge of the structure and function of the lymphatic vessels, nodes, and associated organs.
57. The student will demonstrate knowledge of the composition and circulation of lymphatic fluid.
58. The student will be able to distinguish between specific and nonspecific body defenses and provide an example for each.
59. The student will be able to demonstrate and/or explain how lymphocytes are formed and their role in the immune mechanisms.
60. The student will be able to name the major types of immunoglobulins and discuss their functions.
61. The student will be able to distinguish between primary and secondary immune responses as well as active and passive immunity.
62. The student will be able to explain how allergic reactions and tissue rejection reaction are related to the immune response.
63. The student will demonstrate knowledge of the structure and function of the organs of the respiratory systems and air passageways.
64. The student will demonstrate knowledge of the respiratory musculature and pressure changes produced by their action.
65. The student will demonstrate knowledge of physical and chemical changes associated with oxygen and carbon dioxide transport.
66. The student will demonstrate knowledge of the respiratory volumes and exchanges.
67. The student will demonstrate knowledge of the phases of the respiratory process.
68. The student will review the major events that occur during cellular respiration and explain how oxygen is utilized by cells.
69. The student will demonstrate knowledge of the mechanisms of regulation the respiratory system.
70. The student will demonstrate knowledge of some common physiological modification of the respiratory process.
71. The student will become familiar with some common respiratory disorders and their effect on the respiratory process.
72. The student will demonstrate knowledge of the structure, location, and functions of the kidneys.
73. The student will demonstrate knowledge of the structures, locations, and functions of the ureters, the bladder, and the urethra.
74. The student will be able to trace the pathway of blood through the renal portal system.
75. The student will demonstrate knowledge of the kidney tissues.
76. The student will be able to describe the nephron and explain the functions of its parts.
77. The student will demonstrate knowledge of the physiology of urine formation.
78. The student will be able to explain glomerular filtration and describe the composition of the filtrate.
79. The student will be able to discuss the composition of urine.
80. The student will demonstrate knowledge of the regulation of kidney functions.
81. The student will be able to discuss the process of micturition and explain how it is controlled.
82. The student will be able to describe the distribution of body fluids into the major fluid compartments.
83. The student will be able to explain what is meant by water and electrolyte balance and discuss why it is important.
84. The student will demonstrate knowledge of the mechanisms controlling the distribution of the body’s water.
85. The student will demonstrate knowledge of the mechanisms of ionic homeostasis (electrolyte homeostasis).
86. The student will demonstrate knowledge of the relationship between trauma and water distribution.
87. The student will be able to explain factors leading to water intoxication and dehydration and their effects on the water/electrolyte balance.
88. The student will be able to explain or define edema and list several causes and their effects.
89. The student will be able to understand and describe the consequences of sodium and potassium imbalance as well as imbalances in various other electrolytes in the human body.
90. The student will be able to define pH and describe the major sources of hydrogen ions.
91. The student will demonstrate knowledge of the acid-base balance and buffer system.
92. The student will be able to explain acidosis and alkalosis, conditions that cause them to occur and how they may be controlled.
93. The student will be able to state the general function of the reproductive system.
94. The student will be able to describe the process of gametogenensis (spermatogenesis and oogenesis).
95. The student will be able to describe the structure, location and function of the female reproductive anatomy.
96. The student will be able to describe the structure, location and function of the female reproductive anatomy.
97. The student will be able to describe how hormones control the activities of the female reproductive system and how they are related to the development of the female secondary sexual characteristics.
98. The student will be able to describe how hormones control the activities of the female reproductive system and how they are related to the development of the female secondary sexual characteristics.
99. The student will be able to describe the physiological changes relative to the menstrual cycle.
100. The student will be able to discuss the structure and function of the mammary glands.
101. The student will be able to explain fertilization and early embryonic development.
102. The student will be able to explain the physiological and anatomical changes experienced during pregnancy and the birth process.
103. The student will be able to discuss some common methods of contraception.
104. The student will be able to distinguish between growth and development.
105. The student will be able to describe the major events that occur during the period of cleavage.
106. The student will be able to explain how the primary germ layers originate and list the structures produced by each layer.
107. The student will be able to describe the formation and function of the placenta.
108. The student will be able to list and give the functions of the extra-embryonic membranes.
109. The student will be able to define the term fetus and discuss fetal development.
110. The student will be able to trace the general path of blood through the fetal circulatory system.
111. The student will demonstrate knowledge of the Mandolin Laws of the Genetics.
112. The student will demonstrate knowledge of the various forms of gene interaction.
113. The student will be able to describe how chromosomes control the inheritance of sex.
114. The student will be able to describe the patterns of sex-linked traits.
115. The student will be able to define nondisjuction of chromosomes and explain the genetic and/or developmental consequences.
116. The student will be able to discuss some common forms of human genetic diseases.
117. The student will be able to explain the role of DNA and RNA in inheritance.

**Grading**

* **Methods of Evaluation**

Your semester grade is based out of 900 points. See breakdown below.

There are no “extra credit” assignments given. EVER.

Point Distribution

|  |  |
| --- | --- |
| Item | Possible Point Total |
| Lecture Portion | |
| 11 weekly chapter quizzes each worth 10 points (the 2 lowest will be dropped) | 90 points |
| 3 Unit Tests (100 points each, 100 questions each) | 300 points |
| Cumulative Final (200 questions) | 200 points |
| Laboratory Portion | |
| 10 weekly post laboratory quizzes (10 points each) | 100 points |
| 3 laboratory practical’s (70 points each) | 210 points |
| Semester total | 900 points |

* **Grading Policies**

Assessment

Lecture Portion: Points will be awarded from multiple assessment styles. Any and/or all of the following may be used: multiple choice, true/false, matching, fill in the blank, sort answer, and essay.

Laboratory Portion: There will be three lab practical exams given during the course of the semester. These lab practical’s will be based on your individual recall ability and will not be multiple choice, also, word banks will not be given.

* **Missed Work Make-Up Policy:**

All tests, quizzes, and practical exams are scheduled in advance (see class schedule at the end of this syllabus). If a scheduling conflict occurs, come see me as early as possible to discuss the best course of action such as dropping the course or switching into another section. Vacations are not a reason to miss a scheduled test or practical exam.

Lecture: Quizzes **cannot** be made up for any reason and they **will not** be given early/late. Unit tests can be made up, but at the discretion of the instructor. Makeup tests will be granted on an individual basis only following a conference with the instructor; where the reason(s) for missing the test must be determined as mitigating circumstances beyond the control of the student such as, illness, death in the family, or change in condition of employment. All make-up tests will be scheduled at the **convenience of the instructor** and ***must be made up within 48 hours*** *of the original test date and time.* Only one (1) Unit Test make-up will be allowed.

Lab: Missed laboratory exercises can be made up. If you know you will miss a lab exercise for any reason, come speak to me about attending another lab section. Quizzes **cannot** be made up for any reason and they **will not** be given early/late. Lab practical’s **cannot** be made-up.

* **Letter Grade Equivalents**

94.00 or higher = A

90 – 93 = A-

87 – 89 = B+

84 – 86 = B

80 – 83 = B-

74 – 76 = C

70 – 73 = C-

67 – 69 = D+

64 – 66 = D

60 – 63 = D-

59 or lower = F

**Classroom Policies**

* **Attendance:**

Attendance to all lectures and labs is expected. Absences are counted from the first meeting of class. More than four consecutive or more than six accumulative absences could result in student receiving an “F” grade in this course. You are responsible for any and all material that you miss due to an absence, excused or unexcused. Please DO NOT email me asking where I ended/what material I covered during your absence. Please contact a fellow student for that information.

* **Communication:** All communication will occur by email, Remind, or BlackBoard. Please make sure that you check your TRCC email or set it up to forward to another account. Check your email regularly to be informed of any changes in schedule.
* **Class Cancellation: If school is cancelled**, notification of cancellation due to inclement weather will be available by telephone by 6:00 am for daytime classes and by 2:30 pm for evening classes by calling the College's main telephone at (860) 215-9000, pressing 1, and listening to the taped announcement. The College’s website will also have announcements available by accessing the www.threerivers.edu home page. The myCommnet Alert Notification System will also be used to deliver important information regarding weather-related class cancellations, via both email messages and text messages, to registered individuals. To register, log on to your myCommnet account at http://my.commnet.edu/ and follow the link to myCommnet Alert.

**If class is cancelled by the instructor**, a notice will be placed on the classroom door and on BlackBoard. If time permits, students may be notified by a message via email.

* **Withdrawal Policy:** You may withdraw from this class any time up to and including November 5th, 2019 and you will receive a W grade on your transcript. However, you must complete a withdrawal form in the Registrar’s Office at the time of withdrawal; *if you merely stop attending classes you will be assigned a grade of F*. Any eligibility for refund of tuition is based on the date that the registrar receives the withdrawal.
* **Academic Integrity:** The effective operation of any organization is dependent on the honesty and goodwill of its members. In an organization devoted to the pursuit of knowledge, acting with integrity is essential to effective teaching and learning. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. To emphasize the importance of academic integrity, Three Rivers Community College adheres to the Student Code of Conduct and Discipline Policy, as provided by the Connecticut State Colleges and Universities (CSCU) - Board of Regents for Higher Education. (Please refer to BlackBoard for the complete statement.)

**Some** of the behaviors that will be considered cheating are:

* + Communicating with another student during a quiz or exam
  + Copying material from another student during a quiz or exam or from any assignment being graded
  + Allowing another student to copy from your quiz, exam, or any assignment being graded
  + Use of unauthorized assistance on any assignment being graded
  + Use of unauthorized notes or books during a quiz or exam
  + Providing or receiving a copy of a quiz or exam used in the course
  + Use of a cell phone or pager to transmit information during a quiz or exam

**Tentative Schedule**

This is the tentative schedule – instructor reserves the right to change dates throughout the semester. It is your responsibility to attend class to learn of any changes in schedule.

*See the end of this syllabus for the schedule*

**School Policies**

Please refer to BlackBoard for a link to the entire policy.

* **Digication:** All students are required to maintain an electronic portfolio using the College template within Digication. Digication can be accessed at https://threerivers.digication.com.
* **Disability:** Three Rivers Community College (TRCC) is committed to the goal of achieving equal educational opportunity and full participation for individuals with disabilities. To this end, TRCC seeks to ensure that no qualified person is excluded from participation in, is denied the benefit of, or otherwise is subjected to discrimination in any of its programs, services, or activities.
* **Non-discrimination:** Three Rivers Community College does not discriminate on the basis of race, color, religious creed, age, sex, national origin, marital status, ancestry, present or past history of mental disorder, learning disability or physical disability, sexual orientation, gender identity and expression, or genetic information in its programs and activities.
* **Sexual Misconduct:** The Board of Regents for Higher Education (BOR) in conjunction with the Connecticut State Colleges and Universities (CSCU) is committed to insuring that each member of every BOR governed college and university community has the opportunity to participate fully in the process of education free from acts of sexual misconduct, intimate partner violence and stalking.

**Study Guide**

Unit 1

1. The Endocrine System
2. Hormones
3. Chemistry of hormones
4. amines
5. proteins
6. steroids
7. Action of hormones – the effect they have on organs, tissues, and cells.
8. Control of hormonal secretions
9. nerve control
10. negative feedback mechanism
11. positive feedback mechanism
12. The Glands and Tissues
13. Pituitary, Pineal gland, Thyroid, Parathyroids, Thymus, Adrenal cortex, Adrenal medulla,

Pancreas, Ovaries, Testes, Kidneys, Heart, and other specific tissues.

1. Anatomical locations of each gland or tissues
2. Histological features of each gland
3. Hormonal secretions and their functions of each gland or tissue
4. Disorders of over and under secretions of each gland or tissue
5. Stress
6. Types
7. Causes
8. Responses
9. Clinical implications
10. The Digestive System
11. Regulation of the gastrointestinal system
12. nerves
13. hormones
14. The wall structure of the alimentary canal (G.I. system)
15. Mucous membrane
16. Submucosa
17. Muscular layer
18. Serous layer
19. The mixing and movement of materials along the G.I. tract
20. Peristalsis
21. The organs and glands of the digestive system their structural make-up, functions,

and their anatomical locations.

1. Mouth
2. cheeks and lips
3. tongue
4. palate
5. teeth
6. The salivary glands
7. parotids
8. submaxillary
9. sublingual
10. The pharynx
11. The esophagus
12. The stomach
13. cardiac region
14. fundic region
15. the body
16. pyloric region
17. gastric glands
18. The pancreas
19. The liver
20. The small intestines
21. duodenum
22. jejunum
23. ileum
24. villi
25. lumen
26. intestinal glands
27. The large intestines
28. ascending colon
29. transverse colon
30. descending colon
31. rectum
32. anal canal
33. anus
34. Nutrition and Metabolism
35. The basic food groups and their biological usage
36. carbohydrates
37. lipids
38. proteins
39. Energy requirements
40. basal metabolic rate
41. Vitamins
42. kinds of vitamins and their chemical composition
43. sources
44. biological role
45. disorders of vitamin deficiency
46. Minerals
47. essential minerals (elements)
48. trace elements
49. biological role of minerals
50. Cellular Respiration
51. glycolysis
52. kreb’s cycle or tca cycle
53. electron transport or oxidative phosphorylation

UNIT II

1. The Blood/Cardiovascular System
2. The blood
3. Composition
4. plasma
5. formed elements: erythrocytes (red blood cells)

leukocytes (white blood cells)

thrombocytes (platelets)

1. intrinsic factors
2. The formation of blood cells
3. Functions of blood cells
4. Clotting – and the mechanism of clotting
5. Typing
6. the ABO system
7. the Rh system
8. The cardiovascular system
9. The heart
10. histological features
11. anatomical features
12. conduction system
13. the cardiac cycle and its regulation
14. arrhythmias
15. the blood vessels, their anatomy and physiology
16. arteries/arterioles
17. capillaries
18. veins/ venules
19. Blood pressure
20. systolic pressure
21. diastolic pressure
22. stroke volume
23. cardiac output
24. blood volume
25. control of blood pressure
26. factors affecting blood pressure
27. The circulatory circuits
28. pulmonary
29. systemic
30. coronary
31. portals (hepatic/renal)
32. Fetal circulation
33. Disorders of the cardiovascular system
34. Body Defense and the lymphatic system
35. The lymphatic system
36. The basic functions of the lymphatic system
37. conservation of proteins
38. absorption of fats
39. immunity
40. Lymph
41. composition
42. circulation
43. Lymph vessels – structure and function
44. lymphatic capillaries (lacteals)
45. lymphatic vessels
46. lymph nodes (afferent and efferent vessels)
47. lymphatic trunks
48. collecting ducts
49. Lymphatic organs -structure and function
50. nodes
51. spleen
52. thymus
53. tonsils
54. Body defense against infections
55. Nonspecific resistance
56. species resistance
57. mechanical barriers
58. chemical action
59. interferons
60. inflammation
61. phagocytosis
62. fever
63. NK cells
64. Immunity
65. lymphocytes
66. T-cell system
67. B-cell system
68. immunoglobulins, their chemical composition, role in immunity and concentration in the plasma
69. IgG
70. IgA
71. IgM
72. IgD
73. IgE

3) Types of Immunity

a) active immunity

b) passive immunity

4) Allergies and other disorders of the immune system

1. The Respiratory System
2. The organs and passageways of the respiratory system, their structure and functions.
3. nose and nasal cavity
4. pharynx
5. larynx
6. trachea
7. bronchi and bronchioles
8. alveolar ducts and alveoli
9. lungs
10. The mechanism of breathing
11. inspiration
12. expiration
13. Respiratory volumes
14. vital capacity
15. tidal volume
16. inspiratory reserve volume
17. expiratory reserve volume
18. residual volume
19. total lung capacity
20. The phases of the respiratory process
21. breathing
22. external respiration
23. internal respiration
24. cellular respiration
25. Control of breathing
26. the respiratory center
27. pneumotaxic area
28. apneustic area
29. Hering-Breuer reflex
30. Chemical factors
31. Some breathing disorders
32. Paralysis of breathing muscle
33. Bronchial asthma
34. Emphysema
35. Lung cancer

Unit III

1. The Urinary System
2. Kidneys
3. anatomical location
4. structures
5. renal sinus
6. renal pelvis
7. renal medulla
8. renal cortex
9. hilum
10. the renal portal system
11. nephrons
12. Functions

a) urine formation

b) water and electrolyte balance

1. Ureters
2. anatomical location
3. structural make-up
4. function
5. The urinary bladder
6. anatomical location
7. structural make-up
8. function
9. The Urethra
10. anatomical location
11. structural make-up
12. function
13. The micturition reflex
14. Water and Electrolyte Balance
15. Fluid compartments
16. introcellular compartment
17. extracellular compartments
18. transcellular compartments
19. The movement of fluids between compartments
20. Water balance
21. water intake
22. water output
23. regulation of water balance
24. Electrolyte Balance
25. electrolyte intake
26. electrolyte output
27. regulation of electrolyte balance
28. Disorders of the water and electrolyte balance
29. dehydration
30. water intoxication
31. edema
32. sodium/potassium imbalances
33. hyponatremia
34. hypernatremia
35. hypokalemia
36. hyperkalemia
37. imbalances of other electrolytes: hypo and hyper concentrations
38. calcium
39. magnesium
40. chlorine
41. phosphates
42. pH
43. pH (defined)
44. sources of hydrogen ions
45. regulation of hydrogen ion concentration
46. acid/base buffer system
47. Disorders of the acid/base balance
48. acidosis, types and causes
49. respiratory acidosis
50. metabolic acidosis
51. Alkalosis, types and causes
52. respiratory alkalosis
53. metabolic alkalosis
54. The reproductive system
55. The function of the reproductive system
56. Gametogenesis
57. spermatogenesis
58. oogenesis
59. The male reproductive organs
60. names and anatomical location
61. histology
62. function
63. The hormones of the male reproductive and their function
64. The female reproductive organs
65. names and anatomical location
66. histology
67. function
68. The female reproductive cycle
69. menarche
70. menopause
71. Hormonal control of the female reproductive cycle
72. pituitary hormones
73. ovarian hormones
74. The mammary glands
75. histological make-up
76. secretions and the regulation of the secretions
77. Birth control methods
78. Some common S.T.D.’s
79. Pregnancy
80. ovulation
81. fertilization
82. early embryonic development
83. Human Growth and development
84. Cleavage
85. zygote
86. morula
87. blastula
88. blastocyst
89. gastrula
90. The germ layers and their development
91. ectoderm
92. mesoderm
93. endoderm
94. The extra-embryonic membranes and their functions
95. chorion
96. amnion
97. allantois
98. yolk sac
99. Fetal stage
100. growth
101. development
102. Fetal circulation
103. Postnatal period
104. neonatal
105. infancy
106. childhood
107. adolescence
108. adulthood
109. senescence
110. Heredity
111. Meiosis, chromosomes, genes and heredity
112. Mendelian inheritance
113. law of segregation
114. law of independent assortment
115. law of dominance
116. other terms
117. Crosses
118. monohybrid
119. dihybrid
120. probability
121. Epistasis
122. Gene interactions
123. Sex determining chromosomes
124. Sex linked traits
125. Non-disjunction of chromosomes
126. aneuploidy
127. trisomic cells
128. monosomic cells
129. Quantitative inheritance
130. polygenes
131. multiple alleles

Fall 2019 A&P II Schedule

***\*ALL DATES ARE OPEN TO REVISION AS NEEDED\****

|  |  |  |
| --- | --- | --- |
| **Date** | **Laboratory**  Monday (6-8:55) | **Lecture Portion**  Wednesday (6-8:45) |
| 8/26-9/1 | 8/26  **No Class** | 8/28  Chapter 18 Endocrine System  (p.609-630) |
| 9/2-9/8 | 9/2  **Labor Day- No Class** | 9/4  **Quiz #1 (Endocrine)**  Chapter 18 Endocrine System  (p.631-647)  Chapter 24 Digestive System  (p.881-901) |
| 9/9-9/15 | 9/9  Endocrine Renal Lab  **Post Lab Quiz#1** | 9/11  **Quiz #2 (Endocrine/Digestive)**  Chapter 24 Digestive System  (p.901-928) |
| 9/16-9/22 | 9/16  Cat internal organs and digestive system  Digestive Wet Lab (Carolina)  **Post Lab Quiz#2** | 9/18  **Quiz #3 (Digestive)**  Chapter 19 Blood  (p.653-679) |
| 9/23-9/29 | 9/23  Heart anatomy  Blood flow (adult/fetal)  Heart Dissection  **Post Lab Quiz#3** | 9/25  **Quiz #4 (Blood)**  Chapter 20 Heart  (p.685-718) |
| 9/30-10/6 | 9/30  **Practical #1**  Blood analysis (typing, Rh factor, hemoglobin determination, hematocrit, glucose, cholesterol, O2 sat.) | 10/2  **Quiz #5 (Heart)**  Chapter 20 Heart  (p.685-718) |
| 10/7-10/13 | 10/7  RBC and WBC Lecture  Blood cell identification lab  Human blood vessels lab  **Post Lab Quiz#4** | 10/9  **Unit Test #1 (18, 24, 19, 20)**  Chapter 21Blood vessels  (p.724-753) |
| 10/14-10/20 | 10/14 **Columbus Day**  Chapter 21 Blood vessels  (p.753-776)  Cat blood vessels lab  **Post Lab Quiz#5** | 10/16  **Quiz #6 (Blood vessels)**  Chapter 22 Lymphatics and Immunity  (p.782-804) |
| 10/21-10/27 | 10/21 **Midterm Grades**  Human blood vesselslab  Cat blood vesselslab  **Post Lab Quiz#6** | 10/23  **Quiz #7 (Lymphatics and Immunity)**  Chapter 22 Lymphatics and Immunity  (p.805-825)  Chapter 23 The Respiratory System  (p.831-856) |
| 10/28-11/3 | 10/28  **Practical #2**  ELISA (Carolina) | 10/30  **Quiz #8 (Immunity/Respiratory)**  Chapter 23 The Respiratory System  (p.856-875) |
| 11/4-11/10 | 11/4  Respiratory Anatomy  Spirometer wet lab (Carolina)  **Post Lab Quiz#7** | 11/6  **Unit Test #2 (21, 22, 23)**  Chapter 26 Urinary System  (p. 973-992) |
| 11/11-11/17 | 11/11 **Veterans Day**  Urinalysis (part 2)  Kidney anatomy  Nephron anatomy  Kidney dissection  Countercurrent exchange  **Post Lab Quiz#8** | 11/13  **Quiz #9 (Urinary)**  Chapter 26 Urinary System  (p. 992-1011)  Chapter 27 Fluid, Electrolyte, and Acid–Base Balance  (p.1016-1029) |
| 11/18-11/24 | 11/18  Chapter 28 The Reproductive System Anatomy  (p.1051-1091)  Gonad histology lab  **Post Lab Quiz#9** | 11/20  **Quiz #10 (Urinary/Fluid)**  Chapter 27 Fluid, Electrolyte, and Acid–Base Balance  (p.1030-1046)  Chapter 28 The Reproductive System  (p.1051-1091 |
| 11/25-12/1  Thanksgiving | 11/25  Heredity and Genetics lab  Karyotype lab (Carolina)  Chapter 29 Development  (p.1096-1131)  Development lab  **Post Lab Quiz#10** | 11/27  **Quiz #11 (Reproductive)**  **Thanksgiving Recess- No Class** |
| 12/2-12/8 | 12/2  **Practical #3**  Chapter 29 Development  (p.1096-1131) | 12/4  **Unit Test #3 (26, 27, 28, 29)** |
| 12/9-12/15 | 12/9  **Review for Final Exam** | 12/11  **Final Exam** |