**Biology 2252. Human Anatomy and Physiology 2.**

**Spring 2025. Section A (32179)**

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**Office Hours:** Tuesday 3:30-5:00/ Thursday 3:30-5:00 / scheduled by appointment. Virtual (through Microsoft Teams, **preferred**) or in person

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**The best and more direct way to communicate with me is via MS Teams. Please make sure you download the app in your phone/computer by clicking on the link below**

[**https://www.microsoft.com/en-us/microsoft-teams/download-app**](https://www.microsoft.com/en-us/microsoft-teams/download-app)

Biology 2112 is the complementary part and continuation of the 2111 lecture and laboratory. In this course, you will go through a deep review of the characteristics, organization, and function of the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.

**Lecture and laboratory schedules:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title | Day | Hour | Building | Room |
| Lecture | | | | |
| Section A | Monday, Wednesday, and Friday | 9:00-9:50 AM | Hamilton Building | 1101 |
| Laboratory | | | | |
| Section A | Tuesday | 8:00-9:50 AM | College of Science and Mathematics Building (GE) | 2065 |

**Textbook and resources (required)**:

* Human Anatomy and Physiology, 11th edition; Marieb & Hoehn.

**Anatomy and Physiology II: An Interactive Histology Atlas**

* Open access via press books

[**https://pressbooks.pub/aandp2histologyatlas/**](https://pressbooks.pub/aandp2histologyatlas/)

**Rabbit atlas (REquired):**

* Free download in the following link

[**https://scholarlycommons.augusta.edu/items/1a0e2708-3848-463c-90b4-0fafdcb52f80**](https://scholarlycommons.augusta.edu/items/1a0e2708-3848-463c-90b4-0fafdcb52f80)

**Optional Resources:** A Brief Atlas of the Human Body; Hutchinson, Mallatt, Marieb, Wilhelm Online

**Lab Supplies:** Lab coat, protective eyewear/goggles, non-latex/nitrile gloves (available at university bookstore)

**Basic essential technology needs:**

**Laptop computer**

* + - Operating system of Windows 10 Home or Pro or Mac OS 10.13 or higher.
    - Surface Pro devices are approved, however, **Chromebooks, iPads, Android Tablets, and ‘non-Pro’ instances of Microsoft Surface tablets are not compatible with the required applications**.
    - Processor: minimum Intel Core i3 or equivalent
    - RAM/Memory: 8GB or higher
    - Storage: 128GB internal hard drive or larger (256+GB solid state drives preferred, but not required)
    - Features: computers must include a functioning webcam and microphone (often this is integrated/included with laptops and USB webcams can also be utilized).
    - Access to a broadband internet connection.

**Camera** **(required for respondus lockdown software)** (check your system; many have this built-in)

**Speakers/Microphone** (check your system; many have this built-in)

**Software** requirements include Microsoft Word and Excel – software available to students for downloading can be found at:

[**https://www.augusta.edu/it/software.php**](https://www.augusta.edu/it/software.php)

**Respondus Lockdown Browser and Respondus Monitor** will be required for online exams/quizzes. Please make sure you download it and test it before each exam/quiz by running the “quiz to test if respondus is working properly” that will be available on D2L.

If you need a loaner laptop you can obtain it through the Augusta University Libraries. Check the instructions on the link below in the laptops tab.

[**https://www.augusta.edu/library/access\_services.php**](https://www.augusta.edu/library/access_services.php)

For additional information regarding technology requirements visit:

[**https://www.augusta.edu/it/#**](https://www.augusta.edu/it/)

**D2L (LEARNING MANAGEMENT SYSTEM):**

***D2L will be used as the center of exchange of materials, activities, and notifications related to the class.*** Please make sure you review the contents of the platform on a **DAILY BASIS** to be aware of when the new materials or announcements get posted. When you first log into D2L please check the ***“START HERE”*** module, it will contain the syllabus, the lab schedule as well and other useful information. The information for the course will be organized in folders corresponding to the 5 exams we will have during the Spring. Each folder will contain subfolders corresponding to the different lessons of the course where the power points, links to the activities, and any other information related to the subject will be uploaded. Similar folders will be created for the laboratories. Please remember that any material or assignment uploaded must be reviewed or completed **PRIOR** attending to the corresponding lecture or laboratory.

FERPA regulations protect student personal information and **grades cannot be shared/discussed via email**, if you have doubts about your grades, please contact me so we can meet in person or via a video call through Teams. D2L is a secure way to share your grade information, so, all grades will be posted to the course grade book. Reminders and important notifications will be posted on the announcement board in D2L or sent to your Augusta University email address, so, it is important for you to **check both regularly.**

**Attendance and expectations:** Classes and laboratories for Anatomy and Physiology move at a fast pace, then **you are expected to attend all lectures and laboratories and to arrive on time, missing a single class or laboratory represents for you to miss a large amount of information**. Attendance will be recorded in both lecture and lab, and tardiness may result in a missed quiz. You may be dropped from the course with a "WF" after missing 10% of class and/or laboratory time. However, it is not the instructor's responsibility to withdraw a student who stops attending class. If you wish to withdraw with a "W" before mid-term, **you must complete a withdrawal form**, have it signed by me and your advisor, and submit it to the Registrar’s office. The last date to withdraw without a penalty grade is **Tuesday, March 4th.**

To engage you in an active learning process, you will be required to **review the corresponding book materials and activities ahead of each class** so the time available for the session can be used more efficiently to discuss and resolve specific doubts and questions. **PRE-CLASS QUIZZES** regarding the subject of the day will be applied at the beginning of the sessions to ensure the students have reviewed the corresponding materials.

**LABORATORY:** Same as in the lecture, you must **review and complete before attending the laboratory** the materials and activities I will post on D2L for the subject listed in the Lab schedule below. I cannot emphasize enough how important is for you to review the posted materials since otherwise, you will not be able to follow up with the programmed activities or use the available time in an effective manner.

You are expected to attend and be on time for **EVERY lab.** Please be aware that, because of the time and space limitations, make-up labs will not be possible, and you will still be responsible for covering all the material for the lab practical exam.

You should be familiar with lab rules that are posted in the laboratory and on the Department of Biological Sciences website. **Closed-toe shoes and ankle-length pants or skirts are required in the lab at all times. Lab coats, gloves, and goggles are required for dissection labs or when using biological materials**. Food, candy, gum, drinks, cosmetics, and wrappers/containers are not allowed in the lab and should be placed in receptacles outside the lab. Laboratory equipment and supplies should not be removed from the lab for any reason. Loss or damage to assigned equipment or supplies may result in a charge for replacement or repair.

**OPEN LAB POLICY:** Open lab will be offered this semester, rules and time of operation will be posted in D2L in the near future**. All lab safety rules must be observed in the Open Lab.**

**CLASS POLICY**:

You are expected to be courteous and respectful to the instructor, and classmates at all times. **Tardiness and talking during class or lab are considered disrespectful and disruptive**. If you disrupt the class, you may be asked to leave the classroom. Use of portable electronic, computerized, or smart devices, including cell phones, pagers, iPods, laptops, tape recorders, smart pens/watches/glasses, etc. during class or lab is not allowed without prior approval from the instructor.

**No electronic/computerized/smart devices, headsets/earphones/earbuds, watches, or head coverings are allowed during quizzes, tests, exams, and lab practicals or during the review of such materials**. Possession of these devices during testing or test review will be considered a violation of academic honesty. If you violate this policy, you will receive a grade of “zero” on the exam and you will be withdrawn from the class with a “WF.” A record of the violation will be placed in the Office of the Dean of the College of Science and Mathematics and sent to the dean of the college that houses the student’s major. A report of the incident will be placed in the academic dishonesty file of Augusta University. Further actions may be taken by the university if necessary.

**EXAMINATIONS:**

Depending on the situation, **lecture exams** and quizzes could be given in one of the following formats:

* **Face-to-Face (using D2L as interphase).** If the exam is presented in this format **you must be physically in the classroom to take it**. Please be aware that attendance will be taken and **if you open your exam out of the classroom without my authorization will be considered cheating. Under these circumstances your exam will be automatically canceled, you will obtain a zero on it and further disciplinary measures could be taken**.
* **Fully online in D2L**. When you present any quiz or lecture exams online in this format, you will be required to use **Respondus Lockdown** and **Respondus Monitor** which **requires a webcam**. Exams administered fully online must be **taken alone**. You are prohibited from using any technology during the exam, except for contacting Dr. Ramiro-Diaz in the event of technical issues. If technical issues arise, **you MUST immediately contact Dr. Ramiro-Diaz preferably via MS Teams** so he can help you to figure out the issue. You may not take your exam while in contact with any other person. **Consulting another person, your notes, your book, or use of any other webpage during an exam is cheating and you will receive a grade of 0 for that exam and a possible WF in the course.**

All **Laboratory Practical Exams will be presential.** The practical exams will be taken in the same laboratory where the regular laboratory sessions take place and will start promptly at the same time the regular session begins at least is established differently.

Class quizzes will be given during the semester, and they may cover material previously presented or not yet covered. Make-up quizzes will not be given for tardiness. Make-up quizzes or lecture tests will be given only for excused absences, and you should be prepared to provide documentation for an excused absence if requested.

* If an emergency arises, you must notify the instructor by phone, email, or through a MS Teams message before the end of the test day when missing a lecture exam.
* There will be no make-ups given for missed laboratory practical exams.
* Any missed quizzes, unexcused missed lecture tests, or missed lab practicals will receive a "zero."

All possessions (purses, book bags, cell phones, electronic/smart devices…) must be placed at the front of the room before beginning an exam. Test grades will be posted via D2L. Due to the time limitations, tests will not be reviewed during class**. If you desire to review an exam, an appointment may be scheduled with the instructor.** All portable electronic/smart devices must be put away during the review of tests. All exams are the property of the instructor. Failure to return a test will result in a "zero" and withdrawal from the course with a "WF". If the content of an exam is reproduced or recorded by any means or if the exam is removed from the classroom, you will be charged with a violation of the University's Academic Honesty Policy, and disciplinary action will be taken as outlined in “Class Policy” and “Academic Integrity” below.

**ACADEMIC SUCCESS CENTER:** The Academic Success Center offers tutoring in first and second-year courses, if you feel you require additional coaching during the semester please do not hesitate to contact them. For more information visit:

[**https://www.augusta.edu/academicsuccess/**](https://www.augusta.edu/academicsuccess/)

**ACADEMIC INTEGRITY:** You should refer to AU’s Student Manual, Section 5.2. The University recognizes that honesty and integrity are necessary for its academic function. The following regulations protect the equity and validity of the university’s grades and degrees, and help students develop ethical standards and attitudes appropriate to academic and professional life.

Violations of academic honesty include cheating of all kinds, plagiarism, fraudulent research activity and/or scholarship, collusion, and false statements made to avoid negative academic consequences.

The Academic Student Code of Conduct Policy can be found at:

[**https://augustauniversity.app.box.com/s/xts25m2sebc4qeb1sfqkh6i7v39v6a0s**](https://augustauniversity.app.box.com/s/xts25m2sebc4qeb1sfqkh6i7v39v6a0s)

The Academic Honesty Policy can be found at:

[**https://www.augusta.edu/services/legal/policyinfo/policy/academic-honesty.pdf**](https://www.augusta.edu/services/legal/policyinfo/policy/academic-honesty.pdf)

**DISABILITIES:** Students with disabilities must contact the Office of Testing and Disability Services to schedule confidential appointments. Academic accommodations cannot be provided by the instructor until documentation from Disability Services has been received.

**Grading**

**Lecture Exam 1 (100 points)** - Chapters 16 and 17

**Lecture Exam 2 (120 points)** – Chapters 18, 19, and 20

**Lecture Exam 3 (120 points)** - Chapters 22, 23, and 24

**Lecture Exam 4 (120 points)** - Chapters 25, 26, and 27

**Lecture Exam 5 (40 points)** – Chapter 21

**Final Exam (150 Points)** - Comprehensive

5 Lecture Exams (varied points) -----------------------------> 500 points

2 Laboratory Practical exams (100 points each) ---------> 200 points

Lecture/Lab Quizzes (number to be determined) -------> 150 points

Comprehensive Final Exam ----------------------------------> 150 points

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Total Possible Points -------------------------------------------> 1000 points

Final grades are calculated by dividing the points earned by the total points available (1000 total points) and determining a percentage.

Grading scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

**Exam grades will be posted in D2L/Brightspace and cannot be issued by email or telephone**.

**TENTATIVE LECTURE SCHEDULE**

The following schedule is tentative, it could be modified depending on the advance of the group.

|  |  |  |
| --- | --- | --- |
| **WEEK OF** | **TOPIC** | **CHAPTER** |
| **January 6** | **January 6th Classes start** |  |
| Syllabus and class overview |  |
| Endocrine System | **16** |
| **January 13** | Endocrine System | **16** |
| **January 20** | **No classes on 1/20 due to Martin Luther King Jr. Day** |  |
| Blood | **17** |
| **January 27** | Blood | **17** |
| **Lecture Exam 1, Friday 1/31 (100 pts) face-to-face**  **(using D2L as interface)** | **16-17** |
| **February 3** | The Cardiovascular System – Heart | **18** |
| **February 10** | The Cardiovascular System – Heart | **18** |
| The Cardiovascular System – Blood Vessels | **19** |
| **February 17** | The Cardiovascular System – Blood Vessels | **19** |
| The Lymphatic System | **20** |
| **February 24** | The Respiratory System | **22** |
| **March 3** | **Lecture Exam 2, Monday 3/3 (120 pts) face-to-face**  **(using D2L as interface)** | **18-20** |
| The Respiratory System | **22** |
| **March 4th, 2025 official last day to withdraw**  **I will be signing withdrawal forms until 5:00 PM that day** |  |
| **No classes on March 6th and 7th due to the Spring pause** |  |
| **March 10** | The Digestive System | **23** |
| **March 17** | The Digestive System | **23** |
| Nutrition | **24** |
| **March 24** | **Lecture Exam 3, Monday 3/24 (120 pts) face-to-face**  **(using D2L as interface)** | **22-24** |
| The Urinary System | **25** |
| **March 31** | The Urinary System | **25** |
| **April 7** | **No classes from April 7th to 11th due to Spring Break** |  |
| **April 14** | Fluid Electrolyte Balance | **26** |
| The Reproductive System | **27** |
| **April 21** | The Reproductive System | **27** |
| The Immune System | **21** |
| **Lecture Exam 4, Friday 4/25 (120 points) face-to-face**  **(using D2L as interface)** | **25-27** |
| **April 28** | The Immune System | **21** |
| **Lecture Exam 5, Monday 4/30 (40 points) online using respondus and webcam** | **21** |
| **April 30th. Last day of classes** |  |
| **FINAL EXAM** | **Final Exam. Thursday, May 8th. 8:00-10:00 AM.** | **16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27** |

**TENTATIVE LAB SCHEDULE**

All pre-lab work must be completed before your scheduled lab class. All pre-lab work will be assigned in D2L .

|  |  |  |
| --- | --- | --- |
| **Week of Meeting:** | **Labs** | **Exercises:** |
| **January 6** | **First week – No Labs** | |
| **Complete pre-course assignment.**  **Review - Microscopy video (link below)** | |
| **January 13** | **Lab 1:** Lab safety. Microscope focusing and handling  Functional Anatomy of the Endocrine Glands | 27 |
| **January 20** | **Lab 2:** Blood – Hematocrit, blood cells, blood typing  **Review** - hematocrit video before coming to this Lab (link below)  **(Full PPE required)** | 29 |
| **January 27** | **Lab 3:** Anatomy of the heart – Human & Sheep heart  **(Full PPE required)** | 30 |
| **February 3** | **Lab 4:** Physiology of the heart; Blood Pressure  Electrocardiography (ECG)  **(Full PPE required)** | 31, 33 |
| **February 10** | **Lab 5:** Anatomy of Blood Vessels  Distribution of human Blood vessels,  Intro Rabbit blood vessels  **(Full PPE required)** | 32 |
| **February 17** | **Lab 6:** Blood vessels of rabbit  **Review** – rabbit blood vessels videos before coming to this Lab (links below) | Rabbit Anatomy Atlas |
| **February 24** | **Lab Practical 1 - Students will take the Lab Practical 1 exam during their normally scheduled lab class - Topics Labs 1 – 6** | |
| **March 3** | **No labs this week due to the Spring pause** | |
| **The last day to withdraw with “W” is Tuesday March 4th** | |
| **March 10** | **Lab 7:** Lymphatic System  Respiratory System (Anatomy), Respiratory Physiology | 35, 36, 37 |
| **March 17** | **Lab 8:** Digestive System – Anatomy | 38 |
| **March 24** | **Lab 9:** Anatomy of the Urinary System, sheep kidney dissection  **Review** – sheep kidney video before coming to this Lab (link below)  **(Full PPE required)** | 40 |
| **March 31** | **Lab 10:** Urinalysis, Physical and Chemical Properties  Reproductive System - Anatomy | 41  42 |
| **April 7** | **No labs this week due to Spring Break** | |
| **April 14** | **Lab 11:** Physiology of Reproduction, Gametogenesis;  Meiosis, Early Stages of Development  Organ Systems of Rabbit – Lymphatic, Respiratory  Digestive, Urinary, and Reproductive  **(Full PPE required)** | 43, 44  Rabbit  Anatomy Atlas |
| **April 21** | **Lab Practical 2 - Students will take the Lab Practical 2 exam during their normally scheduled lab class. Topics: Labs 7 – 11** | |
| **April 28** | **No labs this week (April 30th. Last day of classes)** | |

***Links to Videos:***

Microscope video: <https://www.youtube.com/watch?v=IqzznPgrNhE&t=125s>

Hematocrit Prep video: <https://www.youtube.com/watch?v=eMzWf8ZVtjs&t=52s>

Sheep Heart Anatomy: <https://www.youtube.com/watch?v=UgfkSWvosew>

Rabbit Blood Vessels I: <https://www.youtube.com/watch?v=ydUooduwXTM>

Rabbit Blood Vessels II: <https://www.youtube.com/watch?v=WxxD4kYjhDw>

Sheep Kidney: <https://www.youtube.com/watch?v=VwsYNAiEsUg&t=8s>