

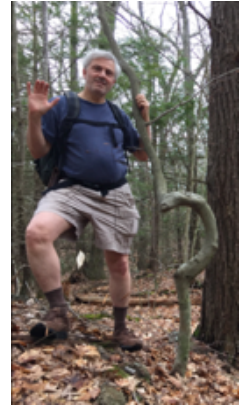
**Northern Essex Community College**  
**Department of Science, Technology, Engineering, and Mathematics**  
**BIO 122 L2A – Anatomy and Physiology II**  
**Spring 2025**

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## Welcome

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Welcome to Anatomy and Physiology II. My name is Noel Ways. I am a biologist by training, and for over 30 years, I have had the privilege to teach both A&P I and A&P II hundreds of times. Oddly, the content never gets old. The material is the same, but what breathes life into the classroom every semester is the student. We work together, and we learn together. As you begin your journey into this segment of your academic career, I am here to help guide and encourage you to be the best you can be. Welcome to the class.



## Course Information

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**Name:** Anatomy and Physiology II

**Course Number:** Bio 122 L2A **CRN:** 1554

**Credits:** 4 Credit Hours. 3 Lecture hours, 2 Lab hours

**Dates:** January 22 – May 10 (~16 weeks)

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**Presentation Modality:** Hybrid

**Class Meeting Days and Times:** Tuesday, 6 pm – 7:40 pm

**Location:** **Location:** Lawrence Campus, Dimitry Building, 45 Franklin St., Room L015 → [MAP](#)

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**Prerequisites:** BIO 121 Anatomy and Physiology I

## Instructor Contact Information

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**Instructor:** Noel Ways

**Email:** [nways@necc.mass.edu](mailto:nways@necc.mass.edu)

**Office Hours for a Hybrid Modality:** As our schedules vary dramatically, specific “office hours” that work for all can be challenging. The best time is immediately after any class meeting. However, if this does not work, email me, and we can schedule a meeting using the Zoom video teleconferencing software program during a mutually acceptable time. You will find a “Zoom Office Hours” link on Blackboard.

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## College Course Description

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A continuation of BIO121 Anatomy & Physiology I. Systems covered are circulatory, endocrine, reproductive, urinary, digestive and respiratory. (3 hours of lecture and 2 hours of lab per week.)

### General Course Description

Human Anatomy and Physiology II is considered a "gate-way course," and is designed to provide an anatomical and physiological foundation for further course work for students pursuing careers in the allied health fields. We will explore the human body, how it is put together, and how the various parts work together. This course is a continuation of Human Anatomy and Physiology I, and will proceed on a system-by-system basis.

The course will begin with a study of the cardiovascular system, followed by an in-depth look at the immune and respiratory systems. Other organ systems, such as the digestive, urinary, and reproductive systems, will also be examined. Other subjects of particular relevance will be discussed at appropriate points in the lecture sequence.

The course's laboratory component is designed to give the students a "hands-on" appreciation of the anatomical considerations discussed in the lecture and to familiarize them with some of the more basic physiological concerns related to gross anatomy. All course components (Lectures and Labs) will be delivered online using online and video resources.

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### Course Presentation – 16 week hybrid

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This section of A&P II is presented in a hybrid format. where two modalities are employed:

- In-class time for instruction, laboratory exercise, and assessment.
- Asynchronous online learning where the students work independently using online resources to master course content and take some assessments.

Most exams are given on Blackboard. Course content will be presented in a modular format, and each module will have its own assessment (exam). This is helpful as it reduces the overall content for any one exam.

This modular presentation will have a variety of resources to guide your mastery of the content. Outlines and handouts will provide structure and explanation. Videos for all content have been prerecorded and are almost identical to an in-class, face-to-face modality. You will find the course organized, and it will be easy to follow the flow of information.

Communication with the class is frequent, and we will be meeting weekly. There will also be frequent announcements on Blackboard. I am also available to meet with students through Zoom. Student-student interactions may occur on a discussion board on Blackboard

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## General Course Objectives

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As we endeavor to prepare you for a career in the allied health professions, specific goals and benchmarks have been established towards this aim. Looking towards this end, general course objectives listed below expand on the overall course description. As the flow of the course ensues, you will find that the course topics and laboratory work will align with these objectives.

### Module - Blood

- Distinguish between the formed elements of the blood by name and function.
- Describe erythrocyte production and regulation.
- Describe hemostasis and the control of blood clotting.
- Illustrate the CO<sub>2</sub> gas transport as it involved erythrocytes.
- Compare and contrast leukocyte functions in fighting infection.

### Module - Heart

- Identify the name and functions of the structures of the heart.
- Explain the cardiac cycle, integrating electrical activity, pressure issues, EKG, heart sounds, and blood flow.
- Describe how cardiac output is controlled.

### Module – Vessels and Routes

- Compare and contrast how the tissues of blood vessels and how tissue differences affect the specific functions of various vessel types.
- Identify specific major blood vessels in the body.
- Describe the vessels of and function of the hepatic portal system and the hypothalamic hypophyseal portal system.
- Describe the fluid exchange of capillaries and fluid return to the heart.
- Illustrate blood pressure regulation.

### Module – Lymphatic System

- Identify the name and functions of lymphatic organs.
- Describe the relationship of various organs to the particular functions in the immune response and other blood maintenance activities.

### Modules – Nonspecific Host Immunity *and* Adaptive Immunity

- explain the essential components of both non-specific and specific host immune responses.
- Critique the complement system and place of interferon in the immune system.

### Module – Respiratory System

- Identify the major organs of the respiratory system and their functions.
- Explain the mechanism of gas transport.
- Describe the anatomy and physiology of the larynx and sound production.
- Explain how lungs are “inflated” and what happens in pneumothorax.
- Explain the mechanisms that affect the oxygen carrying-capacity of hemoglobin.

### Module – Digestive System

- Identify the major organs of the digestive system and their functions.
- Describe gastric regulation

- Describe the process of lipid digestion and transport
- Describe the process of deglutition

#### Module – Urinary System

- Identify the major organs of the urinary system and their functions.
- Compare and contrast nephron components in terms of their anatomy and physiology

#### Modules – Male Reproductive System *and* Female Reproductive System

- Identify the structures and functions of major organs of the reproductive system
- Describe the hormonal regulation of spermatogenesis
- Describe and integrate the physiology of both the uterine cycle and the ovarian cycle
- Illustration several examples of hormonal regulation in the body

## Intensive Core Skill Objectives

In addition to the General Course Objectives listed above, Anatomy and Physiology II has been identified by the college as both Science Intensive and Quantitative Intensive. As such, additional objectives unique to this designation are listed below which help qualify the above General Course Objectives. Below is a College statement regarding these objectives:

### Intensive Core Skill Objectives

BI0121 has been designated as a **Science and Technology Intensive** course. Students will have the opportunity to develop knowledge and/or skills concerning the ability to:

- Demonstrate basic knowledge of major concepts related to science and technology. This includes current theories, historical and data trends, and empirical findings.
- Be able to critically read, evaluate and interpret research findings and/or theories and draw reasonable conclusions. This includes supporting or rejecting a hypothesis or theory, analyzing case studies, and providing alternative explanations.
- Transfer, adapt, and apply prior knowledge to science and technology related issues and develop new understanding.
- Be able to identify reliable sources of information from a variety of resources including those from the library, websites, journals, magazines, newspapers, and other media.

BI0121 has been designated as a **Quantitative Reasoning Intensive** course.

Students will have the opportunity to develop knowledge and/or skills concerning the ability to:

- Graphical and statistical analysis, such as trends over time.
- Descriptive and/or inferential statistics.
- Data analysis.
- Experimental design and creation of data sets with simple evaluation.
- Application of Mathematics in context.
- Reading, Writing, and/or Critical thinking in context with numbers.
- Development of mathematical solutions and equations to solve problems in context.
- Discussion of multiple interpretations of a single data set.
- An emphasis on the difference between cause and effect versus correlation data.
- Proportional reasoning in the context of real situations.

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## Course Materials

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- **Textbook (Required):** *Anatomy and Physiology* an Open Educational Resource (OER).

<https://openstax.org/details/books/anatomy-and-physiology>

- **Videos:** YouTube Lecture Videos with Closed Caption
- **Handouts:** Accessible and downloadable PDFs
- **Internet:** Web sites that feature animations explaining complex physiology

Aside from the required text, other course materials are linked on blackboard.

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## Zoom “Office Hours” Link

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### Office Hours

Join Zoom Meeting

<https://zoom.us/j/96233097264>

Meeting ID: 962 3309 7264

One tap mobile

+13017158592,,96233097264# US (Washington DC)

+13126266799,,96233097264# US (Chicago)

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 929 205 6099 US (New York)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 669 900 6833 US (San Jose)

Meeting ID: 962 3309 7264

Find your local number: <https://zoom.us/u/adSc6HD290>

Join by H.323

162.255.37.11 (US West)

162.255.36.11 (US East)

115.114.131.7 (India Mumbai)

115.114.115.7 (India Hyderabad)

213.19.144.110 (Amsterdam Netherlands)

213.244.140.110 (Germany)

103.122.166.55 (Australia Sydney)

103.122.167.55 (Australia Melbourne)

149.137.40.110 (Singapore)

64.211.144.160 (Brazil)

149.137.68.253 (Mexico)

69.174.57.160 (Canada Toronto)

65.39.152.160 (Canada Vancouver)

207.226.132.110 (Japan Tokyo)

149.137.24.110 (Japan Osaka)

Meeting ID: 962 3309 7264

Join by SIP

96233097264@zoomcrc.com

Join by Skype for Business

<https://zoom.us/skype/96233097264>

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## Course Presentation – 16 weeks, Hybrid Modality

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This particular section of A&P II is a 16-week, full-semester course presented in a hybrid format.

As this course is **Hybrid**, two modalities are employed:

- In-class time for instruction, laboratory exercise, and assessment.
- Asynchronous online learning where the students work independently using online resources to master course content and take some assessments.

Course content is divided into topic-specific modules and each module will be accompanied by content-specific outlines and handouts. Videos for all content have been prerecorded and are almost identical to an in-class, face-to-face modality. You will find the course to be organized and it is easy to follow the flow of information.

Correspondence between the instructor and the class is frequent, typically twice per week. I am also available to meet with students through Zoom. Student–student interactions may occur on a discussion board on Blackboard.

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## Method of Instruction

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This course is delivered utilizing resources available through Blackboard and the instructor’s website, to which Blackboard is linked. The course curricula are divided into modules. With few exceptions, each lecture/module has a:

- **Learning Guide** that will guide the student through the lecture, videos, animations, and other media under consideration.
- **Lecture Outline** that provides structure to the course content focuses on preparing the student for assessment exams and includes space for note-taking. In addition,
- Handouts – Additional handouts are provided as needed where support may be needed
- **Video Support** - Archived Videos of the lectures/modules provide instructional delivery in an online lecture setting. Both the lecture outlines, and the video support page can be found online. In the videos, I will walk you through everything!
- **Image Bank** – each module has an image bank with photos, illustrations, and PowerPoint files that may be used as needed by the student.
- **Laboratory** – As Anatomy and Physiology is a laboratory course, special links are provided to laboratory material, videos, photographs, and guides.
- **Exams** are given on a lecture-by-lecture basis and are to be completed by the dates on the schedule below. Exams will be administered through the college testing center. These exams will cover the material in the outlines, handouts, and videos. The exams are noncumulative, but any lecture topic assumes a working knowledge of previous lecture topics.

For additional details of the module week, see “Course Walkthrough (or Instructional Rhythm) in the Getting Started folder on Blackboard.

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## Course Workload

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We all come from different backgrounds and varying employment obligations and may have family relationships and responsibilities that must be maintained. With the various pulls on our time and resources, scheduling another major activity can sometimes be challenging. For example, planning and scheduling several hours daily for study can be daunting for some. However, this must be looked at immediately and requires a quality decision to ensure success in the course.

Two blocks of time need to be set aside:

- **The first time block** is approximately four hours to view course resources and videos. This time block should be scheduled on the first day of any module start date. The review of course content should be completed entirely on that day or shortly afterward.
- **The second time block** is about three-four hours daily aimed at mastery of course content. Having reviewed the course content, this is the time to integrate the material into your thinking and understanding of Anatomy and Physiology. This time suggestion is highly individualistic, and it is crucial to determine your unique learning requirements.

To secure the necessary time required to fulfill your aspiration of becoming a proficient medical professional, I also encourage you to talk to those people important in your life about your educational needs at this juncture in your developing career. I encourage you to look carefully at all the time-demanding activities in your life and make appropriate adjustments in light of your important career aspirations. The word “priorities” comes to mind here.

### **Assignments**

Anatomy and Physiology I is a rigorous course rich with content. Your primary assignment for each module the continued building of a foundation to support your developing career. Thus, as you embark on a module or lecture topic, your responsibility is to acquire a working understanding of the material presented in the module. Each module will come with a **Learning Guide** that will guide you through the specific goals and key points to consider in preparation for an assessment. The module content is outlined in the Lecture Outline. The **Lecture Outline** will serve the following purposes:

- The “Lecture Outline” is designed for note-taking purposes.
- The “Lecture Outline” is your study outline.
- The “Lecture Outline” is also the exam outline. If something is on the outline you will need to know it. If something is not on the outline, you do not need to know it, even if it is in the textbook.

To begin the learning process, start with the **Learning Guides**. These documents provide insight into approaching the material on a module-by-module basis and point out matters that require special attention or preparation. The lecture outline will then systematically guide you through the text and lecture content. If something is on the outline, you need to know it; if it is not, you are not responsible for it, even if it is in your text. Handouts and videos will supplement and reinforce key concepts.

Regarding the **Video Support**, I will talk through the lecture content following the outline closely. Note, if something is on the outline you are responsible for it, even if I do not discuss it. With this in mind, it will require TIME to review the outlines, view associated videos, and study the handouts to understand the material. Regarding laboratory material, mastery of the anatomical characteristics of tissue, bones, organs, etc., and associating appropriate functions with them will be necessary.



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## Exams and Makeup Work

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The assignment of a final semester grade will depend upon completing all exams listed on the syllabus below, of which the lowest grade may be dropped (except for the few units). These exams will cover material from online assignments, handouts, and video presentations. The nature of each exam is non-comprehensive. However, any particular unit will assume a working knowledge of previous units.

Blackboard exams are also timed. You will have enough time to read the question, pause, and put down an answer. To ensure this process goes well, master the material well before the exam date. Also, there is no backtracking for Blackboard exams, and the exams must be done in one sitting. For details, see the "[Assessments](#)" document online.

**Assessments** consist of a variety of question types, as listed below.

- True and False
- Matching
- Fill in the Blanks
- Illustrations
- Guided Essays
- Short Answers

**Exam Answers** – Answers on exams must reflect the working knowledge of the content as presented in the module. Occasionally, an answer may be correct but was not covered in the module or was presented in a manner that is not reflected in the answer. Here, questions arise as to the source of the answer, and therefore, would be incorrect for the purposes of the exam. Answers on exams must reflect a working knowledge and understanding of the vocabulary and concepts as presented in the module.

**Makeup Exams and Documentation** - Makeup Exams are to be avoided! But if a makeup is needed, documentation is required to certify that the need is legitimate. If documentation is not presented, a makeup is still permitted, but an adjustment to the grade is made at the instructor's discretion. This adjustment is typically a reduction in extra points that would otherwise bolster your grade. You will never get a grade lower than your earned grade. But if there is to be a makeup, this task should be accomplished within a week of the student's return to school. Contact me by email so that a time and a date can be coordinated.

**Exam Retention** - Completed exams are retained as a record of student performance. Exams are not returned as having exam content in general circulation compromises the academic integrity of the assessment process.

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## Communication and Interactions

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Throughout the semester, I will be contacting you on a weekly/biweekly basis to offer you advice, provide comments, and give reminders. If your questions have class-wide import, the questions may be answered and shared with the class. Another avenue for communication is the "Student Interaction Board" on Blackboard. By using this, all students will profit from the questions and the answers. Another venue may be scheduling a meeting using Zoom. Students are also encouraged to form online study groups. I have found that students who study together and talk through the material tend to excel. .



## Blackboard Announcements



Please make sure to log in to the Blackboard site daily. Announcements, class resources, and all assessments will be handled through Blackboard. I will also regularly broadcast emails to the class through Blackboard. In such cases, Blackboard will send the email to your NECC student account. If you wish, you can change which email account these messages are sent to in your Blackboard settings.

## Email

Please check your student email daily. You can also forward your student mail to any other email account. Instructions can be found at: [\(link to instructions\)](#).

**Email:** [nways@necc.mass.edu](mailto:nways@necc.mass.edu)

**Required Information** - When you send me an email, always include:

- Your name
- Your class (either course number or title, day, and time)
- A relevant subject

**Email Client** – Only use your NECC mail! If you use your personal email, the email may not be read as the source is coming from outside the college community and there will be warnings, flags, and the email may be quarantined. So, if you do not receive an answer from me, please resend the message using the NECC email client.

**Email Turnaround Time** – The email turnaround time is generally 24 hours. Should you not receive a response from me within 24 hours, please resend the email as it may have gotten “buried” or lost.

**Video Conference Software** – The Zoom video conference software is use for getting together and chatting should after class time not be available. Contact me by email so that we can establish a mutually acceptable time to meet. The Zoom link is on Blackboard.

**Student Interaction Board** – The Student Interaction Board is a discussion board that may be used to communicate with the class at large. Communication etiquette is required to use this class wide facility.

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## Criteria for Grading

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As mentioned above, this course aims to build a foundational knowledge base so that you may become a competent medical professional. A commitment of time and hard work goes a long way towards realizing your career goals. Further, when one receives good grades on exams it gives a certain satisfaction of a job well done.

**Exams** - Note, **Grading Criteria** is presented in the Learning Guides available on Blackboard. See the Learning Guides for specifics on the criteria for grading, suggestions on where to focus, and for special exam activities. Exams are given on a weekly basis. On the day of an exam, the exam will be found in the appropriate folder at the bottom of the list (i.e., Exam #1 will be in the “Blood” folder; Exam #2 will be in

the “Heart” folder).

Exam #1	Blood	100 points
Exam #2	Heart	100 points
Exam #3	Vessels and Routes	100 points
Exam #4	Lymphatic and Non-specific Host Immunity	100 points
Exam #5	Non-specific Host Immunity	100 points
Lab Exam #1	Lab Practical #1 (Heart and Vessels)	100 points
Exam #6	Respiratory System, Part #1 and Part 2	100 points
Exam #7	Digestive System, Part #1	100 points
Exam #8	Digestive System, Part #2	100 points
Lab Exam #2	Lab Practical #2 (Lymph, Resp, Dig, Uri. Sys)	100 points
Exam #9	Male Reproductive System	100 points
Exam #10	Female Reproductive System	100 points

All exams are weighed equally. Always record your grades! You will want to do this not only to ascertain how you are doing in the class but also to be alerted if there is something that appears questionable (there rarely is). Of course, you can always email me if you have a question.

**Grade Calculation** - The final semester grade assignment will depend upon completing all lecture exams and lab practicals. All exams are weighted equally. The lowest grade may be dropped except for the last few unit exams. Calculating your current standing in the class is simple: drop the lowest grade, do a simple average, and then use the Number/Grade Equivalency chart (below). You will know where you stand in the class regarding your grade at any particular time.

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## NECC Grading System

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A link to the College Grading System can be found at: [NECC Grading System](#)

A	4.00	93-100	C	2.00	73-76
A-	3.70	90-92	C-	1.70	70-72
B+	3.30	87-89	D+	1.30	67-69
B	3.00	83-86	D	1.00	60-66
B-	2.70	80-82	F	0.00	59 or less; failure; no credit earned
C+	2.30	77-79			
W	0.00	Withdrawal from the course by the student within the withdrawal period			
NP	0.00	Non-participation withdrawal grade assigned by the instructor due to evidence of non-participation			
IP (or I)		In progress. Extension granted due to extenuating circumstances			

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## Accessibility/Learning Disabilities

“Northern Essex Community College is committed to providing equal access to students with documented disabilities. To ensure equal access to this class (and your program) please contact the Center for Accessibility Resources & Services (CARS) or Deaf and Hard of Hearing Services (DHHS) to engage in a confidential discussion about accommodations for the classroom and clinical/practicum settings.

**Center for Accessibility Resources & Services:** Serving students with documented disabilities, such as learning disabilities, attention deficit disorders, autism spectrum disorders, brain injuries, chronic illness, low vision/blind, physical disabilities, psychiatric disabilities and seizure disorders.

**Deaf and Hard of Hearing Services:** Serving students who are Deaf or Hard of Hearing.

Accommodations are not provided retroactively. Students are encouraged to register with CARS or DHHS at the start of their program.

**The Center for Accessibility Resources & Services is scheduling appointments Mondays through Fridays.**

**Communications/meetings can be flexible based on student’s needs and may consist of the following communication options: Zoom, Phone, In-Person or Email.**

**To get started students may contact us as outlined below:**

- **Call the Center for Accessibility Resources & Services main number 978-556-3654 or email [centerforaccess@necc.mass.edu](mailto:centerforaccess@necc.mass.edu).**
- **Deaf and Hard of Hearing Services call 978-241-7045 (VP/Voice) or email [deafservices@necc.mass.edu](mailto:deafservices@necc.mass.edu).**
- **To request an Interpreter or communication access email: [interpret@necc.mass.edu](mailto:interpret@necc.mass.edu)**
- **Individual staff members can be contacted via email**

COVID vaccinations are required to be on campus. NECC is a mask optional campus, however, please consider wearing a mask on campus to mitigate the risk of catching and spreading COVID-19. For current information please visit: [Coronavirus Information and Updates](#) and [Student COVID-19 Vaccination Requirement](#).

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## Statement on Plagiarism and Academic Integrity

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As students pursuing a career in the allied health professions, you will someday be in a position with medical or other important responsibilities. The health and well-being of the people you work with and for are paramount. A strong foundation in anatomy and physiology is essential to operate competently in such positions. Towards this end, exams serve as weigh-points along your road to success. They indicate that your progress is progressing well, and you are now succeeding in your career goals. However, to ensure that this process proceeds well, academic integrity and ethical behavior are vital. To receive a grade that does not accurately reflect your knowledge and skill undermines your academic progress and puts you at risk of not fulfilling your goals or potentially harming others in your care. All future coursework and clinical activity will stand squarely on the shoulders of the knowledge base you are laying down now.

**Artificial Intelligence (AI) Technology** – Use of Artificial Intelligence is encouraged to the degree that it can enhance your understanding of course content. However, the use of Artificial Intelligence for any and all assessments is prohibited.

**Exam Answers** – exam answers must represent an understanding of course content as presented in the lecture sequence. An answer that is correct but was not covered in a similar manner as in the course sequence presented will be considered wrong for exam purposes. Answers must reflect a working knowledge of the vocabulary and content as presented.

All work done on assessments and practicals must be your own. You are encouraged to work together, prepare together, and collaborate, but the work must be your own when an exam is done. Therefore, the following guidelines are established to help guide you in an ethical and legitimate approach to your assessments.

1. When exams are taken, no electronic devices may be on.
2. No web browsers or other sources of information may be used.
3. Violation of the above will result in one of the following
  - a “0” on the exam
  - an “F” for the Course
  - a meeting with the dean of students who would assess the infringement and follow college disciplinary procedures.

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## NECC Outcomes Assessments

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NECC’s commitment to student success involves the evaluation of student work at the program, department, and/or campus levels to help ensure that students are achieving the learning outcomes identified by our programs and the college. This process may include the collection of such evidence as student classroom products or classroom-associated reports of student knowledge or skill demonstrations. All collected products will have any identifying information removed before they are reviewed. Results from these reviews are then aggregated to provide an overall view of students’ outcomes achievements. Assessments carried out at the program, department, and/or campus levels will not impact students’ course grades. The process of assigning grades will continue to be the responsibility

of the course instructors. Any student who does not wish to have their products collected for program, department, or campus-level assessment can opt out by notifying their instructor.

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## Getting Help

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I am here to help you with this course and to make this an enjoyable and successful experience. If you would like assistance regarding study tips, progress, or other issues, please send me an email. We can also collaborate through an appointment on Zoom. Please do not wait until the last moment to ask for help. Remember, I am just an email away.

### Additional Educational Services

**Tutoring:** NECC also offers FREE tutoring.

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## Lecture Syllabus

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Below is a tentative but probable schedule of topics and dates. The schedule could be adjusted should unforeseen circumstances occur. Note, the modules below always start on a Wednesday, and the assessment for that module can be anticipated the following Wednesday. It is best to take the assessment first before starting the new module.

### Assignments

A particular Lecture Topic will be considered on a module start date. Your assignment is to use the resources provided to you to begin mastering that topic in preparation for an exam on that topic. As mentioned above, read the *Learning Guide* found on Blackboard for particular guidance on how to approach the material. In addition, the *Lecture Outline* will provide structure and organization for the lecture content and provide room to take notes. *Supplemental handouts* will reinforce and expand on anatomical and physiological topics of particular importance or complexity. In the *Lecture Videos*, I will walk you through all (with a few exceptions) of the material.

Northern Essex Community College

Anatomy and Physiology II

Bio 122 L2A - 16 Week, Hybrid

In-Class:

Room: Lawrence L015,

Day: Tuesday. Time: 6:00 pm – 7:40

Below is a tentative but probable schedule of and dates. The schedule may be modified according to the progress of the lecture or unforeseen circumstances.

NOTE: the lowest exam grade may be dropped with the exception of the:

- Lab Practical #2
- Reproductive Exams (male & female)

→ **Exam Administration** - exams administered on **BLACKBOARD** will open at 8 am and must be completed by 11:59 pm. Please plan accordingly.

Exams administered **IN CLASS** start at the beginning of class. Please be on time.

Any changes will be announced in class.

→ **Unexpected College Closures** - Should there be an unforeseen college closure on a day when an exam is scheduled to be administered in class, The exam will be automatically administered on

topics

Jan 22 (**Wed**) → **Start Module #1 - Blood**

Jan 28 (**Tues**) \* *In Class* – Review select topics on the Blood

Feb 1 (**Sat**) *Exam – Blood (on Blackboard)*

→ **Start Module – Heart**

Feb 4 (**Tues**) \* *In Class* – Heart Dissection / Cardiac Cycle

Feb 10 (**Mon**) *Exam - Heart (on Blackboard)*

→ **Start Module - Vessels and Routes**

Feb 11 (**Tues**) \* *In Class* – Blood Vessel lab / Blood pressure regulation

Feb 17 (**Mon**) *Exam – Vessels and Routes (on Blackboard)*

→ **Start Module - Lymphatic**

Feb 18 (**Tues**) \* *In Class* – Laboratory – Vessel identification Continued

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- Feb 24 (**Mon**)     *Exam – Lymphatic (on Blackboard)*  
                            → **Start Module - Non-specific Host Immunity**
- Feb 25 (**Tues**)     \* *In Class – Review varied topics in lecture sequence*  
                            Laboratory – Vessel identification, and Lymphatics  
                            \* *In Class – Discussion on Immunity & Wound Healing*
- 
- Mar 3 (**Mon**)     *Exam – Non-specific Host Immunity (on Blackboard)*  
                            → **Start Module - Specific Host Immunity**
- Mar 4 (**Tues**)     \* *In Class – Specific Host Immunity*
- 
- Mar 11 (**Tues**)    *Exam – Specific Host Immunity (IN CLASS)*  
                            \* *In Class – Review for laboratory practical #1*
- 
- Mar 15 (**Tues**)    *(Note: Spring Break: March 17 – March 23)*  
                            *Exam – Respiratory System, Part #1 (on Blackboard)*  
                            → **Start Module - Respiratory System, Part #2**
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- Mar 25 (**Tues**)    *Lab Practical #1 – Heart and Vessel Lab Practical (IN CLASS)*  
                            → **Start Module – Introduce Respiratory System, Part #2**
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- Mar 31 (**Mon**)    *Exam – Respiratory System, Part #2 (on Blackboard)*  
                            → **Start Module - Digestive System, Part #1**
- Apr 1 (**Tues**)     \* *In Class – Gastric Control and Chyme Production*  
                            Laboratory – Respiratory and Digestive  
                            structure and function
- 
- Apr 7 (**Mon**)     *Exam – Digestive System, Part #1 (on Blackboard)*  
                            → **Start Module #8b - Digestive System, Part #2**
- Apr 8 (**Tues**)     \* *In Class – Lipid Transport and Digestion*  
                            Laboratory – Digestive structure and function
- 
- Apr 14 (**Mon**)    *Exam – Digestive System, Part #2 (on Blackboard)*  
                            → **Start Module - Urinary System**
- Apr 15 (**Tues**)    \* *In Class – Nephron Physiology*  
                            Laboratory – Digestive structure and function
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Apr 21 (Mon)	Exam #9 – Urinary System (on Blackboard) → Start Module #10 - Male Reproductive System
Apr 22 (Tues)	* Laboratory: Urinary System Structures and Functions

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Apr 29 (Tues)	Lab Prac #2 – Lymp, Resp, Dig, and Uri System (IN CLASS)
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May 2 (Fri)	Exam #10 – Male Reproductive System (on Blackboard) → Start Module #11 - Female Reproductive System
May 3 (Sat)	<i>Last Day of Classes before Finals Week</i>

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	<i>Finals Week – May 5 - 10</i>
May 10 (Sat)	Exam #11 – Female Reproductive System (on Blackboard)

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# NORTHERN ESSEX COMMUNITY COLLEGE ACADEMIC CALENDAR, ABRIDGED

## Spring 2025

- Official NECC [Academic Calendar](#)

↑ Above is a link to the **official** NECC Academic Calendar

↓ Below is an **abridged** rendition of the Academic Calendar.

Full Semester Classes (15 Weeks)	January 22 - May 10	
Session I: First Half Semester Classes (7 Weeks)	January 22 - March 5	
Session II: Second Half Semester Classes (7 Weeks)	March 24 - May 10	
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Martin Luther King Day (College closed)	January 20	(Monday)
<b>Classes begin</b>	January 22	
ADD/DROP PERIOD for Full Semester and Session I classes	January 22-29	
<b>Withdrawal period</b> begins for the Full Semester and Session I classes	January 30	
To receive full refund for Full Sem. or Ses. I, classes must be dropped by the close of business. See Student Affairs Hours and Refund Policy	January 29	
No Show (NS) roster Due	February 7	
<b>President's Day (College closed)</b>	February 17	(Monday)
Last day to withdraw with "W" for Session I classes	February 23	
To receive full refund for Session II, classes must be dropped by the close of business. See Student Affairs Hours and Refund Policy	March 25	
Web registration ends at midnight for Session II classes	March 17	
<b>Spring Break (No classes)</b>	March 17-22	
<b>Session II classes begin</b>	March 24	(Monday)
ADD/DROP PERIOD for Session II classes Adding, Dropping or Withdrawing from a Course	March 24-31	
<b>NECC Professional Day</b> (No Day classes, Evening classes will meet)	March 28	(Friday)
To receive full refund for Session II, classes must be dropped by the close of business. See Student Affairs Hours and Refund Policy	March 31	
No Show (NS) rosters due for Session II classes	April 7	
<b>Last day to withdraw with "W" for Full Semester classes</b>	April 12	(Saturday)
<b>Patriot's Day (College closed)</b>	April 21	(Monday)
Last day to withdraw with "W" for Session II classes	April 19	
<b>Last day of classes</b> before Final Exams	May 3	(Saturday)
<b>Finals Exam Period</b> (See Final Exam Schedule)	May 5-10	
Spring Semester officially ends for students	May 10	
Grades due by noon	May 14	(Wednesday)
<b>Grades/GPA/Academic Status posted</b>	May 15	(Thursday)

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## Distance Education Course Interaction Plan (Form DE-2)

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This form is to be completed by the faculty of record. Students enrolled in this distance education course shall receive a copy of this completed form.

**Course Title:** *Anatomy and Physiology II*

**Faculty:** *Noel Ways*

**Email:** *nways@necc.mass.edu*

✓ Asynchronous Course

✓ Synchronous Course

**Asynchronous:** This form of distance education is characterized by an emphasis on “learning on demand” or “as needed communication” between students and faculty from multiple locations at times convenient to participants.

**Synchronous:** This form of distance education entails the use of live, two-way communication among and/or between students and faculty in a scheduled or “fixed” point(s) of time(s), much like classroom-based instruction.

This course may include, but not be restricted to, the following interactions:

	YES	NO
1. in-person meetings (Weekly in class)	✓	<input type="checkbox"/>
2. telephone interactions	<input type="checkbox"/>	✓
3. electronic interactions (email, internet ...)	✓	<input type="checkbox"/>

If yes, dates, times, places are to be specified. Meeting are held Tuesdays 6:00 – 8:20 pm

In-class meetings are held Tuesdays, 6:00 – 8:20 pm.

Students are encouraged to engage in the following interaction(s) for successful completion of this course:

Discussion board promotes student-student and student-instructor interactions.

Weekly class meeting will occur where we meet and interact with course content, particular with material that could be more challenging.

Student-instructor interactions occur weekly via email and announcements. Should a follow-up meeting be necessary, an online zoom meeting will be scheduled at a mutually acceptable time.