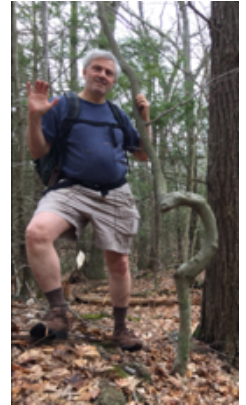


Northern Essex Community College
Department of Science, Technology, Engineering, and Mathematics
BIO 122 L12 – Anatomy and Physiology II
Fall 2025

Welcome

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

Name: Anatomy and Physiology II

Course Number: Bio 122 L12 **CRN:** 7108

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

Dates: September 4 – December 16 (15-16 weeks)

Presentation Modality: In Class

Class Meeting Days and Times:

- Lecture: Tues/Thurs 12:45 – 2:00 Room L-022
- Laboratory: Tues 2:10 – 3:50 Room L-015

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

Prerequisites: BIO 121 Anatomy and Physiology I

Instructor Contact Information

Instructor: Noel Ways

Email: nways@necc.mass.edu

Virtual Office Hours: As our schedules vary dramatically, specific “office hours” that works for all can be challenging. If you would like to meet, email me, and we will schedule a meeting using the Zoom video conferencing software program during a mutually acceptable time. You will find a “Zoom Office Hours” link on Blackboard.

College Course Description

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 designed to provide an anatomical and physiological foundation for students pursuing careers in the allied health fields. Human Anatomy and Physiology, as the name implies, is the study of 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 commence with a study of the cardiovascular system, followed by an in-depth view of the respiratory system. 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.

Course Presentation – 16-week, In Class

This section of A&P II is presented in a 16-week format with intact and unabridged course content. Therefore, modules will be presented weekly, with typically one assessment (exam) per week. This frequency is helpful as it reduces the overall content for any one exam.

Course content will be presented through in-class lecture presentations that follow module outlines and handouts. Videos for all content have also been prerecorded and are almost identical to the 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 student is frequent, typically at least once per week. I am also available to meet after class or with students through a Zoom appointment. Student–student interactions may also occur on a discussion board on Blackboard.

General Course Objectives

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 CO₂ 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

BIO121 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.

BIO121 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.

Course Materials

- **Textbook (Required):** *Anatomy and Physiology* an Open Educational Resource (OER). Note, the textbook is obtained as a free online resource, and can be accessed at:

<https://www.oercommons.org/courses/anatomy-and-physiology-4/view>

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

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

Zoom “Office Hours” Link

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 SIP

96233097264@zoomcrc.com

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 Skype for Business

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

Course Requirements – 16 weeks, In Class Modality

This particular section of A&P I is a 16-week, full-semester course presented on campus and in class. As this course is **In Class**,

- Significant time on campus is allocated for instruction, laboratory exercise, and assessment.
- Notwithstanding this in-class time, students will also have some coursework where they work independently using online resources to master course content and take some assessments.

The course content is organized into modular components to facilitate accessibility, clarity, and organization in this process.

Method of Instruction

Each module will include the following components:

- **Learning Guide** - A Learning Guide helps students navigate supportive readings, videos, animations, and other media related to each lecture/module. It offers tips on approaching the material and highlights issues related to the associated exam.
- **Lecture Outline** - A lecture outline organizes the course content and guides students through the material in preparation for assessments. It is also designed to aid note-taking.

- **Handouts** – Handouts emphasize critical points in the lecture sequence that require special attention, commentary, or visual support. They often focus on more complex physiological topics.
- **Videos Support** - Videos of the lectures follow the outline closely. Their purpose is to cover all content discussed in both lecture and laboratory settings.
- **Laboratory** - While traditional labs provide a hands-on approach to understanding course content, this online course uses rich image banks with accompanying videos to compensate for the lack of physical labs.
- **Exams** - Exams are typically administered on Blackboard on a module-by-module basis. Exams cover material from outlines, handouts, and videos. They are non-cumulative, but understanding earlier lecture topics is assumed.

For more details about each week, see “Course Walkthrough” in the Getting Started folder on Blackboard.

Workload for a full semester - ~15-16 -week in-class Course

We come from diverse backgrounds, with various employment and family responsibilities that must also be maintained. Managing time for another major activity can be challenging. For example, setting aside several hours daily for study can be overwhelming for some. However, addressing this early and making a good decision is vital for success. To facilitate this, two blocks of time should 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 on the schedule below, and will frequently coincide with a planned in-class meeting. Much of this will occur in the classroom setting.
- **The second time block** is about three-four hours daily to master the course content. After reviewing the material, use this time to internalize and understand Anatomy and Physiology. This time suggestion is approximate and may need to be adjusted according to the student’s unique learning requirements.

To help achieve your goal of becoming a skilled medical professional, I encourage you to discuss your educational plans with those people close to you. Also, review your schedule and make necessary adjustments that align with your career aspirations. The word “priorities” comes to mind.

Assignments

Anatomy and Physiology II is a content-intensive course. Your main task is to build a solid foundation will that will support your future career. Your goal at the start of each module is to develop a working knowledge of the material.

As a course that includes laboratory work, some topics are revisited in both lecture and lab formats. For example, we will discuss histology in lecture and then assess it with a laboratory practical, which relies mainly on visual identification. Offering multiple study methods and assessment formats allows students to access and demonstrate mastery of content in different ways.

Begin with the **Learning Guides**, which offer insight into approaching each module and highlight key areas requiring attention. The **Lecture Outline** aligns with the logical progression of curricular content and therefore lends structure to your study. If a topic appears on the outline, you are responsible for it; if not, it's not required, even if mentioned in the textbook. Supplements such as handouts and videos reinforce core concepts. 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.

Regarding **Video Support**, I will discuss lecture content following the module outlines closely. Again, reviewing outlines, videos, and handouts will require dedicated time in order to grasp the material. Mastery of anatomical features and their functions will also be crucial for laboratory work, including identifying tissues, bones, organs, and understanding their roles.

Exams and Makeup Work

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 last 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.

Exams are given in two modalities:

- **Blackboard Exams** - Blackboard exams are 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.
- **In-Class Exams** – Exams administered in class are given at the beginning of class. Please be on time. Exams are also timed, but there is more flexibility. Furthermore, backtracking is allowed.

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. Potentially, 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 requested 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. This adjustment typically reduces 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 so that a time and a date can be coordinated. For further elaboration of exam and makeup policies, see the link: [Exam Policies!](#)

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.

Communication and Interactions

Throughout the semester, I will be contacting you on a weekly/biweekly basis to offer you advice, provide comments, and give reminders. Another venue is scheduling a Zoom meeting. 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

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.

Criteria for Grading

As mentioned above, this course aims to build a foundational knowledge base so that you may become a competent medical professional. Committing time and hard work goes a long way toward 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** are 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 special exam activities. Exams are given bi-weekly in class.

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. Of all the exams given, the lowest grade may be dropped except for the last unit(s). To calculate your grade: 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 point in time.

NECC Grading System

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			

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.**
- **Deaf and Hard of Hearing Services call 978-241-7045 (VP/Voice) or email deafservices@necc.mass.edu.**
- **To request an Interpreter or communication access email: 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](#).

Statement on Plagiarism and Academic Integrity

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 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.

NECC Outcomes Assessments

NECC’s commitment to student success involves evaluating student work at the program, department, and/or campus levels to help ensure that students meet the learning outcomes established by our programs and the college. This process may include collecting evidence such as student classroom products or reports associated with student knowledge or skill demonstrations. All collected products will have any identifying information removed before review. The results from these reviews are then aggregated to provide an overall perspective on students’ achievements. Assessments conducted at the

program, department, and/or campus levels will not impact students' course grades. The responsibility for assigning grades will remain with the course instructors. Any student who prefers not to have their products collected for assessment at the program, department, or campus levels can opt-out by notifying their instructor.

Getting Help

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.

Lecture Syllabus

Below is a tentative but probable schedule of topics and dates. The schedule could be adjusted should unforeseen circumstances occur.

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 on Blackboard for particular guidance on approaching the material. The Lecture Outline will provide structure and organization for the lecture content, and it provides room to take notes. Supplemental handouts will reinforce and expand on anatomical and physiological topics of particular importance or complexity. And in the lecture videos, I will walk you through all (with a few exceptions) the material.

Northern Essex Community College

Anatomy and Physiology II

Bio 122 L12 - 16 Week, In Class

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

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

- Male Repro Sys
- Fem Repro Sys
- 2nd Lab Practical

• Lec: Tue/Thur 12:45 – 2:00
Rm L022

• Lab: Tue 2:10 – 3:50
Rm L015

→ **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
BLACKBOARD

topics and dates
the progress of

dropped

September 4 **(R)**

→ **Start Module #1 - Blood**

September 9 **(T)**

* *In Class* – Review topics on the Blood

September 11 **(R)**

Exam – Blood (IN CLASS)

→ **Start Module #2 – Heart**

September 16 **(T)**

* *In Class* – Heart Dissection, Cardiac Cycle

September 18 **(R)**

* *In Class* –Cardiac Cycle, etc

→ **Start Module #3 - Vessels and Routes**

September 19 **(F)**

Exam - Heart (on Blackboard)

September 23 (T)	* In Class – Blood Pressure Reg., Hep. Port. Sys
	* Laboratory – Vessel identification
September 23 (R)	* In Class – Continue Blood Pres Reg., Hep. Port. Sys → Start Module #4 - Lymphatic
September 25 (S)	Exam– Vessels and Routes (on Blackboard) → Start Module #4 - Lymphatic

September 30 (T)	* In Class – Review varied topics in lecture sequence Laboratory – Vessel identification, and Lymphatics
October 2 (R)	* In Class – Continue Lymphatic system
October 3 (F)	Exam – Lymphatic (on Blackboard) → Start Module - Non-specific Host Immunity

October 7 (T)	* In Class – Discussion on Immunity & Wound Healing
October 9 (R)	→ Start Module - Specific Host Immunity
October 10 (F)	Exam – Non-specific Host Immunity (on Blackboard)

October 14 (T)	* In Class – Adaptive Immunity Laboratory – Review for laboratory practical #1
October 16 (R)	Exam – Specific Host Immunity (IN CLASS)

October 21 (T)	Lab Practical #1 – Heart and Vessel Lab Practical (IN CLASS) → Start Module - Respiratory System, Part #1
	* In Class – Larynx, Surfactant, Other topics.
October 23 (R)	* In Class – Respiratory, continued

October 27 (M)	Exam – Respiratory System, Part #1 (on Blackboard)
October 28 (T)	→ Start Module - Respiratory System, Part #2
October 30 (R)	* In Class –Partial Pressure, Dissociation Curves, Respiratory System Control Laboratory – Respiratory structure and function

November 4 (T)	Exam – Respiratory System, Part #2 (IN CLASS) → Start Module #8a - Digestive System, Part #1
November 6 (R)	* In Class – Gastric Control and Chyme Production Laboratory – Respiratory structure and function

November 10 (M)	Exam – Digestive System, Part #1 <i>(on Blackboard)</i> → Start Module #8b - Digestive System, Part #2
November 11 (T)	* <i>No Class – Veterans Day</i>
November 13 (R)	* <i>In Class – Lipid Transport and Digestion</i> <i>Laboratory – Digestive structure and function</i>
November 18 (T)	Exam – Digestive System, Part #2 <i>(on Blackboard)</i> → Start Module #9 - Urinary System
November 20 (R)	* <i>In Class – Nephron Physiology</i> <i>Laboratory – Digestive structure and function</i>
November 25 (T)	Exam #9 – Urinary System (IN CLASS) → Start Module #10 - Male Reproductive System
November 27 (R)	* <i>No Class – Thanksgiving Holiday</i>
December 2 (T)	* <i>Review for Lab Practical #2</i>
December 3 (W)	Exam #10 – Male Reproductive System <i>(on Blackboard)</i>
December 4 (R)	→ Start Module #11 - Female Reproductive System
December 8 (T)	* <i>Review for Lab Practical #2</i>
December 11 (R)	Exam #11 – Female Reproductive System (IN CLASS)
December 16 (T)	* <i>Lab Prac #2 – Lymp, Resp, Dig, and Uri System (IN CLASS)</i>

NORTHERN ESSEX COMMUNITY COLLEGE ACADEMIC CALENDAR, ABRIDGED

Fall 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)

Session I: First Half Semester Classes (7 Weeks)

Session II: Second Half Semester Classes (7 Weeks)

September 3- December 16

September 3 - October 21

October 29 - December 16

Labor Day (College closed)

Classes begin (Both Full semester and Session I)

ADD/DROP PERIOD Adding, Dropping or Withdrawing from a Course

To receive full refund for Session I

Dropping or Withdrawing from a Course

To receive full refund for Full Semester

Withdrawal period begins for full-semester classes

NS (No show) roster due by noon

Session I

Full Semester

Last day to withdraw with a "W" for Semester I

Columbus Day & Indigenous Peoples' Day (College closed)

Final Exam period for day and evening classes for Session I Classes

Session II classes begin

Add/drop period for Session II classes

To receive a full refund for Session II, classes must
be dropped by the close of business

Assessment Day (No classes)

Spring and Summer 2026 Advising/Registration begins

NS (No show) Roster for Session II due by noon

Veteran's Day observed (College closed)

Last day to withdraw with a "W" for Full Semester classes

Thanksgiving Recess begins at 5:00 pm (No evening classes)

No day or evening classes

Last day of classes before Final Exams

**Final Exam period for day and evening classes
for Full Semester and Session II classes**

September 1

September 3 (Wednesday)

September 3-5

September 3-9

September 11

September 17

September 19

is October 10 (Friday)

October 13 (Monday)

October 15-21

October 29

October 29 – November 3

October 31 (Friday)

November 3

November 10

November 11 (Saturday)

November 26

November 26 (Wednesday)

November 27-29

December 9 (Tuesday)

December 10-16

Distance Education Course Interaction Plan (Form DE-2)

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)	✓	☐
2. telephone interactions	☐	✓
3. electronic interactions (email, internet ...)	✓	☐

This course is technically not a distance course, although some contact may be done by the students using online resources.

On-campus lecture meetings are held on Tuesday and Thursday, 12:45 – 2:00 pm.

On-campus lab meetings are held on Thursday, 12:45 – 2:00 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 meetings will occur where we meet and interact with the course content, particularly with material that could be more challenging.

Student-instructor interactions occur weekly via in-class meetings, email, and announcements. Online zoom meetings are also available, if needed