Science Prerequisite Courses
Nurturing well-rounded scholars and professionals who can adapt, prosper, and lead in a rapidly evolving world
The University of New England is an innovative health sciences university grounded in the liberal arts, with two distinctive coastal Maine campuses and a top-rated online college. UNE has internationally-recognized scholars in the sciences, health, medicine and humanities; offers more than 40 undergraduate, graduate and professional programs; and is home to Maine’s only medical and dental schools.

Welcome to UNE

At UNE, students engage in research and scholarship opportunities alongside dedicated faculty who are committed to their academic and professional success. Our academic programs also provide students with a variety of opportunities for extensive fieldwork, clinical experiences, research, and internships for career readiness. UNE’s unique combination of expert faculty, personalized student support, advanced technology, and highest-quality course content ensures that the education received by our worldwide student body is unparalleled.

From its College of Osteopathic Medicine and Westbrook College of Health Professions to its College of Pharmacy, College of Dental Medicine, and College of Graduate and Professional Studies, UNE is recognized as a leading educator of healthcare professionals. It is one of a handful of private universities with a comprehensive health education mission including medicine, pharmacy, dental medicine, nursing and an array of allied health professions. UNE’s interprofessional education initiatives prepare future healthcare professionals to practice comprehensive and collaborative team-based care. UNE provides all its students around the world a vast variety of quality resources from personalized student support to online technical troubleshooting.
### COURSE OFFERINGS

- Anatomy
- Medical Biology I
- Medical Biology II
- Microbiology
- Pathophysiology
- Genetics
- Medical Biochemistry
- Medical General Chemistry I
- Medical General Chemistry II
- Organic Chemistry I
- Organic Chemistry II
- Statistics
- Medical Terminology
- Principles of Human Nutrition
- Medical Physiology
- Physics I
- Physics II

### FINANCIAL INFORMATION

- Tuition & Books
- Financial Aid & Military Benefits
- Refund Policy

### ENROLLMENT

- Online Registration
- Technical Requirements

### 2019-2020 COURSE CALENDAR

Our 100% online Science Prerequisite courses are ideal for anyone who is planning to enter a graduate or professional program, but may need just one or two courses to fill a gap in their transcript. These individual science and mathematics courses can be taken as needed and do not require students to enroll in a matriculated program. The flexible, self-paced format of these content-rich courses, combined with our outstanding student support structure, make UNE Online a truly exceptional choice.

**ONLINE COURSE HIGHLIGHTS INCLUDE:**

- Self-paced & flexible learning environment
- 100% online with no campus visits required
- Courses start twice a month
- Renowned faculty of medical and science professionals
- Credits transferable to many colleges and universities*
- Content rich courses with labs offered virtually or shipped direct
- Incomparable student support and resources
- UNE is regionally accredited by the New England Commission of Higher Education (NECHE)

* Check with the institution you are planning to transfer credits into to ensure acceptance of courses.
Science Prerequisites

Anatomy - ANAT 1005
This intensive gross anatomy course provides students with a detailed examination of all structural aspects of the human body with a special emphasis on the anatomy and anatomical relationships significant to common clinical cases.

FORMAT(S) OFFERED:
Lecture / Lab (4 credits)

LABORATORY METHOD: Hands-on / Virtual

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years

One semester of college-level biology (essential)

One semester of college-level medical terminology (recommended)

Medical Biology I - BIOL 1010
The goal of this online course is to provide the student with an introduction to biology that emphasizes the concepts that will be important for, and provide the basis for, the topics considered in biochemistry, molecular biology, microbiology, cell biology, pharmacology, and physiology.

FORMAT(S) OFFERED:
Lecture / Lab (4 credits)

LABORATORY METHOD: Hands-on
**Medical Biology II - BIOL 1011**

The overall goal of this online course is to provide the student with an introduction to biology that builds on the material covered in Medical Biology I. This course is designed to emphasize the concepts that will be important for, and provide the basis for, the topics considered in biochemistry, molecular biology, microbiology, cell biology, pharmacology, and physiology.

**FORMAT(S) OFFERED:**
Lecture / Lab ( 4 credits )

**LABORATORY METHOD:** Hands-on

**PREREQUISITE(S) FOR SUCCESS:**
*It is strongly suggested to have completed this prior coursework within the past 7 years*

One semester of college-level biology ( essential )
Science Prerequisites

Microbiology - BIOL 1020
This online course is designed to emphasize the concepts that are a necessary groundwork for courses the students will take in their graduate or professional studies. Topics covered in this course include: the history of microbiology, microbial morphology and physiology, bacterial metabolism, genetics, ecology, and the classification of microorganisms, particularly bacteria, fungi, and viruses. Therapeutic agents used to disrupt and control microbial growth are considered and a body systems approach is utilized in the coverage of diseases.

FORMAT(S) OFFERED:
Lecture / Lab ( 4 credits )
Lecture ( 3 credits )

LABORATORY METHOD: Hands-on

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years
One semester of college-level biology ( essential )
One semester of college-level physiology ( recommended )

Pathophysiology - BIOL 1030
This online, introductory physiology course focuses on the changes in cellular and systemic physiology that occur in prevalent or important medical conditions. This course will build on prior knowledge of anatomy and physiology as body functions in altered health conditions are explored.

FORMAT(S) OFFERED:
Lecture / Lab ( 4 credits )

LABORATORY METHOD: Hands-on

PREREQUISITE(S) FOR SUCCESS:
One semester of college-level physiology ( essential )
One semester of college-level anatomy ( recommended )
One semester of college-level medical terminology ( recommended )
*It is strongly suggested to have completed this prior coursework within the past 7 years
**Genetics - BIOL 1040**

This online course takes a unified approach to transmission genetics, molecular genetics, cytogenetics, evolutionary genetics, molecular medicine, and developmental genetics. Students will learn from examples drawn from the scientific literature, which stress modern technological and experimental methodologies used in studying the genetics and genomics of prokaryotes, higher plants, and animals.

**FORMAT(S) OFFERED:**
Lecture / Lab (4 credits)

**LABORATORY METHOD:** Hands-on / Virtual

**PREREQUISITE(S) FOR SUCCESS:**
*It is strongly suggested to have completed this prior coursework within the past 7 years*

Introductory biology (essential)

Inorganic chemistry, or a good understanding of atoms, elements, chemical reactions and bond types, acid / base chemistry, and biological macromolecules (recommended)

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**Medical Biochemistry - CHEM 1005**

This online course is designed to lay the foundation for other basic and clinical medical sciences. The goal of this course is to learn the core concepts of biochemistry that apply to human health and disease and to cite specific examples of their application.

**FORMAT(S) OFFERED:**
Lecture (4 credits)

**PREREQUISITE(S) FOR SUCCESS:**
*It is strongly suggested to have completed this prior coursework within the past 7 years*

One semester of college-level biology (essential)

One year of college-level chemistry, including one semester of organic chemistry (essential)
Science Prerequisites

Medical General Chemistry I - CHEM 1010

This is an introductory general chemistry course. The subjects covered in this course include components of matter, atomic theory, stoichiometry, chemical reactions and bonding, thermochemistry, gases, quantum theory, electron configuration, models of bonding, theories of covalent bonding, shapes of molecules and intermolecular forces of liquids and solids.

FORMAT(S) OFFERED:
Lecture / Lab (4 credits)
Lecture (3 credits)
Lab (1 credit)

LABORATORY METHOD: Hands-on

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years

One semester of college-level algebra (essential)

Medical General Chemistry II - CHEM 1011

This is an online introductory general chemistry course that builds on the material covered in General Chemistry I. The topics covered in this course include mixtures, trends in the periodic table, organic chemistry, kinetics, chemical equilibrium, acid-base equilibria, thermodynamics, electrochemistry, elements in nature, chemistry of transition elements, and nuclear chemistry, bonding theories of covalent molecules, shapes of molecules and intermolecular forces of liquids and solids.

FORMAT(S) OFFERED:
Lecture / Lab (4 credits)
Lecture (3 credits)
Lab (1 credit)

LABORATORY METHOD: Hands-on

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years

One semester of college-level algebra (essential)
One semester of college-level general chemistry (essential)
Organic Chemistry I - CHEM 1020

This online course is an introduction to organic chemistry emphasizing the concepts that will be important for and provide the basis for the subjects students will encounter in their graduate or professional studies. The topics covered include biochemistry, molecular biology, cell biology and pharmacology.

FORMAT(S) OFFERED:
Lecture / Lab ( 4 credits )
Lecture ( 3 credits )
Lab ( 1 credit )

LABORATORY METHOD: Virtual

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years

Two semesters of college-level general chemistry ( essential )

Organic Chemistry II - CHEM 1021

This online course is an introduction to the organic chemistry of important biological pathways that students will encounter in their graduate or professional studies. The topics include biochemistry, molecular genetics and metabolism.

FORMAT(S) OFFERED:
Lecture / Lab ( 4 credits )
Lecture ( 3 credits )
Lab ( 1 credit )

LABORATORY METHOD: Virtual

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years

One semester of college-level organic chemistry ( essential )
Science Prerequisites

Statistics - MATH 1005
This online course is designed to offer the same major subject and content areas as a traditional, upper-level statistics course, but differs in that an emphasis is placed on application. Students will explore data sets and challenges from several disciplines, including health professions, education, sports science, and business, to make the course relevant to their specific needs and interests.

FORMAT(S) OFFERED:
Lecture (4 credits)

Medical Terminology - MEDT 1000
This online course is designed to provide students with a broad and comprehensive understanding of the unique language of medical terminology.

FORMAT(S) OFFERED:
Lecture (3 credits)

Principles of Human Nutrition - NTRN 1010
This is an online, science-oriented, introductory nutrition course which focuses on the basic principles of human nutrition. Emphasis is placed on the nutrient requirements of healthy individuals, nutrient categories and their characteristics, physiological functions, metabolism, and food sources.

FORMAT(S) OFFERED:
Lecture (3 credits)
In this online course, students are introduced to core concepts that shape our knowledge of the workings of the human body. Cell-cell communication and membrane dynamics will first be studied as central themes that govern coordination in individual cells and tissues, and within and between organ systems.

**Medical Physiology - PHSL 1010**

In this online course, students are introduced to core concepts that shape our knowledge of the workings of the human body. Cell-cell communication and membrane dynamics will first be studied as central themes that govern coordination in individual cells and tissues, and within and between organ systems.

**FORMAT(S) OFFERED:**
Lecture / Lab (4 credits)

**LABORATORY METHOD:** Hands-on

**PREREQUISITE(S) FOR SUCCESS:**
*It is strongly suggested to have completed this prior coursework within the past 7 years*

One semester of college-level biology (essential)
One semester of college-level anatomy (recommended)

**Physics I - PHYS 1010**

Physics I is an algebra-based course with an overall goal to provide the student with an introduction to physics that emphasizes the concepts that are the foundation of sciences. This course provides an in-depth examination of basic mechanics including the study of motion (kinematics), interactions and forces (dynamics), energy, impulsive forces (collisions), circular motion, and fluids.

**FORMAT(S) OFFERED:**
Lecture / Lab (4 credits)

**LABORATORY METHOD:** Hands-on / Virtual

**PREREQUISITE(S) FOR SUCCESS:**
*It is strongly suggested to have completed this prior coursework within the past 7 years*

One semester of college-level algebra (essential)
Background knowledge in trigonometry (essential)
Physics II - PHYS 1011

Physics II is an algebra-based course with an overall goal to provide the student with a continuing introduction to physics that emphasizes additional concepts to those covered in Physics I that are the foundation of sciences. These topics include thermodynamics, waves and sound, electrostatics, circuits, magnetism, light and optics, and atomic and nuclear phenomena.

FORMAT(S) OFFERED:
Lecture / Lab (4 credits)

LABORATORY METHOD: Hands-on / Virtual

PREREQUISITE(S) FOR SUCCESS:
*It is strongly suggested to have completed this prior coursework within the past 7 years

One semester of college-level algebra (essential)
Background knowledge in trigonometry (essential)
One semester of college-level physics (recommended)
Financial Information

TUITION
$360 per credit hour
$30 registration fee

COURSE MATERIALS
The cost of course materials, which includes all textbooks and lab software, ranges from $150- $450.

FINANCIAL AID
UNE does not accept any type of financial aid or payment plan at this time for non-matriculated courses.

MILITARY BENEFITS
For information about Military Tuition Assistance (TA) and GI Bill® benefits* visit:
une.edu/registrar/veteran-benefits

REFUND POLICY
• 100% refund on or before the official start date of the course.
• 40% refund between the second day of the course and the end of the first week of the course.
• No refund after the first week of the official course start date.

*Cost subject to change without notice

*Please note: GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at www.benefits.va.gov/gibill
Enrollment

ONLINE REGISTRATION

- Visit our 24/7 online registration portal, FlexReg: go.une.edu/register (Use Firefox or Chrome browsers for best performance)

- For step-by-step instructions that will walk you through the registration process with FlexReg visit: online.une.edu/science-prerequisites/faq/flexreg

- You must submit payment in full at the time of registration. Within 24 hours you will receive a Welcome Email with course access instructions and next steps. If you do not receive this email, please contact us at 855-325-0894 or prehealth@une.edu

TECHNICAL REQUIREMENTS

For a complete list of technical requirements visit: online.une.edu/science-prerequisites/technical-requirements/
# 2019-2020 Course Enrollment Calendar

**SPRING 2020** - Registration opens December 4th, 2019

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### FALL 2020 - Registration opens August 5th, 2020

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The University of New England has repeatedly claimed a spot in U.S. News & World Report’s rankings for Best Online Graduate Education Programs.