



## 2024 Course Descriptions

### ALGEBRA 2

In this course, students will engage in an in-depth study of functions. Quadratic, polynomial, rational, radical, exponential, periodic, and logarithmic functions will be explored graphically and algebraically. Conic sections, matrices, and parametric equations will also be introduced. Algebra 2 emphasizes mathematics as a language through which real world problems will be addressed, analyzed, and solved. A graphing calculator, preferably a TI-83 or TI-84 Plus, is required for this course. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](https://nsula.edu/advance) and click on Eligibility. Students must have completed algebra 1 and geometry in school or at ADVANCE. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

### BIOLOGY

What are some properties of living matter that separate it from non-living matter? Are all physical and chemical reactions the same inside vs. outside of a living matter? Can we take control of these physical and chemical reactions so that we can become "Faster, Higher, Stronger"? How do strings of four alphabets determine the structure and function of all living systems? Which other factors may contribute to the properties of living things? If you want to know the answers to some or all these questions, enroll in biology.

This course will help participants build upon a foundation of life's defining characteristics and use analytical skills to develop an in-depth appreciation of fundamental principles of biology through provoking classroom instructions, hands-on experience, as well as social activities. The topics to be covered include cells and cellular components, genes and their role in life, diversity of life forms and evolution, anatomy and physiology, basic tools to explore biological systems, and introductory bioinformatics.

By taking this course, participants will expand their scientific knowledge base as they make connections across concepts and become more informed citizens by exploring current events through a scientific lens. Laboratory work will be an integrated part of the class, including conducting experiments and analyzing the results. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](https://nsula.edu/advance) and click on Eligibility. Students must have completed algebra 1 and geometry in school or at ADVANCE. **Lab Fee:** There is an additional \$50 lab fee for this course that must be included with the final payment. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.



### CHEMISTRY

How do fluorescent light bulbs work by using the chemistry of inert noble gases? Why is water the most chemically important substance on earth? Why is diamond the hardest naturally occurring material? Have you ever wondered how a car battery works? Is it possible to completely dissolve coins in strong acids?

These questions and more can be answered through the science of chemistry. From chemical reactions to electrochemistry, and gas laws to molecular structure, students will learn and apply the equivalent of a year-long chemistry sequence through written assignments and lab work. Major topics covered will include chemical nomenclature and structure, the periodic table and periodic trends, reaction classification and stoichiometry, ideal gases and intermolecular forces, and nuclear, thermo-, and electrochemistry. Additionally, students will practice practical knowledge and skills for science disciplines, such as unit conversions, scientific notation, and significant figures, both as lecture topics and applications in a variety of laboratory sessions. A scientific calculator, such as one from the TI-30 series, is required for the class. Graphing calculators are permitted, but certainly not required. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](https://nsula.edu/advance) and click on Eligibility. Students must have completed algebra 1 and either physical science or biology in school or at ADVANCE. **Lab Fee:** There is an additional \$50 lab fee for this course that must be included with the final payment. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

## CREATIVE WRITING

In Creative Writing, students will be challenged to write daily, producing a body of work that will include poems in numerous styles, and at least one completed short story, as well as personal narratives.

In class the students will be given exercises to stimulate and develop their writing skills and their critical thinking about both writing and reading literature. These exercises and the longer assignments that evolve from them should be enjoyable for any student who likes to write or thinks he or she might have things to say and experiences to communicate. We will use both a poetry text and a fiction text to create a body of shared examples and models, and to analyze and enjoy the craft of exemplary writers. We will spend a lot of time talking about these models and about the work each student produces. Some of our discussion will take place within the framework of a more formal 'workshop,' in which every student will offer critiques of every other student's work. We will explore craft, as well as the more elusive idea of art, and focus on the enrichment of the astonishing human gift of language. We will read aloud to one another, and produce an anthology of work completed in the class. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

## CRIMINALISTICS

At the end of the course, each student will understand and be able to critically evaluate the application of science to law in a criminal justice setting. Students will explore the role that physics, chemistry, biology, pathology, anatomy, psychology, and other major branches of science play in courtroom settings. Emphasis will be placed on the historical evolution of forensic science, terminology, and how scientific methods are used to solve crimes. Some of the topics will include fingerprint collection and techniques, hair and fiber analysis, ballistic analysis, soil analysis, crime scene documentation, blood/DNA analysis, glass analysis, forensic profiling, and medico-legal death investigation. Students will experience forensic science in both lecture and hands-on applications. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. **Lab Fee:** There is an additional \$50 lab fee for this course that must be included with the final payment. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.



## FILM STUDIES - MARVEL COMICS

This course will provide an introduction to film and Marvel comics of the 1960s to present through an examination of films and TV shows based on Marvel comics, with a focus on comparing the source material to the film adaptations of Marvel Studios, Fox, Sony, and others.

Why have Marvel comics remained so successful for the past six decades? Why are the Marvel Studios films so critically and popularly acclaimed today? Our class will parse answers to this challenging line of inquiry, and students will hone their skills of text-based analysis, criticism, and argumentation.

Through discussion of the texts, as well as critical and creative writing, students will learn and apply aspects of film theory, technique and history, principles of screenwriting, fundamentals of visual composition, and basic features of film and comic storytelling, including some original compositions in both media.

In addition, the course will culminate in a creative, collaborative project of composing, storyboarding, shooting, and editing an original short film, giving students first-hand experience with the elements they have studied. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

## HISTORY - AMERICA IN THE REVOLUTIONARY ERA, 1754 - 1789

Ever wonder about the birth of the United States? Why did the colonists rebel against Great Britain in 1776? The class will discuss the origins of the American Revolution starting with the end of the French and Indian War in 1763. How did England's great triumph against France and Spain spark a rebellion in her American colonies just a few years later? We will discuss the causes of the Revolution and address many of the myths of the conflict. Military campaigns make up only part of the story - so the class will tackle the societal changes in the United States during the period. Finally, we will answer the question "How Revolutionary was the Revolutionary War?" The origins, drafting and ratification of the Constitution in 1787 will constitute our last several classes. So answer the call young patriots and enroll in this engaging history class. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

## INTRODUCTION TO ENGINEERING TECHNOLOGY

Embark on a fascinating journey into the world of innovation and problem-solving with our Introduction to Engineering Technology course. Ever wondered about the intricacies behind the creation of everyday items such as plastic bottles, cell phones, or motor vehicles? Curious about the processes that drive industries, ensuring efficiency, quality, and safety?

This course is your gateway to understanding the integrated ideas that fuel industries and bring products to life. Delve into the realms of robotics, electronics, computer-aided design (CAD), manufacturing, ergonomics, and beyond. Gain valuable insights into engineering degree requirements, academic resources, and the diverse career opportunities within engineering technology. Explore the essential skills for success in this dynamic field, from scientific notations and problem-solving to programming, 3D designs, and the cutting-edge realms of 3D printing and Computer Numerical Control (CNC) machines.



Engineering technology is the bridge between science and real-world problem-solving, and the demand for skilled professionals is soaring. According to the U.S. Bureau of Labor Statistics, engineering technology careers are projected to grow by 10% through 2031, offering a median salary of \$78,000. Join us on this educational odyssey, where you will not only enhance your academic prowess but also cultivate the adaptability to tackle significant challenges. Become an integral part of an expanding industry, where your skills as a problem solver will be the key to shaping the future. Don't miss this opportunity to explore the boundless possibilities within engineering technology and prepare for a fulfilling and lucrative career ahead. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. Students must have completed algebra 1 and geometry in school or at ADVANCE. **Lab Fee:** There is an additional \$50 lab fee for this course that must be included with the final payment. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

## PSYCHOLOGY: BRAIN AND BEHAVIOR BUFFET - WHERE WE SERVE AUTHENTIC PSYCHOLOGY

Psychology is the science of behavior and mental processes. To understand the psychology of human beings, the students will be learning some physiology first, including brain structure and function, five senses and function, Endocrine system, and how drugs affect both physiology and psychology of human beings.

The Brain and Behavior Buffet course (2B Buffet) is designed to trigger students' minds with questions about who they are, how do they behave, why do they behave in a certain way, can they change their behavior, can they change their personality, can they learn new things easily, and can they memorize material quickly.

2B Buffet will serve the students with a special menu of topics including the brain, human nature, state of consciousness, motivation, emotion, learning, memory, intelligence, personality, human development, psychological disorders, and therapies. 2B Buffet will be spiced by classic psychology experiments, fields of psychology, and research in psychology. 2B Buffet will be incomplete if students will not taste three different kinds of dessert; how to relax, how to have hope, and how to be positive! **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.

## SHAKESPEARE IN PERFORMANCE

The objective of this course is to familiarize students with three of Shakespeare's great plays and the conditions for which they were written, namely the Renaissance playhouse. This course will cover the history of the period, the playing style of the Elizabethan playhouse, and the writing trends of Shakespeare's contemporaries. The focus will be on the insight this information gives us in the performance of selected scenes from three plays.

However weird you thought Shakespeare's plays were when you studied them in English class, be prepared to learn how wacky and wonderful *The True Contention* is! It may be known as *Henry VI, Part 2*, today, but that is only because it was so popular it got two sequels and a prequel. Random pirates also show up in the more mainstream *Hamlet*, but the real thread holding the three plays together is the theme of a peasant's rebellion – sparked in *Julius Caesar* by the most famous speech in Shakespeare's canon.

This crash course in theatre history and Shakespeare's play in particular will immerse you in the language of the Renaissance until iambic pentameter and thee's and thou's feel both natural and emotional. These complex, interesting plays are full of fun but also deep and profound meaning that likely explains their survival to the present day. Come to see Shakespeare knocked off his lofty perch (like the kings and dictators being overthrown) but stay to learn why his works still have much to teach us today.

There is a performance component to this class in which all students must participate. **Admission Requirements:** To view our Admissions Policy, visit [nsula.edu/advance](http://nsula.edu/advance) and click on Eligibility. **Note:** This course may be eligible for articulated college credit at Northwestern State. See Articulation Agreement under Academics.



## ADMISSIONS POLICY

All applicants must email the following documents to [palmerh@nsula.edu](mailto:palmerh@nsula.edu) after applying online:

1. A copy of their most recent report card.
2. A copy of their most recent state standardized test scores. If scores have been misplaced, many schools provide that information on school transcripts, and transcripts may be submitted.

Louisiana applicants:

Louisiana applicants who earn LEAP 2025 achievement levels of Advanced or Mastery in the subject area that corresponds to the desired ADVANCE class and submit a satisfactory report card will be accepted to the program.

Louisiana applicants who earn LEAP 2025 achievement levels of Basic, Approaching Basic, or Unsatisfactory in the subject area that corresponds to the desired ADVANCE class will be required to submit two examples of outstanding schoolwork, and a teacher must email the ADVANCE office stating why they recommend the student as a candidate for the program.

Texas applicants:

Texas applicants who earn STAAR performance standards of Masters or Meets in the subject area that corresponds to the desired ADVANCE class and submit a satisfactory report card will be accepted to the program.

Texas applicants who earn STAAR performance standards of Approaches or Did Not Meet in the subject area that corresponds to the desired ADVANCE class will be required to submit two examples of outstanding schoolwork, and a teacher must email the ADVANCE office stating why they recommend the student as a candidate for the program.

Applicants from other states:

Contact the ADVANCE office at 318-357-4500 or [palmerh@nsula.edu](mailto:palmerh@nsula.edu).



## FOR STUDENTS WHO HAVE TAKEN AN ACT OR SAT

If applicants have taken an ACT or SAT and their scores meet those shown in the chart below, they may submit those scores along with a copy of their most recent report card with their application. Applicants will be notified if state standardized test scores and teacher recommendations are needed.

The left side of the chart below indicates qualifying scores for students who took an ACT or SAT while in the 7th grade. If students achieve the required scores while in 7th grade, they do not have to retake the test to apply to ADVANCE in future years.

The right side of the chart indicates qualifying scores for students who took an ACT or SAT while in 8th – 11th grades.

Students qualify for specific courses based on their scores on subsections of the ACT or SAT. For example, **\*Students who submit ACT scores** and wish to enroll in a math, science, or technology course at ADVANCE should qualify with either their ACT math or science score. Students who wish to enroll in a humanities course should qualify with either their ACT English or reading score.

**\*\*Students who submit SAT scores** and wish to enroll in a math, science, or technology course at ADVANCE should qualify with their SAT math score. Students who wish to enroll in a humanities course should qualify with their SAT EBRW score.

Abbreviations for the ACT qualifying scores include E = English; M = Math; R = Reading; S = Science. Abbreviations for the SAT qualifying scores include EBRW = Evidence-Based Reading and Writing; M = Math.

ADVANCE QUALIFYING SCORES	
IF TEST TAKEN IN GRADE 7	IF TEST TAKEN IN GRADES 8, 9, 10, or 11
<p>Students must meet at least one of the following:</p> <p><b>*ACT</b>                      E &gt; 20                      M &gt; 18                      R &gt; 20                      S &gt; 20</p> <p>Or a combination of:                      M &gt; 17 and E &gt; 19                      M &gt; 17 and R &gt; 19</p>	<p>Students must meet at least one of the following:</p> <p><b>*ACT</b>                      E &gt; 22                      M &gt; 20                      R &gt; 22                      S &gt; 22</p> <p>Or a combination of:                      M &gt; 19 and E &gt; 21                      M &gt; 19 and R &gt; 21</p>
<p><b>**SAT</b>                      EBRW &gt; 510                      M &gt; 500</p>	<p><b>**SAT</b>                      EBRW &gt; 540                      M &gt; 520</p>