NORTH CEDAR ACADEMY

COURSE GUIDE

2025-26

TABLE OF CONTENTS

STUDENT WELCOME

Current and Future NCA Eagles,

Each day we see or hear of exciting new products, changes, procedures, or applications, employed in the world around us. A new paradigm exists in this Information Age. What was once the standard is no longer acceptable. New innovations and approaches to problem solving are directly influencing our challenges and opportunities. Our students must be ready to meet this reality as they enter the post-secondary world. Business and industry are looking for dedicated, critical thinkers who are able to adjust and adapt as situations arise.

In school and in life beyond, the challenges and changes they encounter will provide each of them with opportunities for growth and success. It is not enough to recognize the opportunities; action will be required which will be dependent upon preparation. This means individuals have to be proactive in the pursuit of educational excellence. Expect and accept only the very best from one's efforts. Competition for life's opportunities will be intense and only those individuals who have prepared wisely will reap the most. History has shown time and again that there is a direct correlation between the quantity and quality of life's opportunities and the quality and effort of one's education. North Cedar Academy is committed to providing excellent educational opportunities for all our students. Remember, today's lost chances impair tomorrow's choices.

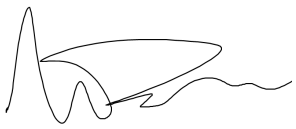
This Course Planning Guide provides helpful information necessary in making meaningful course selections. Each student has the opportunity to select courses to meet individual needs, explore new information, pursue interests, and challenge their limits. Preparation for life after high school is a goal directly related to the courses that students select throughout their 9-12 education. Students are encouraged to work with their North Cedar Academy staff to address questions related to the selection of a course, as our staff are valuable resources.

Prior to selecting courses, students are asked to review their four-year plan and past academic achievements. This process is very important. Staff assignments and class sections are determined by the commitments from the students. NCA administration reserves the right to organize the master schedule of courses and may need to alter a student's course selection based on insufficient enrollment or faculty availability for a particular course. If a course selection is not offered, students will be enrolled in one of their alternate course selections.

The administration, faculty, and staff of North Cedar Academy are devoted professionals who care that each student receives a world-class education.

We eagerly look forward to assisting each student on the road to success.

Go Eagles!



Mr. Arnold
Academic Dean
North Cedar Academy

NORTH CEDAR EAGLES

NCA GRADUATION REQUIREMENTS

All students must complete the graduation requirements as established by the North Cedar Academy Board to be eligible for the North Cedar Academy Diploma. Students must obtain approval from the Academic Dean prior to enrolling in courses for credit which are not offered by North Cedar Academy. Students will not be permitted to participate in commencement exercises until all requirements and obligations are completed (including fees, fines, classroom materials, and detention time owed). NCA's graduation requirements are as follows:

Academic Requirements for Graduation

4.0 English Credits
- 1.0 credit English Language Arts 1/2
- 1.0 credit English Language Arts 3/4
- 0.5 credit Speech
- (1.5 additional English credits)

3.0 Mathematics Credits
- 1.0 credit of Algebra I
- 1.0 credit of Geometry
- 1.0 credit of Algebra II, Precalculus, or Trigonometry

3.0 Science Credits
- 1.0 credit of Chemistry or Physical Science
- 1.0 credit of Biology or Life Science
- (1.0 additional Science credit)

3.0 Social Studies Credits
- 1.0 credit of World History
- 0.5 credit of United States History
- 0.5 credit of United States Government
- (1.0 additional Social Studies credit)

1.0 Fine and Performing Arts Credit

1.0 Foreign Language Credit

1.0 Physical Education Credit

0.5 Health Credit

8.0 Elective Credits

= 24.5 Credits - Total number of credits required for graduation at North Cedar Academy

Non-Academic Requirements for Graduation

20 hours of community service

SCHEDULING INFORMATION

Commencement

In addition to completing the minimum requirements for a diploma, students must pay all fees and fines, return all books, school equipment, materials and complete any detention time owed. Students who have any aforementioned outstanding obligations will have their final transcript and diploma held until the requirements have been met.

Student Books / Class Material Fees

In most classes, students will be issued a class textbook (physical text or ebook) and other class materials to be used by the student for the duration of the class. Students are responsible for returning all books and class materials issued to them at the end of the year in the same condition they were issued. If items are not returned or are damaged, students will be billed for the replacement book and/or materials.

Student Schedules

All students must be scheduled for and maintain a full course load. Students are not allowed to schedule more than one study hall per semester. In extreme cases, a waiver of the above rules may be issued by the Academic Dean. Students may enroll as a Teacher Assistant (TA), Peer Tutor (PT), or an Admission Temp (AT) in lieu of one of their study halls, with the permission of the teacher and the Academic Dean. TAs earn 1/4 credit per semester position. PTs and ATs earn time towards their community service total.

ALL INTERNATIONAL STUDENTS MUST MAINTAIN A FULL COURSE LOAD IN ORDER FOR THEIR F-1 OR J-1 VISA TO REMAIN IN ACTIVE STATUS.

Course Withdrawals & Schedule Changes

Students are encouraged to plan their schedules carefully. Selecting a course is a commitment on the part of the student to the teacher and school. Staff assignments and class sections are determined by the commitments from the students. Dropping classes is time consuming, expensive, and disruptive to the entire educational process. For these reasons and more, students are discouraged from dropping a course. Therefore, all course withdrawals will be refused unless there are extenuating circumstances which warrant a schedule change. The following reasons are examples which would warrant a scheduling change.

The student:

- failed a course which would affect the scheduling sequence.
- needs a course to meet graduation requirements.
- had scheduling or placement errors.
- had a schedule with class section balancing problems.
- made a change in intended college major or wants to add course rigor.

All schedule change requests will be evaluated by the Academic Dean. Students have until the fifth day of each semester to make changes to their schedule without penalty. After this date, students will need to schedule a meeting with the Academic Dean and the teacher of the class they wish to drop. Students must have written parent permission to make any alterations to their schedule.

Students who drop after the fifth day of the class will have a withdraw recorded on their transcript. Students are reminded they are required to enroll in and finish a MINIMUM of six full credit courses each year. The minimum academic schedule each semester is six courses.

POST-SECONDARY SCHOOL INFORMATION

Technical College Admission

Technical college programs have admission standards and placement testing. Some popular programs have waiting lists for entry into them. Students are encouraged to apply early and seek advice from your NCA College Counselor as well as the college admissions office regarding your program options. Technical college preparation should include a comprehensive high school curriculum to better ensure success. English credits should reflect an emphasis in work-related writing skills.

Recommended preparatory coursework for Technical College Admissions:

COURSE	CREDITS
English	4
Math	2-3
Science	2-3
Social Studies	3
Tech Courses	3-4

University or College Admission

Most four-year colleges and universities have admission standards which include grade point average, class rank, standardized test scores (SAT/ACT), an English proficiency test (TOEFL/IELTS), and the student's high school transcript. Students are encouraged to apply early and seek advice from your NCA College Counselor and the college admissions office regarding their program or major options. College preparation should include a comprehensive or college prep high school curriculum to better ensure success. Students are encouraged to look at each schools' admissions requirements, as each school can vary. The list below is the minimum recommendation for most schools; not all.

Minimum recommended preparatory coursework for admissions to four-year colleges/universities:

COURSE	CREDITS
English	4
Math	3
Science	3
Social Studies	3
College Prep Electives	3-4
Foreign Language	2-3
Fine Arts	1

Students are encouraged to check for specific requirements from the post-secondary institution of their choice. Students are strongly encouraged to take the ACT or SAT Assessment Test including the writing component in March or June of their junior year. Student Services is always available to answer questions and help students plan for their future. *NCA graduates who have successfully completed their Associate's degree wanting to enroll into a University of Wisconsin 4 year school do NOT have to take an ACT or SAT for admission. Upon successful completion they are guaranteed acceptance into their university of choice provided they meet the academic standards for admission.

Students who would like additional assistance with their Post-Secondary plans should seek help from the College Counselor, Student Services Office, or the Academic Dean.

NCA graduates who participate in the University Pathways (UP) Program have the potential to transfer as incoming juniors, not freshmen!

COURSE DESCRIPTIONS

ART

- **Graphic Design**

Grades	*Credit*	*Course Number*	*Prerequisites*
9,10,11,12	*0.5*	*05162*	*None*

This course explores and engages students in the essential fundamentals and tools used by professionals in the business world today for effective visual communication. Topics of study include operating systems, vector vs. raster graphics, elements and principles of design, typography, and logo design. The central focus throughout this course will be on finding creative visual solutions to communication problems using technical skills.

- **Introduction To The Fundamentals Of 2D & 3D Art**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*05154*	*None*

This course is for students who are just beginning their high school art experience. Students must be interested in improving their general art skills. This course will introduce students to the fundamentals of 2-D design and 3-D design. Students will investigate basic two-dimensional and three-dimensional aesthetic and design concepts through the use of a variety of mediums. Students will learn how to effectively and expressively apply the various Elements and Principles of Design, and will develop problem-solving skills to create abstract, non-objective and representational compositions through hands-on classroom projects. This class is designed to give students a solid foundation for further study.

- **Visual Arts - Drawing**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*05156*	*None*

This course is for students who want to improve and explore different drawing techniques and skills. Students will learn various techniques and explore drawing fundamentals and how it is incorporated into the creative process. Students will do various pieces while exploring different mediums from charcoal to 3D drawings.

- **Yearbook / Media**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*11104*	*None*

Students spend the semester compiling photography of their peers and writing articles about campus life for the annual NCA yearbook. They also partake in the production of short videos on a variety of topics of their choice, that they then present to the student body each week during Media Friday. The photography, articles, and videos are often shared on NCA's various social media pages.

ENGLISH LANGUAGE ARTS (ELA)

- **Creative Writing**

Grades	*Credit*	*Course Number*	*Prerequisites*
11, 12	*0.5*	*01104*	*None*

Creative Writing offers students the opportunity to develop and improve their technique and individual style in poetry, short story, drama, essays, and other forms of prose. The emphasis of the course is on writing; however, students will study exemplary representations and authors to obtain a fuller appreciation of the form and craft.

❖ **English Language Arts I/II**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10	*1.0*	*01001/2*	*None*

ELA 1 is a reading-intensive writing course that introduces students to strategies for critical reading, personal, and academic writing. Students will read a variety of fiction and nonfiction and will learn strategies to help them write a variety of well-organized essays including personal, descriptive, creative, compare-contrast, process, and argumentative essay, as well as review the basics of grammar and mechanics. Additional goals include vocabulary building and raising rhetorical awareness. Assignments and course learning outcomes emphasize all aspects of the writing process from brainstorming, drafting, revision, to final editing. ELA 1 prepares students to write in a variety of genres, and helps prepare them for more challenging reading, writing, and research tasks in ELA 2.

❖ **English Language Arts III/IV**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*01003/4*	*ELA 1 or equivalency*

Students continue to hone critical thinking, reading, writing, and research skills through a variety of tasks including rhetorical analysis, synthesis, and argument. Readings will include both works of fiction and nonfiction, ranging from short pieces (articles, poetry, and short stories) to novels. Writers will learn to effectively support a central claim, or thesis, based on their *audience* and *purpose*. Students will also learn to evaluate credible textual and web-based research, use appropriate MLA citation, and apply ethical skills when writing to inform, persuade, or make a strong argument using credible research-based texts. Additional goals include vocabulary building and increased rhetorical awareness. English II is designed to help students become successful readers, writers, and researchers and prepare them for success in higher-level reading and writing-intensive courses.

❖ **Public Speaking**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*01151*	*None*

Public Speaking is a practical course designed to offer the novice speaker a number of opportunities to deliver interesting, effective, and persuasive speeches. Emphasis is on effective topic selection, research, organization, preparation, and delivery, as well as evaluation of informative, persuasive, and special-occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussions with appropriate audiovisual support. Students should also demonstrate speaking, listening, and interpersonal skills necessary to be effective communicators in academic settings, the workplace, and the community.

ENGLISH AS A SECOND LANGUAGE (ESL)

❖ **English As A Second Language (ESL) 1**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*01008-1*	*None*

This course is intended to help students who have a difficult time communicating and expressing themselves using English in an academic setting. Students will not only focus on individualized plans based on their needs, but also group discussions and activities to build skills such as: speaking and listening skills, pronunciation, vocabulary, and basic grammar. The objective of this course is to provide intensive English instruction in academic and conversational English in order to be successful in high school. Material will be chosen based on and dictated by the needs of the learners. Students enrolled in ESL I may be concurrently enrolled in ESL World History and ESL English, when offered. Material from these classes will be used to facilitate the speaking, listening, and vocabulary components of ESL I. As in all levels of ESL, students will take one TOEFL test at the beginning and end of each school year to measure their language progress. In addition to the TOEFL, they will also be given a placement interview by the ESL instructor to ensure they are placed correctly. *There is an additional fee associated with this class.*

❖ **English As A Second Language (ESL) 2**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*01008-2*	*None*

ESL II is designed for students who are at intermediate levels of English proficiency. This class will focus on building proficiency in reading and writing as well as continuing to develop listening and speaking skills. Pronunciation will also be a larger area of emphasis at this level as dictated by the needs of the learners. This class is focused on building the capacity of intermediate English learners to be successful not only in speaking but also in academic reading and writing. *There is an additional fee associated with this class.*

❖ **English As A Second Language (ESL) 3**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*01008-3*	*None*

ESL III is designed for students who are at advanced levels of English proficiency. Students enrolled within this class will focus on fine tuning all of their English language skills. There will be a heavy emphasis on accuracy, including spoken and written accuracy. In addition, students will be provided with opportunities to receive one on one support from the instructor to facilitate their success in content area classes. This may include studying for tests, improving note-taking skills, etc. Students enrolled within this class are expected to have a more advanced knowledge of English but may need more support within the academic setting. *There is an additional fee associated with this class.*

** NOTE: ESL courses do not count towards meeting ELA credit requirements (elective credit only)*

HEALTH AND PHYSICAL EDUCATION (HPE)

❖ **Health**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*08051*	*None*

The purpose of this course is to promote positive decision making and practices for healthy living in today's world. The health information presented and discussed throughout the semester will enable students to assume responsibility for their own health. Students will be expected to discuss issues with others and to use what they learn by practicing, applying, and acting in a responsible health-conscious manner. Some of the issues studied are goal setting, Red Cross C.P.R., first aid, nutrition, alcohol and drug abuse prevention, violence prevention, conflict resolution, human growth and development and effective communication.

❖ **Physical Education**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*08001*	*None*

Physical Education courses provide students with knowledge, experience, and an opportunity to develop skills in more than one of the following sports or activities: team sports, individual/dual sports, recreational sports, and fitness/conditioning activities.

INFORMATION SCIENCE AND TECHNOLOGY (IST)

❖ **Introduction to Computer Science**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*10012*	*None*

Exploring Computer Science courses present students with the conceptual underpinnings of computer science through an exploration of human computer interaction, web design, computer programming, data modeling, and robotics. While these courses include programming, the focus is on the computational practices associated with doing computer science, rather than just a narrow focus on coding, syntax, or tools. Exploring Computer Science courses teach students the computational practices of algorithm design, problem solving, and programming within a context that is relevant to their lives.

MATHEMATICS

❖ **Algebra 1**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10	*1.0*	*02052*	*None*

Algebra 1 includes the study of properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations.

❖ **Algebra 2**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11	*1.0*	*02056*	*Algebra 1*

Algebra II course topics include developing an understanding of the relationships between the symbolic, graphic, tabular (cont') and verbal representations of functions; utilizing the various representations to interpret function behavior and solve equations; operations with rational and irrational expressions; factoring of rational expressions; in-depth study of linear equations and inequalities; quadratic equations; solving systems of linear and quadratic equations; graphing of constant, linear, and quadratic equations; properties of higher-degree equations; exponential functions; inverse functions; statistical modeling; modeling linear and quadratic data; and operations with rational and irrational exponents.

❖ **AP Calculus AB**

Grades	*Credit*	*Course Number*	*Prerequisites*
11, 12	*1.0*	*3650/3655*	*Must have a B or higher in Precalculus or teacher consent*

The Advanced Placement Calculus AB course is designed to cover the traditional first year college calculus concepts. Calculus is generally offered to incoming college freshmen majoring in engineering, mathematics, or science related fields. Topics covered provide students with the skills needed to solve a variety of advanced mathematical problems. Topics covered in this course include the formal definition of a limit, differentiation strategies, integration techniques, and applications of derivatives & integrals. College credit may be earned upon taking and achieving the necessary score on the Advanced Placement Calculus Exam. Students will be expected (but not required) to take the AP Calculus AB Exam, which is given in May of the school year. The textbook anticipated to be used in this course is: Calculus, 11th Edition by Larson & Edwards. Graphing calculators are used in this course and students are encouraged to purchase their own.

❖ **College Algebra (MAT 109 @ UWEC)**

Grades	*Credit*	*Course Number*	*Prerequisites*
11, 12	*1.0 (4.0 UW)*	*MAT 109*	*Algebra*

(UWEC course description) "Algebraic concepts, techniques, and applications including polynomial and rational expressions, linear and quadratic equations, complex numbers, inequalities, absolute value, functions and graphs, exponential and logarithmic functions, systems of equations and inequalities, and zeros of polynomials. This course is for students pursuing degree programs that require calculus." https://catalog.uwec.edu/courses/math/math.pdf

❖ **Geometry**

Grades	*Credit*	*Course Number*	*Prerequisites*
All	*1.0*	*02072*	*Algebra*

The Geometry course is designed to cover traditional high school geometry concepts. Topics covered in this course include: Basics of Geometry, Reasoning & Proofs, Parallel & Perpendicular Lines, Transformations, Congruent Triangles, Triangle Relationships, Quadrilaterals & Polygons, Similarity, Right Triangle Trigonometry, Circles, Volume/Area. The textbook to be used in this course is: *Geometry, 2015 Edition* by Larson and Boswell. Students are expected to take class notes and to complete all assigned work.

FINE & PERFORMING ARTS (FPA)

❖ **Beginning Band**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*05101*	*None*

This full-year class is for students who have never been in band but would like to learn to play a band instrument. Students may choose to study the flute, clarinet, saxophone, trumpet, trombone, baritone, tuba, or a percussion instrument. In order to enroll, students must rent or own a band instrument, which can be facilitated through the school. The goal of this class is for students to play instruments at a gradually increasing level of proficiency, made possible through regular practice. A performance will be presented at the conclusion of the semester, and at the end of the year.

❖ **Concert Choir**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*05110*	*None*

Students in concert choir will develop basic vocal and musicianship skills including tone quality, range, intonation, balance, diction, and sight-reading skills. They will study and perform a wide range of choral literature. Students will also develop and experience the aesthetics of musical expression. Students will perform two or more concerts during the school year. Concert Choir meets both semesters.

❖ **Piano I**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*05107*	*None*

This course is designed to be an individualized approach to the piano keyboard for students with beginning to advanced piano skills. For the beginner pianist the course includes playing in five-finger patterns and triads in some major keys, scales and chord progressions in some major keys, legato and staccato technique, and basic note reading. Intermediate and advanced students will be expected to perform the above tasks, as well as learn additional major scales and chords, along with learning piano literature at their skill level. Performances for class or individually for the teacher are expected. Instruction will be individual (intermediate and advanced students) and small group (beginner level).

SCIENCE

❖ **AP Biology**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*4060/4065*	*Algebra, and a B or better in Biology, or teacher consent*

AP Biology is a rigorous life science course designed to prepare students for the AP exam for college credit. It is particularly recommended for anyone aspiring toward a career in medicine, biotechnology or any other scientific field. The course focuses on the four Big Ideas of Biology: Evolution, Use of Free Energy by Biological Systems, Information Storage/Retrieval/Transmission in Biological Systems, and Interaction of Biological Systems. Instruction will rely heavily on inquiry and critical thinking activities. This course requires proficiency in mathematics, as the mathematical relationships involving systems and their interactions will be studied. Laboratory exercises and formal lab write-up's will be used to emphasize and reinforce classroom theory and to promote analytical thinking through application of the scientific method. *AP Biology students are expected to take the AP exam given in May*. *Course offering depends on student interest and availability.*

❖ **Aquatic Ecology**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*18306*	*None*

Aquaculture courses impart the knowledge and skills needed for producing fish, plants, and other species living in an aquatic environment, and course topics typically include the selection, propagation, harvesting, and marketing of those species. Instruction may also address aquatic and marine biology, ecosystems, water quality and management, and business practices.

❖ **Astronomy**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*03004*	*Enrolled in or completed Algebra*

Astronomy is one of the two basic divisions of Earth Science. As long as humans have walked the earth, they have gazed up at the stars and wondered. No other science speaks so powerfully to the commonality of human experience. Topics covered include the history of astronomy, constellations (composition and cultural background), the solar system, the Sun, the Moon, the inner and outer planets, comets, meteors, asteroids, the nature of light, the stars, the galaxies, the cosmos, the history and future of the universe, Kepler's laws, telescopes, observatories, and navigation of the night sky. The course includes several night-time star parties on the campus lawn, with and without the use of our high-tech telescope, as well as potential field trips to observatories and planetariums.

❖ **Biology**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*03051*	*Be enrolled in or have completed Algebra*

Biology is the fundamental life science course. This course provides an overview of the living world and how it functions. Areas of study include characteristics of life, basic biochemistry, the cell, photosynthesis, respiration, energy flow in living systems, genetics, evolution, plant and animal systems, and human biology. Students will perform hands-on laboratory experiments and projects while learning about the living world.

❖ **Chemistry**

Grades	*Credit*	*Course Number*	*Prerequisites*
9 ,10, 11, 12	*1.0*	*03101*	*C or better in Algebra or instructor consent*

Chemistry is the study of matter and its interactions and is one of the physical sciences. It is one of the fundamental courses for a career in medicine, engineering, technology or any other scientific field. Topics covered include classification of matter, chemical and physical properties/changes, atomic theory, atomic structure, bonding, ions, isotopes, chemical reactions,

moles, balancing equations, stoichiometry, thermodynamics, the periodic table, VSEPR theory, nuclear chemistry, solutions, acids/bases, and basic organic chemistry. This course requires proficiency in mathematics, as the mathematical relationships involving structure and chemical changes will be studied. Laboratory exercises will be used to emphasize and reinforce classroom theory and to promote analytical thinking through application of the scientific method.

- **Environmental Science**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*03003*	*Be enrolled in or have completed Biology*

Environmental Science courses examine the mutual relationships between organisms and their environment. In studying the interrelationships among plants, animals, and humans, these courses usually cover the following subjects: photosynthesis, recycling and regeneration, ecosystems, population and growth studies, pollution, and conservation of natural resources.

- **Physics**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*03151*	*Algebra and enrolled in or completed Precalculus; or instructor consent*

Physics is the study of energy and motion. Topics covered include the scientific method, measurement, vectors, mechanics (kinematics, circular motion, Newton's Laws, forces, machines, simple harmonic motion, and fluid mechanics), gravitation, wave mechanics, heat, light, and sound. Physics is essential to those students who wish to pursue engineering careers or other math/science related fields. Periodic laboratory exercises will allow students to confirm and verify classroom theory. A sound mathematical background is assumed (students will be required to solve a variety of problems using algebra and basic trigonometry). Projects will include a Rube Goldberg Machine for the regional contest. *Note: Students preparing for careers in engineering, trade/technical occupations, or post-secondary science related fields are encouraged to take Physics prior to graduating high school.*

- **Weather and Climate**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*03006*	*None*

Meteorology courses examine the properties of the earth's atmosphere. Topics usually include atmospheric layering, changing pressures, winds, water vapor, air masses, fronts, temperature changes and weather forecasting.

SOCIAL STUDIES

- **AP United States Government And Politics**

Grades	*Credit*	*Course Number*	*Prerequisites*
11, 12	*1.0*	*04157*	*Completed or concurrently enrolled in United States History or by instructor consent*

AP United States Government and Politics is a year-long course examining the history and workings of American government from the nation's founding through the present. Topics of study include: the American Constitution, independence and powers of the three branches of American government, Federalism as an institution (including the role of state governments), the making and execution of policy, and the American electoral process. The course will culminate with students taking the AP exam in May. *AP United States Government and Politics students are expected to take the AP exam given in May*.

- **Broadfield Psychology**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*04254*	*None*

This course investigates human behavior. Topics covered include memory, the brain, aging, child development, mental illness, intelligence, learning, and psychological research. Content is presented in a number of ways including lectures, video presentations, oral reports, and written projects**.**

- **Financial Literacy**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*19262*	*None*

Consumer Economics/Personal Finance courses provide students with an understanding of the concepts and principles involved in managing one's personal finances. These courses emphasize lifespan goal-setting, individual and family decision making, and consumer rights as well as topics that are commonly associated with personal finance so that one can become a financially responsible consumer. Topics may include savings and investing, credit, insurance, taxes and social security, spending patterns and budget planning, contracts, and consumer protection. These courses may also investigate the effects of the global economy on consumers and the family.

- **United States History**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*04104*	*None*

This course delivers a general survey of United States history from the Age of Colonization through the end of the 20th century. This course will engage students with a global view of the significant and central people and events that shaped the United States of America as it exists today, with a focus on domestic, international, social, economic, and political issues and outcomes that influenced and contributed to the United States' existence as a lasting, multi-century world power.

- **United States Government**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*04151*	*None*

This course examines American government from colonial times through the present. Students will learn about the nature of divided, republican government, and explore the United States' executive, legislative, and judicial branches on an interactive level. Topics of study include the Constitution, federalism, civil liberties, the electoral process, landmark Supreme Court cases, the making of foreign policy, and a closer look at the inner workings of state and local governments. Additionally, this course compares the American political system to others throughout the world. Current events are an integral part of this course.

- **World Geography**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.50*	*2850*	*None*

Geography is a yearlong course that focuses on the distribution, processes, and effects of human populations on the planet. Units of study include population, migration, culture, language, religion, ethnicity, political geography, economic development, industry, agriculture, and urban geography. Emphasis is placed on geographic models and their applications.

- **World History**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*04051*	*None*

This course engages students in an exploration of world history from the origins of civilization through the present. This

course highlights the nature of changes inside global frameworks along with their causes and consequences. This course requires extensive outside reading.

WORLD LANGUAGES

- **Spanish 1**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*06101*	*None*

This course stresses the mastery of basic conversational Spanish through the skills of listening, speaking, reading, and writing. Videos and materials from Latin America provide practice using the Spanish language. Students will also be exposed to Spanish culture.

- **Spanish 2**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*06102*	*Spanish 1*

This course reviews all grammatical forms studied in Spanish 1. In addition, verb forms and a wider variety of vocabulary will be studied, along with the countries of Latin America. Increased emphasis will be placed on conversation, as well as expanding the student's writing in Spanish. Class is conducted mainly in Spanish.

COURSES NOT OFFERED FOR 2025-2026

The following is a list of courses that have been offered at NCA previously, but are not scheduled to be offered for the 2025-26 academic year due to current enrollment and staffing (subject to change).

- **Advanced Composition**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*0.5*	*1350*	*ELA 1, or instructor consent*

This course is intended to help students continue developing close reading, writing, and critical thinking skills as they prepare for advanced high school and college writing. Students will generate a variety of academic texts including a Research Proposal, Annotated Bibliography, Research Review, and a Research Argument Essay. Emphasis will be on *audience* and *purpose,* identifying credible research sources, planning, drafting, and revision, editing, and MLA citation format. *Advanced Composition is strongly recommended for all college bound students and for students planning to participate in the UPP*.

- **AP Chemistry**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*4160/4165*	*Must have a B or higher in Chemistry, and have completed or be concurrently enrolled in PreCalc or teacher consent*

AP Chemistry is a rigorous course designed to prepare students to take the AP Chemistry exam and for college or technical school, particularly for anyone aspiring toward a career in medicine, engineering, technology or any other scientific field. The course focuses on the six Big Ideas of Chemistry: Structure of Matter, Properties of Matter, Chemical Reactions, Rates of Reactions, Thermodynamics, and Equilibrium. Instruction will rely heavily on inquiry and critical thinking activities. This course requires proficiency in mathematics, as the mathematical relationships involving structure and chemical changes will be studied. Laboratory exercises will be used to emphasize and reinforce classroom theory and to promote analytical thinking through application of the scientific method. *AP Chemistry students are expected to take the AP exam given in May*. *Course offering depends on student interest and availability.*

- **AP Environmental Science**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*4196/4199*	*Must have a B or higher in Biology or teacher consent*

The AP Environmental Science course is a rigorous science course designed to prepare students for taking the AP exam for college credit. The course stresses scientific principles and analysis and includes a laboratory component; as such, it is intended to enable students to undertake a more advanced study of topics in environmental science. Topics include: Environmental Problems (Causes and Sustainability), Environmental History, Matter and Energy, the Living World, Population, Land & Water Use, Earth Systems, Pollution, Earth Resources, Energy Resources/Consumption, Global Change, Ecological and Human Health, and other topics of interest. Laboratory exercises will be used to emphasize and reinforce classroom theory and to promote analytical thinking through application of the scientific method. This course also includes a study of organic growing practices, care of the school's organic gardens, and field work in outdoor settings. *AP Environmental Science students are expected to take the AP exam given in May. Course offering depends on student interest and availability.*

- **AP Statistics**

Grades	*Credit*	*Course Number*	*Prerequisites*
11, 12	*1.0*	*3220/3225*	*Must have a B or higher in Precalculus or teacher consent*

The Advanced Placement Statistics course is designed to cover the traditional introductory college statistical concepts. Statistics is generally offered to incoming college freshman majoring in engineering, mathematics, or science related fields. This course will provide students with the skills needed to solve a variety of statistical problems. Topics covered in this course include Descriptive Analysis & Presentation of Single Variable Data & Bi-Variate Data, Probability Distributions, Normal Distributions, Statistical Inferences, Linear Correlation & Regression Analysis, and Nonparametric Statistics. College credit may be earned upon by taking

and achieving the necessary score on the Advanced Placement Statistics Exam. Students will be expected (but not required) to take the AP Statistics Exam, which is given in May of the school year. The textbook anticipated to be used in this course is: The Practice of Statistics, 5th Edition by Starnes, Tabor, Yates & Moore. Graphing calculators are used in this course and students are encouraged to purchase their own.

- **Botany**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*4070*	*Be enrolled in or have completed Biology*

This course is an introduction to the biology of plants. It is recommended for students considering careers in agriculture, environmental science, forestry, or related fields. Topics include plant classification, morphology, anatomy, physiology, diversity, organic gardening, and evolutionary/ecological relationships. The course includes both laboratory and field exercises.

- **Calculus**

Grades	*Credit*	*Course Number*	*Prerequisites*
11, 12	*1.0*	*02121*	*Precalculus*

This course introduces Calculus, along with the following topics: functions, graphs, limits, and continuity; differential calculus (including definition, application, and computation of the derivative; derivative at a point; derivative as a function; and second derivatives); and integral calculus (including definite integrals and anti-differentiation). Students are required to have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and math analysis).

- **Ceramics**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*7345*	*None*

This introduction course provides students with an experience in clay. The course will cover various techniques in hand-building, wheel throwing, and tile making. Students will explore throwing functional ware on the Potter's wheel, coil method, slab construction, and sculpting. In addition, students will learn proper studio use and maintenance, and beginning glazing and firing techniques.

- **Chinese Poetry**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*7450, 7455*	*Proficiency in the reading and writing of the Chinese language*

This is a one-year Chinese Poetry course. The major goal of this course is to learn through different themes (such as, Missing Home, Grieving over the Advent of Autumn, and Love, etc.) Poetry read will come from Chinese classical poems.

- **Chinese Drama**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*		*Proficiency in the reading and writing of the Chinese language*

This is a one-semester Chinese Drama course. The major goal of this course is to expose students to different Chinese dramas, with a focus on Peking Opera and Kunqu Opera. The students will learn to sing (or perform) classical pieces in different roles.

- **Chinese Thoughts**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*2700*	*None*

The major goal of this course is to expose students to major Chinese Thoughts of Confucianism, Daoism and Buddhism through reading and understanding the major Texts. Over the course, those finishing the course will have acquired the following skills:

Basic knowledge and understanding of Confucianism, Daoism and Buddhism.

- **Classical Mythology**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*0.5*	*1370*	*English I or by instructor consent*

Strange and intriguing tales of creation, love, hate, war, jealousy, and pride, tensions between good/evil, mythical beings, mythical journeys, and the spirit-world and afterlife have engrossed us for thousands of years. The primary focus in this course is classical mythology (ancient Greek and Roman gods/goddesses) and the cultural contexts in which they arose, as well as their enduring relevance in our modern world. In the final project for the course, students will explore/compare mythologies of the world (e.g., Norse, Chinese, African, Native American, and Polynesian). We will discover how myths address essential questions about the *human condition* while revealing our cultural values, examine the ways in which we shape myths and how we are shaped by myths, and learn how myths reflect humankind's innate desire to tell stories.

- **Contemporary World Issues**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*04064*	*None*

Contemporary World Issues courses enable students to study political, economic, and social issues facing the world. These courses may focus on current issues, examine selected issues throughout the 20th century, and look at historical causes or possible solutions.

- **Genetics**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*4072*	*Be enrolled in or have completed Biology*

This course delves deeply into the science of genetics. The course begins with a review of meiosis and Mendelian genetics, then covers non-Mendelian patterns of inheritance, such as incomplete dominance, co-dominance, sex-linked inheritance, polygenic inheritance, and more. Also included are karyotyping, types of mutations, genetic disorders, genetic treatments, GMOs, the ethics of genetic technology, and the human genome. Includes laboratory exercises. Class will be offered based on student interest.

- **Instrumental Ensemble**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*05105*	*Previous knowledge of how to play an instrument, or teacher consent*

Instrumental Ensemble is a full-year performance-based course which offers students diverse musical experiences through the study and performance of music in a group setting. This class familiarizes members with various musical genres, including pop, jazz, classical, rock, and more. Traditional and non-traditional genres are studied. All instruments of the band are welcome, as well as rhythm section instruments, and string instruments. Throughout the year, the ensemble performs at assemblies and other school events such as formal concerts.

- **Introduction to Computer Science**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.0*	*10012*	*None*

Exploring Computer Science courses present students with the conceptual underpinnings of computer science through an exploration of human computer interaction, web design, computer programming, data modeling, and robotics. While these courses include programming, the focus is on the computational practices associated with doing computer science, rather than just a narrow focus on coding, syntax, or tools. Exploring Computer Science courses teach students the computational practices of algorithm design, problem solving, and programming within a context that is relevant to their lives.

- **Issues and Ethics in Science / Research**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*0.5*	*03212*	*None*

In Scientific Research and Design courses, students conceive of, design, and complete a project using scientific inquiry and experimentation methodologies. Emphasis is typically placed on safety issues, research protocols, controlling or manipulating variables, data analysis, and a coherent display of the project and its outcome(s).

- **Literature And The Human Experience**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*0.5*	*1340*	*English I or by instructor consent*

Students in Literature and the Human Experience will continue to sharpen communication skills (reading, writing, speaking, and listening) while exploring the genres of short story, poetry (and song), essay, and drama. Students will study both classical and modern literature, reading and writing about the literature they've read, and trying their hand at writing their own original pieces in the various genres. This course is designed to provide a solid base for future courses (both high school and college) in critical thinking and literary analysis as students learn to read, write, and speak about literature using correct terminology.

- **Music Appreciation I**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*7741*	*None*

This course will be offered first semester. It is the study of basic music theory elements, along with a brief overview of the history of western music (Renaissance, Baroque, and Classical eras) and the corresponding music literature of those eras. Included in the theory portion will be basic note writing, rhythms, time signature, flats and sharps, basic elements of music, such as dynamics, tempo, and articulation, major scale construction, and key signatures. Intervals may also be included. Simple forms, such as rondo and waltz, will be studied.

- **Music Appreciation II**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*7742*	*Music Theory I or teacher consent*

This course is a continuation of Music Appreciation I and will be offered second semester. Students will build upon the knowledge gained in Music Appreciation I and will continue their study of music theory, history of western music (romantic and modern eras), and the corresponding music literature of those eras. The theory portion will include the study of intervals, as well as the study of triads, standard chord progressions, introduction to minor scales, harmonization of a simple melody, and 3/8 and 6/8 time signature. Various forms, such as rondo, binary, and ternary forms will be studied.

- **Painting**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*05157*	*None*

This course is for students who want to improve and explore different domains of painting. Students will learn various techniques, explore drawing fundamentals and learn how they are incorporated into the painting process. Students will do various painting pieces while exploring different mediums from water-colors to oil painting.

- **Precalculus**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*1.0*	*02110*	*Algebra, Geometry*

The Precalculus course is designed to cover traditional high school advanced Algebra and Trigonometry concepts with an emphasis on preparation for a course in calculus. Many higher order mathematical topics are covered, such as, solving and graphing quadratics, higher degree polynomials, graphing trigonometric functions, proving and applying trigonometric identities, matrix operations and applications, and graphing parametric equations and polar coordinates. The textbook

anticipated to be used in this course is: Precalculus with Limits, 4th Edition by Larson & Battaglia. Students are expected to take class notes and to complete all assigned work. Graphing calculators are used in this course and students are encouraged to purchase their own.

- **Select Survey Of American Literature**

Grades	*Credit*	*Course Number*	*Prerequisites*
10, 11, 12	*0.5*	*01054*	*ELA 1, ELA 2 or instructor consent*

This course will look at novels, short stories, poetry, drama, essays, and biographies of 3-5 American authors. The authors may be chosen by the instructor or the students. The survey will follow some theme or explore a specific context. The course will include analysis, discussion, research, and composition. The class is designed to develop an appreciation for American literary and study the events which have influenced American writers.

- **Streaming/Speech (eSports course)**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*0.5*	*11002*	*None*

Communication Technology courses enable students to effectively communicate ideas and information through experiences dealing with drafting, design, electronic communication, graphic arts, printing process, photography, telecommunications, and computers. Additional topics covered in the course include information storage and retrieval. Drafting equipment may be used to make scale drawings, including multi-view drawing, photographs, and poster mock-ups.

- **Theatre Arts**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.00*	*05052*	*None*

This course is designed to introduce students to the various elements of the amazing world of theater and to encourage students in further participation. Theater Arts I will include various units of study including, but not limited to: scene study, monologue, musical theater, mime, rhyme, rap, improvisation, the writing of scenes or short plays, historical perspective, and more. Students will grow from reflecting and evaluating personal work and the work of others. Each semester will culminate in performance.

- **World Music**

Grades	*Credit*	*Course Number*	*Prerequisites*
9, 10, 11, 12	*1.00*		*None*

This course will include the study of diverse music traditions from around the world through listening, viewing, the reading of scholarly articles, and the occasional playing of instruments and/or singing. Students will learn methods by which to evaluate musical compositions, arrangements, and performances. Individual and partner presentations on student-chosen particular types of music will be presented each quarter. Students who do not play an instrument or sing are entirely welcome to take this course!