



2021-2022

Course Catalog

Martin L. Nesbitt, Jr. Discovery Academy

175 Bingham Rd.

Asheville, NC 28806

828.271.4521

In compliance with Federal Law, Buncombe County Schools administers all education programs including its Career and Technical Education Programs, employment, activities and admissions without discrimination against any person on the basis of gender, race, color, religion, national origin, age or disability.



PURPOSE: WHY WE ARE HERE

We are committed to providing the resources that ensure all students have the knowledge and skills needed to lead and invent their tomorrow.

DIRECTION: WHAT WE AIM TO DO

Our students will be empowered to thrive in a global society by being immersed in a cross-curricular, STEM-focused, challenging and engaging academic program.

BELIEFS: OUR CORE VALUES

- Every student will be exposed to a hands-on, project-based learning environment which promotes creativity, analytical thinking, and collaboration.
- Every student will graduate technologically literate, as well as college and career ready, to engage in a globalized society more effectively.
- Every student will be empowered to take responsibility for their own learning.
- Every student will be provided a safe environment that is conducive to learning as well as supportive of their mental and emotional wellbeing.
- Every student will participate in the Common Instructional Framework: read, write, listen, think, speak, and move in every class, every day.
- Every student will be supported by stakeholders who promote an alliance between home, school, and community.

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NDA Graduation Requirements

Future Ready Core - High School Graduation Requirements

Content Area	
English <i>(North Carolina State Requirement)</i>	4 Credits required English I, II, III, IV
Mathematics <i>(North Carolina State Requirement)</i>	4 Credits required NC Mathematics I, II, III <i>plus</i> 4th math Course aligned with the student's post high school plans
Science <i>(North Carolina State Requirement)</i>	3 Credits required Biology, Chemistry, Earth/Environmental Science
Social Studies <i>(North Carolina State Requirement)</i>	4 Credits required World History, American History I, American History II, American History: The Founding Principles, Civics and Economics <i>**A student who takes AP US History instead of American History I: Founding Principles and American History II must take the honors research course that is connected to the AP course to satisfy the graduation requirement</i>
Health & Physical Education <i>(North Carolina State Requirement)</i>	1 Credit required 9th Grade Health and PE and Compression Only CPR (<i>This is usually completed in middle school but if not please see your counselor for more information</i>)
Electives <i>(North Carolina State Requirement)</i>	12 Credits required 4 elective credits in the PLTW Engineering Pathway <i>Required:</i> Intro to Engineering, Principles of Engineering, Engineering Design & Development <i>Choice offerings:</i> Digital Engineering, Computer Integrated Manufacturing, Civil Engineering, Environmental Sustainability Students are expected to complete 8 additional electives that meet college admissions requirements and/or that are of interest to the student.
World Languages	Not required for high school graduation. <i>A two-credit world language minimum is required for admission to the UNC system and many other universities.</i>
EDD Capstone Project	Successfully completion of the EDD Capstone Project
Total	28 Credits

High School Future Ready Graduation Planner

State Requirements

Required for NC Future Ready graduates: Core Academics- 16 credits and Electives- 12 credits for 28 total credits.

English 4 Credits	Date Completed	Counselor Initials
English I		
English II (NC required EOC)		
English III		
English IV		

Science 3 Credits	Date Completed	Counselor Initials
Earth and Environmental		
Biology (NC required EOC)		
Chemistry		

Math 4 Credits	Date Completed	Counselor Initials
Math 1 (NC required EOC)		
Math 2		
Math 3 (NC required EOC)		
4th Math Credit		

Social Studies 4 Credits	Date Completed	Counselor Initials
World History		
Civics and Economics		
American History I		
American History II		

PLTW Engineering Pathway specifically for NDA 4 Credits	Date Completed	Counselor Initials
Into to Engineering <i>(required Freshman Year)</i>		
Principles of Engineering <i>(required Sophomore Year)</i>		
DE, CIM, ES, CEA <i>(choose one or more Junior Year)</i>		
Engineering Design & Development <i>(required Senior year)</i>		

Health and Physical Education 1 Credit	Date Completed	Counselor Initials
Physical Education <i>(required Freshman Year)</i>		
Additional 8 elective credits	Date Completed	Counselor Initials
Core, A-B Tech, NCVPS, PLTW, NCSSM, and/or Foreign Language		
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		



Academic Information

Policy for grading and calculating GPA

NORTH CAROLINA STATE BOARD OF EDUCATION Policy Manual

High school transcript standards

Item	Description
Policy Title	High school transcript standards
Policy Category	Graduation Requirements and Related Policies (GRAD)
Policy ID	GRAD-009
Policy Date	2017-06-01
Previous Policy Dates	12/01/1994, 09/13/2001, 02/05/2004, 07/01/2004, 11/04/2004,06/04/2009,10/01/2009, 08/07/2014, 10/02/2014, 10/08/2015
Statutory Reference	GS 116-11(10a)
Formerly GCS-L-004	

1. The Department of Public Instruction shall maintain a transcript system, and the local school administrative units shall use that system to produce standardized transcripts in an automated format. The standardized transcript shall include:
 - . grade point average (GPA),
 - . class rank,
 - . end-of-course test scores, and
 - . uniform course information including course code, course name, credits earned toward graduation, and credits earned for admission to an institution of higher education.
2. Students shall receive both an unweighted GPA that reflects no additional weighting for advanced courses and a weighted GPA that reflects additional quality points for advanced coursework. In accordance with General Statute 116-11 (10a), grade point average values and class rank shall be calculated by a standard method devised by the University of North Carolina and NC Community College systems.
3. Grade point average calculations are based upon standardization of academic course levels, weighting of course grades, and grading scales.
 - 3.1. Academic course levels and associated weights are defined as follows:
 - 3.1.1. Standard courses – Course content, pace and academic rigor follow standards specified by the North Carolina Standard Course of Study (NCSCoS). Standard courses provide credit toward a high school diploma and require the end-of-course test for those courses identified as such in the NC accountability program. Quality points for the GPA calculation are assigned according to the standard 4.0 scale and receive no additional quality points.
 - 3.1.2. Honors courses - Course content, pace and academic rigor place high expectations on the student, demanding greater independence and responsibility. Such courses are more challenging than standard level courses and are distinguished by a difference in the depth and scope of work required to address the NCSCoS. These courses provide credit toward a high school diploma and require the end-of-course test for those courses identified as such in the NC accountability program. An honors review process shall be followed, as outlined in the latest edition of the *North Carolina Honors Course Implementation Guide*.

3.1.3. Advanced Courses, Advanced Placement/International Baccalaureate/Cambridge International Examination (AP/IB/CIE) courses - Course content, pace and academic rigor are considered college-level as determined by NC’s Institutions of Higher Education and are designed and overseen by the College Board (AP), the International Baccalaureate (IB) program, or Cambridge Assessment. These courses are designed to enable students to earn high scores on the AP, IB, or CIE test, potentially leading to college credit. These courses provide credit toward a high school diploma and require an EOC in cases where the AP/IB/CIE course is the first course taken by a student in a subject where an EOC is required by the NC accountability program. The state weighting system awards the equivalent of two (2) quality points to the grade earned in an AP/IB/CIE course. Effective with the freshman class of 2015-16, the weight for AP/IB/CIE courses shall be one (1) quality point.

3.1.4. College courses (“dual enrollment”) - Course content, pace and academic rigor are, by definition, college-level for these courses. College courses, which may be delivered by a community college, public university or private college or university, provide credit toward a high school diploma and may satisfy a graduation requirement or provide an elective course credit. The state weighting system adds the equivalent of one (1) quality point to the grade earned in community college courses included on the most recent Comprehensive Articulation Agreement Transfer List, and for courses taught at four-year universities and colleges.

4. Courses eligible for weights include higher-level high school courses that fall into one of the following categories:

4.1. Honors sections of standard-level academic courses, including NC Virtual Public School courses and other online courses, that are in accordance with the philosophy, rubric, procedures, guidelines, and standards for curriculum, instruction, and assessment as described in the *North Carolina Honors Course Implementation Guide*. Such courses are assigned additional quality points in accordance with section 3.1.2 above; it is not necessary to offer a standard level of a course to offer an honors level.

4.2. Pre-calculus, non-AP/IB calculus, mathematics courses beyond the level of calculus, and world language courses beyond the second-year level are considered inherently advanced and are assigned Honors-level weighting in accordance with section 3.1.2 above.

4.3. Arts education courses meeting the standards for proficient and advanced dance, music, theatre arts, and visual arts are assigned Honors-level weighting in accordance with section 3.1.2 above.

4.4. Project Lead the Way courses approved for college credit are assigned college-level weighting in accordance with section 3.1.4 above.

High schools shall use one grading scale. The conversion of grades to quality points is standardized. Implicit is a conversion of percentage grades to letter grades according to the following widely used scale and effective for all high school students in 2015-2016, 90-100 = A; 80-89 = B; 70-79= C; 60-69 = D; < 59 = F. Grades and the corresponding number of quality points are shown below.

Standard scale — Numeric Grades with a letter grade legend.

90-100 = 4.0	80-89 = 3.0	70-79 = 2.0	60-69 = 1.0	< 59 = 0.0	WF = 0.0
FF = 0.0	WP = 0.0	INC = 0.0	AUD = 0.0	P = 0.0	

6. In accordance with GS 116-11 (10a), each student’s official class rank shall be listed on the standardized transcript.

6.1. The official class rank shall be calculated using the weighted grade point average in which quality points are provided for passing grades in standard, Honors, AP/IB/CIE, and college-level courses according to the weighting system defined in sections 3 and 4 above.

6.2. Local education agencies may re-calculate class rank for local purposes such as determination of valedictorian, salutatorian, and other graduation honors. Such re-calculations may be used for local purposes only, and the official class rank provided on the standardized transcript shall not be altered.

Advanced Placement Courses

Advanced Placement (AP) courses are designed to meet the College Board's rigorous standards for an Advanced Placement class and be the equivalent of a college level course for which students may, depending on the AP Exam score, receive college credit. Extensive course guidelines are provided by the College Board, and teachers are required to maintain current AP authorization. *Students are expected to take the AP Exam. Schools will provide information about the costs of the exams. If fees are applicable, fee reductions and assistance are available through College Board, state and local funds. In addition, students with a 504, IEP, or medical plan must work with their school counselor to apply for testing accommodations. They are not automatically granted for AP, ACT, SAT, PSAT, or Pre-ACT tests. See your school counselor with testing and financial concerns.*

University of North Carolina Minimum Admission Requirements

<https://www.northcarolina.edu/prospective-students/minimum-admission-requirements>

The University of North Carolina minimum admission requirements address three areas: high school courses, high school GPA, and test scores.

High School Courses

- *Four credits in English*
- *Four credits in Math, including a mathematics course that has Math III as a prerequisite*
- *A life science course such as Biology*
- *A physical science: Physical Science, Chemistry, or Physics*
- *At least one science that is considered a laboratory course*
- *Two credits of the same World Language*
- *Two credits of Social Studies, including 1 US History*

High School GPA - 2.5 cumulative weighted GPA

Test Scores - ACT Composite of 17 or SAT score of 880

Students should also talk to their school counselors about creating a resume of extracurricular activities, taking national tests such as the ACT or SAT, writing a compelling personal statement, and seeking appropriate recommendations from school personnel such as teachers or school counselors.

Entrance requirements vary among colleges and universities. Students who wish to attend private colleges or universities or out-of-state universities should be sure they understand entrance requirements specific to the college/university of their choice.

North Carolina Academic Scholars Program

History

In March 1983, the State Board of Education approved the North Carolina Scholars Program to begin with the 1983-1984 school year. Revisions were made to the program again in March 1990 and August 2002 to make it more consistent with graduation requirements and to promote rigorous academic study. In July 2009, the State Board of Education revised the Academic Scholars Program requirements to bring them into alignment with Future Ready Core graduation requirements and incorporate options for innovative high schools. These requirements are in effect for students who enter the ninth grade for the first time in or after 2009-2010. Students who complete the requirements for an academically challenging high school program will be named North Carolina Academic Scholars and receive special recognition.

[NC Academic Scholars](#)

Recognition

The students who qualify for this special recognition

- will be designated by the State Board of Education as North Carolina Academic Scholars.
- will receive a seal of recognition attached to their diplomas.
- may receive special recognition at graduation exercises and other community events.
- may be considered for scholarships from the local and state business/industrial community.
- may use this special recognition in applying to post-secondary institutions. (Candidates are identified by the end of grade 11 and their candidacy can be included in application forms and/or transcripts sent to these institutions.)

For more information visit the NCDPI website: <https://www.dpi.nc.gov/districts-schools/high-school-graduation-requirements/high-school-diploma-endorsements#nc-academic-scholars-endorsement>

NCAA Eligibility Information

National Collegiate Athletic Association

If you plan to play sports at the college level, you will need to review the following information and complete the National Collegiate Athletic Association application online.

Guide for the College-Bound Athlete

http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/CBSA.pdf

Please refer to page 21 and 25 for helpful worksheets.

Division 1 - http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/DI_ReqsFactSheet.pdf

Division 2 - http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/DII_ReqsFactSheet.pdf

Initial Eligibility Brochure http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/IE_Brochure.pdf

NAIA

National Association of Intercollegiate Athletics

PlayNAIA.org helps future student-athletes discover and connect with NAIA schools, coaches and athletic scholarships. Play NAIA is also the official clearinghouse for NAIA eligibility. Every student-athlete must register with the NAIA Eligibility Center to play sports at an NAIA college or university. 250 Colleges in 21 conferences are affiliated with the NAIA.

<https://www.naia.org/landing/index>

Eligibility information: <https://play.mynaia.org/>

Nesbitt Discovery Academy Course Offerings

English

- *Students earn 1 unit of credit for English I, II, III, and IV.*
- *All courses use the NC State Standards for English.*
- *Honors courses require students to master more rigorous and complex material and skills at a faster pace.*
- *College level courses are offered for dual enrollment for both English III and English IV.*

Required English Courses

Honors English I

Prerequisite: None

English I students will study literature, informational texts, poetry, drama, biographical works, historical documents, and art from all genres to gain knowledge of culture, current events and themselves. They will gain the reading and writing skills necessary to write, analyze and evaluate detailed arguments. By the end of English I, students will read and understand increasingly complex texts at the upper end of ninth grade reading range.

Honors English II

Prerequisite: English I

English II students will study literature, informational texts, poetry, drama, biographical works, historical documents, and art from the Americas (Caribbean, Central, South, and North), Africa, Eastern Europe, Asia, Oceania, and the Middle East to come to a better understanding of world cultures, contemporary issues, and their world. They will fine tune the reading and writing skills necessary to write, analyze and evaluate detailed arguments. By the end of English II, students will read and understand increasingly complex texts at the upper end of the tenth-grade reading range. Students are required to take the North Carolina English II End of Course Exam.

Honors English III

Prerequisite: English II

English III students will study literature, historical documents, informational texts, poetry, drama, biographical works, and art from the United States to gain a better understanding of the U.S. in terms of history, literature and culture. They will develop the complex literacy skills necessary to compile information from sources into a meaningful and well written original text. By the end of English III, students are expected to read and understand increasingly complex texts at the high end of the 11th grade reading range.

Honors English IV

Prerequisite: English III

English IV students will study literature, historical documents, informational texts, poetry, drama, biographical works, historical documents, and art from Great Britain and Europe to better gain a basic understanding of the influence of Europe's history on world literature and culture. They will master the complex literacy skills necessary to gather and evaluate information into various kinds of original writing. By the end of English IV, students are expected to read and understand increasingly complex texts at the upper end of the twelfth-grade reading range.

Dual Enrollment is offered for both English III and English IV (see page 21)

Mathematics

- *Students earn 1 unit of credit for each successfully completed course.*
- *All courses use the NC State Standards for Mathematics.*
- *Honors courses require students to demonstrate rigor, manage greater complexity, and apply mathematics concepts more deeply.*
- *College level courses are offered for dual enrollment for the 4th Math option.*

With the State Standards for Mathematics, high school learners can anticipate a rigorous curriculum which will adequately prepare them for further study and application of mathematics as they pursue college and various career options. Students can also expect a deliberate focus on the mathematical practices to facilitate their learning of this rigorous content:

- *To make sense of problems and persevere in solving them*
- *To reason abstractly and quantitatively*
- *To construct viable arguments and critique the reasoning of others*
- *To model with mathematics*
- *To use appropriate tools strategically*
- *To attend to precision*
- *To look for and make use of structure*
- *To look for and express regularity in repeated reasoning*

These mathematical practices are applied throughout each course, and with the content standards of that course, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Required Math Courses

NC Math 1 Honors

NC Math 1 is the first high school mathematics course. This course addresses standards of functions, algebra, numbers and quantities, geometry and statistics. Students formalize and deepen their understanding of linear functions and develop new understandings of exponential and quadratic functions. Each of the identified functions is studied as family in of itself and is also compared and contrast to other function families of this course. Students study univariate data trends and use formal statistical measures to compare and contrast data sets. Additionally, students look at trends in bivariate data and summarize, represent and interpret models that exhibit linear and exponential trends. Students connect geometry and algebra through a focus on coordinate geometry in Math 1. The NC End of Course Exam for NC Math 1 is required of all students enrolled in NC Math 1.

NC Math 2 Honors

Prerequisite: Math I/Math I Honors

NC Math 2 is the second course of a three-course sequence in high school mathematics. In NC Math 2 students continue to add to their repertoire of function families by deepening function families from new courses and adding new families to their toolkit. Radical and rational functions are new to this course. Along with new function families, NC Math 2 students are expected to increase their sophistication with algebra skills. Students are asked to look at both equations and inequalities in two variables within the course appropriate function families and required to analyze, interpret, generate and/or manipulate multiple representations of functions. The geometry component of NC Math 2 is focused on similarity and congruence concepts and under this umbrella students define and solve problems using trigonometric ratios. Additionally, students use transformations to prove and justify similarity and congruences in coordinate and plane figures. Students are also expected to generate formal arguments for geometrical claims regarding triangles and parallel lines. The link between probability and data is explored through independence, conditional probability and compound probability including their use in making models and evaluating decisions.

NC Math 3 Honors

Prerequisite: Math II/Math II Honors

NC Math 3 is the third course in the three-course sequence for high school mathematics in North Carolina. In NC Math 3 students continue to add to their repertoire of function families by exploring and applying understandings of the much broader topic of polynomial functions. NC Math 3 students are expected to continue increasing their sophistication with algebra skills and are required to analyze, interpret, generate and/or manipulate multiple representations of many function types. New function families introduced and explored in NC Math 3 include simple trigonometric, piecewise, and logarithmic. Geometrical argumentation and proof is expected of NC Math 3 students as students prove theorems of circles and quadrilaterals. Connecting geometry and algebra to solve and justify solutions to geometrical modeling problems is a requirement for Math 3. Students also learn about statistical processes to make inferences and justify conclusions from sample surveys, experiments and observational studies. The NC End of Course Exam is required of all students enrolled in NC Math 3.

NC Math 4 Honors

Prerequisite: Math III/Math III Honors

Math 4 is a fourth level math class that meets minimum admissions requirements for the UNC System. In Math 4 students continue to refine functions and statistical thinking, continuing the study of algebra, functions, trigonometry and statistical concepts previously experienced in NC Math 1-3. The course is designed to be a capstone to introductory statistical concepts. Additionally, the course intentionally integrates concepts from algebra and functions to demonstrate the close relationship between algebraic reasoning as applied to the characteristics and behaviors of more complex functions. In many cases, undergraduate students majoring in non-STEM fields will take an entry-level Algebra or Introductory Statistics course. Students will be prepared for college level algebra and statistics or as a bridge to prepare students for Precalculus or other advanced math courses.

AP Computer Science Principles

Recommended Prerequisite: Math I

The AP Computer Science Principles course is designed to be equivalent to a first-semester introductory college computing course. In this course, students will develop computational thinking vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course is unique in its focus on fostering student creativity. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using computer software and other technology to explore questions that interest them. They will also develop effective communication and collaboration skills, working individually and collaboratively to solve problems, and discussing and writing about the importance of these problems and the impacts to their community, society, and the world.

College level courses are offered for dual enrollment and/or elective Math credit(s). (Page 21)

Science

- *Students earn 1 unit of credit for each successfully completed course.*
- *All courses use the NC Standard Course of Study.*
- *Honors courses require students to demonstrate greater rigor, manage greater complexity, and move at a faster pace.*
- *Advanced Placement courses are equivalent to college freshman courses and include an exam prescribed by the College Board.*

Required Science Courses

Honors Earth-Environmental Science

Prerequisite: None

This course investigates the four main branches of earth science: geology, meteorology, astronomy, and oceanography. Students learn about the interrelationships among living organisms and their physical environment through laboratory activities. Students study how people impact their environment and how their environment influences them.

Honors Biology I

Prerequisite: None

Students survey the history and development of biology including an introduction to biochemistry, cellular biology, physiology, genetics, organisms, and life processes. In addition to reading, students will engage in laboratory activities to develop process and problem-solving skills. Students are required to take the NC Biology End of Course Exam.

Physical Science Electives (one required)

Honors Physics I

Prerequisite: Students should have completed or be enrolled in Math 2

Through laboratory activities and quantitative analysis, students learn about motion, velocity, forces, acceleration, electricity, wave theory, energy, and light. The honors level is more rigorous with a greater emphasis on problem solving, outside reading, research, and application of concepts to real world problems.

Advanced Placement Physics 1

Prerequisites: Prior coursework in physics is recommended, but not necessary. Students should have completed Math 2 and be concurrently enrolled in Math 3, although it is strongly recommended that students have completed Math 3.

AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as: Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills.

Honors Chemistry I

Prerequisites: Students must have completed or be enrolled in Math 3

Students study a variety of chemistry topics including chemical equations and reactions, stoichiometry, the periodic table, atomic theory, molecular chemistry, kinetic theory, gas laws, solutions, and acid-base behavior. Students will use their mathematics and problem-solving skills to complete laboratory activities.

Advanced Placement Chemistry

Prerequisite: Chemistry I

The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore topics such as: atomic structure, intermolecular forces and bonding, chemical reactions, kinetics, thermodynamics, and equilibrium. Students will participate in comprehensive laboratory experiences and will need to spend extensive time outside the classroom for individual study.

College level courses are offered for elective credit(s). (See page 21)

Social Studies

- *Students earn 1 unit of credit for each successfully completed course.*
- *Honors courses require students to demonstrate greater rigor, manage greater complexity, and move at a faster pace.*
- *Advanced Placement courses are equivalent to college level courses. Students are expected to take the AP Exam.*
- *College courses are offered for dual enrollment for World History.*

Required Social Studies Courses

Honors World History

Prerequisite: None

World history is a survey course that gives students the opportunity to explore recurring themes of human experience common to civilizations around the globe from ancient to contemporary times. World history examines the world chronologically and thematically, focusing on the historical development of phenomena, the rise and fall of civilizations and their unique contributions to humanity, and the universal elements these civilizations have in common throughout time. The application of the themes of geography and an analysis of the cultural traits of civilizations help students understand how people shape their world and how their world shapes them. Students broaden their historical perspectives as they explore ways societies have dealt with continuity and change, exemplified by issues such as war and peace, internal stability and strife, and the development of institutions.

Honors American History I

Prerequisite: None

This course begins with the European exploration of the New World and covers American history through Reconstruction. Students will examine the historical and intellectual origins of the United States from European exploration and colonial settlement to the Revolutionary and Constitutional eras. This course will also provide students the opportunity to study the establishment of political parties, America's westward expansion, the growth of sectional conflict and the Civil War, and Reconstruction.

Honors American History II

Prerequisites: American History I

This course will guide students through American history from the late nineteenth century through the early 21st century. Students will examine the political, economic, social and cultural development of the United States from the end of Reconstruction era to modern times. The desired outcome of this course is for students to develop an understanding of the cause-and-effect relationship between past and present events, recognize patterns of interactions, and understand the impact of events on the U.S. in an interconnected world.

Honors American History: The Founding Principles, Civics, and Economics (beginning 2021)

Prerequisite: None

This course teaches the skills and knowledge necessary to become responsible and effective citizens in an interdependent world. It provides a framework for understanding the basic tenets of American democracy, practices of American government as established by the United States Constitution, basic concepts of American politics and citizenship, and concepts in macro and microeconomics and personal finance. The course is organized under three strands – Civics and Government, Personal Financial Literacy and Economics. Students will gain a practical understanding of legal, political, and economic systems that affect their lives as consumers and citizens.

Honors Founding Principals of America and NC: Civic Literacy (beginning 2022)

Through the study of The Founding Documents of both national and state governments, students examine political, governmental, and legal topics that engage them in examining the legal and political systems of our society and its basic institutions. This course begins with the historical foundations of civil, political, and economic activism that created our nation, state, and local government. Knowledge gained from civics empowers students to become politically active and responsible citizens of the global society.

Honors Economics and Personal Finance (beginning Fall 2020)

Prerequisite: None

The Economic and Personal Financial Literacy standards are intended to provide students with an understanding of the role economic factors play in making economic decisions, the ability to reason logically about key economic issues and the knowledge and skills needed to manage personal financial resources effectively for lifetime financial security. The economics standards will focus on basic economic concepts and terminology and the roles of business, labor, the government, and the consumer upon the economy. The Personal Finance standards will focus on understanding and managing personal banking, credit cards, loans, home mortgages, accessing and understanding credit reports, and paying for postsecondary education.

Advanced Placement World History: Modern

Prerequisite: None

The purpose of the AP World History: Modern course is to develop greater understanding of the evolution of global processes and interactions among different types of human societies beginning in 1200 CE. Students will read a variety of historical documents and interpretations of World History, write essay responses to document-based questions, and prepare to take the AP Exam. This course can be substituted for World History.

Advanced Placement Human Geography

Prerequisite: None

There are no prerequisites for AP Human Geography; however, students who have had experience with world geography, world history, or earth science may more easily address the objectives of this course. Experience with reading and interpreting data in various forms (e.g., graphs and maps) would also be beneficial. Students may have been effectively introduced to geographic terminology and concepts as early as at the elementary school level. The AP Human Geography course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

College courses are offered for dual enrollment for World History. (See Page 21)

Health and Physical Education

- *Students earn 1 unit of credit for each successfully completed course.*
- *All courses follow the NC Healthful Living Essential Standards.*
- *All students must successfully pass the required Health and Physical Education course for graduation.*
- *Successful completion of Compression Only CPR training/checklist is required for graduation.*
- *PED 211 is taught at NDA for dual credit.*

Required Health and Physical Education Course

Health and Physical Education

Prerequisite: None

This course combines two required components into one section. Students will be involved in Physical Education and Health Education during the semester. The Physical Education section will incorporate fitness assessments, conditioning, sport fundamentals, and recreational activities. Health Education will enhance the student's implementation of healthful living practices such as decision making, substance abuse, nutrition, stress management, reproductive health, and safety, and more.

Students at NDA will take PED 211 for dual enrollment credit. (See Page 21)

Principles of Wellness and Human Performance/Honors

Principles of Wellness and Human Performance will assist students in understanding the essentials of lifelong wellness by learning how to improve personal wellness and the wellness of others. Students will acquire knowledge to positively affect the wellness and physical performance of others through peer teaching. This class will not only address fundamental aspects of wellness and human performance but will also examine more specific topics including Anatomy and Physiology, Biomechanics, Bioenergetics, and Sports and Exercise Psychology.

World Languages: Classic, Heritage, and Modern

- *Students earn 1 unit of credit for each successfully completed course.*
- *All courses use the NC Essential Standards.*
- *Level I and II are standard courses.*
- *Level III and above are honors courses which require students to demonstrate greater rigor, manage greater complexity, and move at a faster pace.*

Prerequisites: *For all courses, successful completion of the previous level is required. For example, if a student takes Spanish II, he/she must have successfully completed Spanish I. If the student takes Spanish IV Honors, he/she must have successfully completed Spanish III Honors.*

Level I Spanish

Students are introduced to the target language and its culture. Class activities develop listening, speaking, reading, and writing using the students' experiences to practice these skills. Grammar is integrated throughout the course. Students learn about the target culture through its literature, laws, foods, games, attitudes, values, and patterns of social interaction. Students develop an appreciation for how languages and cultures work by comparing the target language and culture(s) to their own.

Level II Spanish

Students further develop their listening, speaking, reading and writing skills. They participate in simple conversational situations and write short paragraphs which narrate, describe, compare and summarize topics from the target culture. By the end of the course, students will be able to interact with others on issues of everyday life. Students also continue to learn about the differences between languages and cultures, and how different cultures influence each other.

Level III Honors Spanish

Students' skills with listening, speaking, reading, and writing progress to allow them to participate in conversations, read short literary texts and other material about familiar topics, and write short cohesive passages using the present, past, and future tenses. In discussions, presentations, and written texts, students will be able to identify the main ideas and significant details. As they continue to build their knowledge of the target culture, students develop a deeper understanding of the interrelationships of other cultures to their own and will be able to exhibit behaviors appropriate to the target culture.

Arts Education

- *Students earn 1 unit of credit for each successfully completed course.*
- *All courses use the NC Arts Education Essential Standards.*
- *Students may repeat courses for credit within a given proficiency level.*
- *All Proficient or Advanced courses in each arts discipline receive Honors credit.*

The NC Arts Education Essential Standards reflect four levels of proficiency for high school courses for credit. Arts Education no longer has a numerical sequence of courses due to the new organization by proficiency levels. Mastery of the standards for each proficiency level is the criteria for advancement. Therefore, students may repeat courses for credit within a given proficiency level before moving to the next level. Students who take coursework at the Proficient or Advanced levels enter those studies having completed a minimum of 270-300 hours of instruction within that arts discipline (dance, music, theatre arts, or visual arts). Proficient or Advanced level courses include Honors and AP courses.

Orchestra

Strings - Proficient (Honors Level)

Strings - Advanced (Honors Level)

Career and Technical Education

- Students complete 4 credits in the PLTW Engineering career cluster with one being a completer course (EDD) to meet the elective requirement for a CTE concentration.
- Students meeting the requirements for a CTE Concentrator (Concentrator is a student who has successfully completed a Concentrator course in an approved Career Pathway. Concentrator course is a second or third level course in the Career Pathway that builds upon technical skills acquired in a prerequisite course.) The student will take the WorkKeys assessment during his/her senior year as part of the NC Accountability model.
- Select CTE courses receive community college credit through articulation.
- Career and Technical Education prepares students for college and careers.
- Students can earn industry recognized credentials in certain courses.
- Career and Technical Student Organizations such as FFA, FCCLA, DECA, HOSA, FBLA, TSA, and SkillsUSA provides students' opportunities to travel, compete, and gain beneficial 21st century skills necessary for success in today's world.

PLTW Courses

PLTW Civil Engineering and Architecture (AP weighted)

Prerequisite: *PLTW Introduction to Engineering Design (IED) and PLTW Principles of Engineering (POE)*

In this specialization Project Lead the Way (PLTW) Pathway to Engineering (PTE) course, propels students' learning in the fundamentals of atmospheric and space flight. As they explore the physics of flight, students bring the concepts to life by designing an airfoil, propulsion system, and rockets. They learn basic orbital mechanics using industry-standard software. They also explore robot systems through projects such as remotely operated vehicles. Art, English language arts, mathematics, and science are reinforced.

PLTW Computer Science A (AP Computer Science)

Prerequisite: *PLTW Computer Science Essentials is Recommended*

Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases, as well as creating a game for their friends or an app to serve a real need in their community. This course is aligned to the AP CSA framework.

PLTW Computer Science Essentials (Honors)

Prerequisite: *None*

Students will experience the major topics, big ideas, and computational thinking practices used by computing professionals to solve problems and create value for others. This course will empower students to develop computational thinking skills while building confidence that prepares them to advance to Computer Science Principles and Computer Science A.

PLTW Computer Science Principles (AP Computer Science Principles)

Prerequisite: *PLTW Computer Science Essentials is Recommended*

Using Python® as a primary tool, students explore and become inspired by career paths that utilize computing, discover tools that foster creativity and collaboration, and use what they've learned to tackle challenges like app development and simulation. This course is endorsed by the College Board, giving students the opportunity to take the AP CSP exam for college credit.

PLTW Cybersecurity (Honors)

Whether seeking a career in the growing field of cybersecurity or learning to defend their own personal data or a company's data, students in Cybersecurity establish an ethical code of conduct while learning to defend data in today's complex cyberworld.

PLTW Digital Electronics (AP weighted)

From smartphones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices.

PLTW Engineering Design and Development (Honors)

Prerequisite: *Pathway to Engineering (PTE)*

In this capstone Project Lead the Way (PLTW) Pathway to Engineering course, students identify a real-world challenge and then research, design, and test a solution, ultimately presenting their unique solutions to a panel of engineers.

PLTW Environmental Sustainability (AP weighted)

Prerequisite: PLTW Introduction to Engineering Design (IED) or PLTW Principles of Engineering (POE)

In this specialization Project Lead the Way (PLTW) Pathway to Engineering (PTE) course, students investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply, and renewable energy. Art, language arts, mathematics, and science are reinforced.

PLTW Introduction to Engineering Design (AP weighted)

Prerequisite: None

In this foundation Project Lead the Way (PLTW) Pathway to Engineering (PTE) course, students are exposed to the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. Students use 3D solid modeling design software to help them design solutions to solve proposed problems and learn how to document their work and communicate solutions to peer and members of the professional community. Art, English, language arts, mathematics and science are reinforced.

PLTW Principles of Biomedical Sciences

Prerequisite: None

This course is designed for students to investigate the human body systems and various health conditions. They determine factors that lead to the death of a fictional person and investigate lifestyle choices.

PLTW Principles of Engineering (AP weighted)

Prerequisite: None

In this foundation Project Lead the Way (PLTW) Pathway to Engineering (PTE) course, students survey engineering and are exposed to major concepts they will encounter in a postsecondary engineering course of study. Students employ engineering and scientific concepts in the solution of engineering design problems. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, documenting their work and communicating solutions to peers and members of the professional community. Art, English language arts, mathematics and science are reinforced.

CTE Courses

CTE Internship Honors

A CTE Internship allows for additional development of career and technical competencies within a general career field. Internships allow students to observe and participate in daily operations, develop direct contact with job personnel, ask questions about particular careers, and perform certain job tasks. This activity is exploratory and allows the student to get hands-on experience in a number of related activities. The teacher, student, and the business community jointly plan the organization, implementation, and evaluation of an internship, regardless of whether it is an unpaid or paid internship. (Information can be found on our school's website and by contacting the Career Development Coordinator or School Counselor)

Digital Design and Animation I Honors

Prerequisite: None

This course introduces students to the use of complex graphic tools. Emphasis is placed on the principles, concepts, and use of complex graphic and visualization tools as applied to the study of science and technology. Students use complex 2D graphics, animation, editing, and image analysis tools to better understand, illustrate, explain, and present technical, mathematical, and/or scientific concepts and principles. Emphasis is placed on the use of computer-enhanced images to generate both conceptual and data-driven models, data-driven charts, and animations. Science, math, and visual design concepts are reinforced through the course. Activities are structures to integrate physical and social science, mathematics, English language arts, and art.

Game Art and Design Honors

Prerequisite: Digital Design and Animation I

This course introduces students to techniques used in the electronic game industry. Students will focus on the principles used in game design including mathematical and virtual modeling. Emphasis is placed on areas related to art, history, ethics, plot development, storyboarding, programming, 2D Visual theory, and interactive play technologies. Students develop physical and virtual games using hands-on experience and a variety of software. Art, English language, arts, mathematics and science are reinforced.

Additional Electives

- *Elective Courses are offered through A-B Tech, NCVPS, and NCSSM.*
- *Students register with our A-B Tech liaison for courses online.*
- *Students register for NCVPS online and NCSSM IVC courses with their school counselor.*

A-B Tech Courses Offered on Campus of NDA 2021-2022	
Prefix	Title
ART 111	Art Appreciation
ACA 122	Success & Study Skills
BIO 111	General Biology I & Lab
BIO 112	General Biology II & Lab
BIO 140	Environmental Biology
CIS 110	Introduction to Computers
COM 231	Public Speaking
ENG 111	Writing and Inquiry
ENG 112	Writing in the Disciplines
ENG 232	American Literature II
ENG 241	British Literature I
HEA 110	Personal Health & Wellness
HIS 111	World Civilizations I
HIS 112	World Civilizations II
HUM 110	Technology & Society
MAT 143	Quantitative Literacy
MAT 152	Statistical Methods I
MAT 171	Precalculus Algebra & Lab
MAT 172	Precalculus Trig & Lab
MAT 271	Calculus I and Lab
MAT 272	Calculus II and Lab
MUS 110	Music Appreciation
PED 211	New Games
PSY 150	General Psychology
SOC 210	Intro to Sociology

North Carolina School of Science and Math (NCSSM)

North Carolina Virtual Public Science and Math (NCSSM)- NCSSM offers students the opportunity to take courses from their high school catalog while at their home high school. Please see your counselor for more information about this opportunity.

[CLICK HERE TO VIEW NCSSM ONLINE HIGH SCHOOL COURSES](#)

North Carolina Virtual Public Schools (NCVPS)

North Carolina Virtual Public Schools (NCVPS) awards high school course credits to students who successfully complete online core courses, Advanced Placement courses, and/or honors courses. Students may use NCVPS online courses to meet high school graduation requirements or enhance transcripts for college applications. Students should meet with their high school's online course advisor to enroll in an NCVPS online high school course and have the course added to their schedule. NCVPS Distance Learning Advisors (DLA) at the school will complete the registration process. For additional information regarding NCVPS, visit <http://www.ncvps.org/>.

[CLICK HERE TO VIEW NCPVS ONLINE HIGH SCHOOL COURSES](#)

AB Tech: Career & College Promise

The AB Tech Career & College Promise dual-enrollment program is an excellent opportunity for qualified high school students to take tuition-free college classes, many of which transfer seamlessly to public and private universities in North Carolina. Participating students earn both high school and college credit, tuition free.

High school AND college credit is awarded upon successful completion of AB Tech courses. Courses that transfer directly to the university system carry advanced credit in high school and earn an additional quality point. AB Tech courses use college textbooks, course syllabi, and grading policies, and are taught with the same rigor as those taught to college students. High school students are reminded that all AB Tech classes will be included on a student's college transcript, which follows the student through his or her post-secondary years, regardless of educational goals.

All students taking AB Tech classes have access to Student Support Services through their Academic Learning Center, and tutoring services free of charge both in person on the AB Tech Campus and online through Smarthinking, for any AB Tech course. Please note, mid-year graduates may take classes tuition free during the Spring. In addition, summer offerings are also available for students who are rising Juniors or Seniors or graduating Seniors. This includes many of the courses listed above in addition to Nurse Aide I or CNA. If you are interested in learning more about summer or other dual enrollment classes at A-B Tech, please contact ccp@abtech.edu or speak with your school counselor.

Career & College Promise courses do involve some programmatic expenses, including some student fees, textbooks and supplies unless the course is offered on our campus as noted with an (*). These costs are the responsibility of the student enrolling in the course if not offered on our campus. The minimum entrance standards and general enrollment criteria for the AB Tech Career & College Promise program include:

College Transfer Pathways (courses transfer to UNC System and dozens of NC private colleges)

- Minimum cumulative weighted GPA (requirement currently being adjusted)
- Demonstration of college readiness on an assessment test (requirement currently being adjusted)
- Completion of all AB Tech mandated pre-requisites for any requested course
- Completion of all required paperwork/online forms at both the college and high school sites
- Any student who withdraws from an AB Tech class without the approval of the high school receives a grade of F on his/her permanent high school transcript and is not allowed to register for future dual-enrollment classes. This could affect a student's ability to access financial aid when attending college after graduation.

Certain AB Tech courses or course combinations can count towards high school graduation requirements. The (*) denotes courses offered on our NDA campus.

High School Credit/ Graduation Requirement	Community College Courses	Current PowerSchool Course Codes
American History I	HIS 131 American History I	4C055X0 (HIS 131)
American History II	HIS 132 American History II	4C065X0 (HIS 132)
Biology	*BIO 111 General Biology I and *BIO 112 General Biology II	3C065X0 (BIO 111) 3C055X0 (BIO 112) *Must take EOC
English III	*ENG 111 Writing & Inquiry and *ENG 112 Writing/ Research in the Disciplines and ENG 231 American Literature I or *ENG 232 American Literature II	1C025X0 (ENG 111) 1C035X0 (ENG 112) 1C075X0 (ENG 231) 1C085X0 (ENG 232)
English IV	*ENG 111 Writing & Inquiry and *ENG 112 Writing/Research in the Disciplines and *ENG 241 British Literature I or ENG 242 British Literature II	1C025X0 (ENG 111) 1C035X0 (ENG 112) 1C115X0 (ENG 241) 1C125X0 (ENG 242)
Fourth Math credit	*MAT 143 Quantitative Literacy or *MAT 152 Statistical Methods I or *MAT 171 Pre-calculus Algebra or *MAT 172 Pre-calculus Trigonometry or MAT 263 Brief Calculus or *MAT 271 Calculus I or *MAT 272 Calculus II	2C015X0 (MAT 143) 2C025X0 (MAT 152) 2C035X0 (MAT 171) 2C045X0 (MAT 172) 2C055X0 (MAT 263) 2C065X0 (MAT 271) 2C075X0 (MAT 272)
Physical Science credit	CHM 151 General Chemistry I and CHM 152 General Chemistry II; or PHY 151 College Physics I and PHY152 College Physics II; or PHY 251 General Physics I and PHY 252 General Physics II	3C085X0 (CHM 151) 3C095X0 (CHM 152) 3C195X0 (PHY 151) 3C205X0 (PHY 152) 3C215X0 (PHY 251) 3C225X0 (PHY 252)
World History	*HIS 111 World Civilizations I and *HIS 112 World Civilizations II	4C035X0 (HIS 111) 4C045X0 (HIS 112)

A-B Tech offers a summer JumpStart Program. This is a tuition-free college credit opportunity for rising and current seniors at each high school. This collaborative program allows rising seniors to take college courses during the summer between the junior and senior year and the summer after the senior year to accumulate college credits before entering college. Students may earn up to 21 college credits depending on the number of courses they choose to take, moving them closer to the college degree or certificate they plan to pursue.