



AMERICAN NICARAGUAN SCHOOL CONNECTING THE GLOBAL COMMUNITY



Table of Contents

ANS Diploma	3
Nicaraguan Bachillerato	4
Global Studies	5
Fine Arts	7
Foreign Languages	10
Language Arts	14
Mathematics	16
Science	18
Social Studies	21
Physical Education	25
Career Technology	26
Career Orientation	27

ANS Diploma

These are the requirements of an ANS High School Diploma

English 4 Credits	Spanish 4 Credits	Science 4 Credits	Social Studies 4 Credits	Senior Capstone Project 1 Credit
Mathematics 4 Credits	Physical Education 2 Credits	Fine Arts 0.5 Credits	Electives 9 Credits	

Electives are classes used to enhance and enrich the educational experience at ANS. Students are allowed to select from a wide variety of electives to fulfill this requirement for graduation.

Awarding Credits:

- 1 credit will be issued for a yearlong course.
- 0.5 credits will be issued for a semester course.
- Students must receive a passing grade (D-, 60%) in order to receive credit.

Students who fail three or more full-year core courses during a given school year automatically fail and must repeat the school year if they choose to enroll at ANS for the following school year. They are not entitled to take remedial courses and/or for-credit exams.

Students who fail less than three courses will be required to remediate the course(s) taking a for-credit exam(s) prior to the start of the following academic year. For some courses, the Principal may approve projects, private tutoring, summer school and/or online courses. A student who passes the for-credit exam will receive a maximum grade of 60 for the course.

A student who does not take or does not pass the for-credit exam in two separate courses must repeat the year if he/she chooses to remain at ANS.

Note that electives courses that are listed in this course handbook may not be available every semester.

Nicaraguan Bachillerato

The following are requirements for the Bachillerato Diploma; however, the American Nicaraguan School has other requirements for Language and Math. A student has to have taken these classes from 7- 12th grade to receive the Nicaraguan Bachillerato.

A student cannot obtain the Bachillerato with a failed class on their transcript - a student will take a For-Credit Exam.

Lengua Extranjera (Ingles)	Español y Literatura	Ciencias Naturales	Estudios Sociales Historia y Geografía
Matemáticas	Educación Física	Economía	Orientación Técnica Vocacional (Computación, Arte, Música, etc.)
Sociología*	Filosofía*	Cívica	

**Offered as summer options at ANS*

Global Studies

These are the requirements for completion of the Global Studies Academy Certificate. **The following applies for students graduating on 2019 or before.**

Global Studies	Environmental Science	Foreign Language	Sociology
Upper Level Fine Arts	AP Comparative Politics and Government	AP Human Geography	Philosophy
World Film			

- Students must declare their interest in pursuing the Global Studies Academy Certificate by the beginning of their junior year in high school.
- Students must meet all of the regular requirements for graduation from ANS.
- Students must have a GPA of 3.0 or higher in order to receive the certificate upon graduation from ANS.
- Students must complete A Community Capstone Project prior to graduation.
- Students must participate in at least one international travel experience organized by ANS.
 - o Participation in HACIA Democracy, Model United Nations, International Negotiations Project (INP), Global Issues Network (GIN), or a summer global travel experience organized by ANS satisfies this component of the certificate.
- Students are required to take five courses from the following list.
- Introduction to Global Studies World Religions Environmental Science
- Philosophy or Sociology French I or Chinese I
- World Film
- AP Comparative Politics & Government**
- AP Human Geography**
- All students in the program are required to take Introduction to Global Studies.

*** All students in the program are required to take either AP Comparative Politics & Government or AP Human Geography.*

Global Studies

These are the requirements for completion of the Global Studies Academy Certificate. **The following applies for students graduating on 2020 and beyond.**

- Students must declare their interest in pursuing the Global Studies Academy Certificate by the beginning of their freshmen year in high school.
 - Students must meet all of the regular requirements for graduation from ANS.
 - Students must have a GPA of 3.0 or higher for enrollment and for graduation.
 - Students must complete the Senior Thesis (students in the Global Studies Academy must have their Senior Thesis approved by Mrs. Lopez.
 - Completion of an ANS Sponsored international exchange/experimental learning experience
 - (ei. HACIA Democracy, Model United Nations, Global Issues Network)
 - Students will take three classes from the approved AP list and three classes from the approved elective list.
 - Of the six classes taken from the approved AP and elective lists, at least four classes must be from the same field of study (STEM or Liberal Arts).
 - Students must complete a minimum of 70 hours of approved community service by the end of twelfth grade.
 - Behavior that reflects a global mindset of respect and inclusion
- You have to take 3 courses out each of the lists below (You don't have to take all of the courses on the lists).

<u>Approved AP List</u>	<u>Approved Electives List</u>
AP Biology AP English Literature AP Spanish Literature AP U.S. History AP Economics AP Comparative Politics & Government AP Human Geography AP Environmental Science AP Chinese AP French	Art II Guitar II Architectural Design Chinese III French III Philosophy Sociology *Global Studies World Film Bioengineering

****Global Studies is a required course to obtain the certificate.***

**Subject to change each year depending on course offerings.*

Arts

A student needs one semester of Fine Arts (Music or Art).

Art	Guitar	Music
Art I	Guitar I	Instrumental Music I
Art II	Guitar II	Instrumental Music II
Introduction to Contemporary Art		Música Vocal I
Exploration of Architecture		Música Vocal II
AP Studio Art		
World Film		

Art 1 (0011) - 1 credit

9-12th grade Prerequisite: None

We begin Art I focusing on drawing skills. Because students enter the class with a broad range of abilities, each student is encouraged to build on what he or she already knows. We also explore color theory, composition, abstraction, collage and other contemporary art practices. Throughout the semester time is dedicated to making art intuitively and building creativity.

Art II (0010) - 1 credit

9-12th grade Prerequisite: Art I

Art II is a continuation of Art 1 with greater emphasis on fundamental skills while moving toward an exploration of developing an individual concept.

Introduction to Contemporary Art (0034) -0.5 credit 9-12th grade

In this practical art course, students will revisit known art mediums like illustration, collage and sculpture in exciting new ways inspired by today's art world. Students will not "learn how to draw realistic in this class," however; they'll become familiar with new ways of creating art useful for both new and experimented artists!

Exploration of Architecture (0013)-0.5 credit

9th-12th grade Prerequisites. Some experience in drawing is recommended.

An intensive introduction to the basic concepts of architectural design and theory. Students will receive hands/on training in the fundamentals of design, including architectural drawing, model making and conceptual development.

Considering a career in architecture? This course will introduce you to the processes involved in the creation and understanding of architecture, and you could also start working on your portfolio.

AP Studio Art (0005) - 1 credit

11-12th grade Prerequisite: Art II & teacher recommendation

Studio Art is for students with significant interest in art, particularly those who wish to pursue an art related career. Art 1 and Art 2 are a prerequisite for taking Studio Art. In this class, we explore drawing, painting, sculpture, collage, printmaking, photography, and video as a vehicle of expression and communication. Although it is not an art history class, students do learn art history in order to understand art in the broader historical context. Emphasis is placed on studying contemporary art and postmodern art making practices.

World Film (0039) - 0.5 credits

9-12th grade Prerequisites: None

This course explores some of the past and current influences of motion pictures on cultures and societies all over the world. The focus for the quarter will be on specific works from countries such as South Africa, Denmark, India, Japan and more. Students will study comedies, dramas and musicals, analyzing acting, directing and editing styles as they vary from country to country, as well as exploring the effects of movies on those societies and whether they have had an impact on other societies. The class will consist largely of Foreign Film Analyses, plus lectures, discussions, classwork, quizzes and homework assignments

Music

Instrumental Music I (0029) - 1 credit

8-10th grade Prerequisites: Able to play a musical instrument

In this introductory course students learn the skills necessary to play a wind instrument. These instruments are supplied by the school. The course includes individual and group playing and students will also develop basic skills on the piano and snare drum.

Instrumental Music II (0017) - 1 credit

8th-12th grade Prerequisites: Instrumental Music I

This course is for students who have completed Instrumental Music. Students will further develop their performance skills and learn more about composing and arranging music using the piano.

Instrumental Music III - 1 credit

9th-12th grade Prerequisites: Instrumental Music II

Instrumental Music 3 is an intermediate level music course. Students will further their skills on wind instruments through individual and group practice of a varied repertoire of music including music chosen by the students. We will also use the piano and an online platform to compose music of different genres.

Música Vocal I (0420) (Class Instruction in Spanish) - 0.5 credit

8-12th grade Prerequisites: None

Los estudiantes experimentarán el canto en un ambiente de grupo. Las habilidades cubiertas incluyen respiración, vocal y sonidos de consonante, canto de solfeo, lectura de ritmo, canto de parte y mezcla de voces. Los estudiantes nos serán requeridos a cantar en frente de otras personas además de sus compañeros de clase. Cantantes experimentados e inexpertos son bienvenidos.

Música Vocal II (0032) (Class Instruction in Spanish)- 0.5 credit

8th-12th grade Prerequisites: Música Vocal I

En Vocal Música II nos enfocaremos en el desarrollo de la voz exclusivamente. Ya el estudiante tiene una idea clara del lenguaje y términos musicales y sabe leer una partitura. Ahora vamos a explorar y cantar repertorio musical variado (incluyendo contemporáneo) y formaremos una agrupación vocal de cámara de nivel avanzado.

Guitar I (0028) - 0.5 credits

8-12th grade Prerequisites: None

This is an introductory course aimed at developing skills necessary to play different kinds of music on the instrument. Students also learn different notation systems, a little music theory and get a taste of composition. By the end of this course, students will have the skills and knowledge necessary to play a variety of songs, and to use the many resources available to them to learn songs they choose on their own.

Guitar II (0021) - 0.5 credits

9-12th grade Prerequisite: Completion of Guitar 1 or teacher recommendation.

The focus of the course is playing different styles of music, and students get a taste of rock, blues, flamenco, bossa nova, classical and folk music. Many assignments have a group performance element. In addition, they learn more advanced chords, scales and techniques and experiment with composition and recording. Students are involved in choosing the content of the course and are expected to work and play at a higher standard.

Foreign Languages

Chinese Path	French Path	Spanish Path	Spanish for Language Learners Path
Chinese I	French I	Spanish 9 or Honors Literature 9	Spanish for Language Learners SLL I
Chinese II	French II	Spanish 10 or Honors Literature 10	Spanish for Language Learners SLL II
Chinese III	French III	Spanish 11 or Honors Literature 11	Spanish for Language Learners SLL III
Chinese IV	French IV or AP	Spanish 12 or AP Spanish Literature	Spanish for Language Learners SLL IV or AP

Chinese

Chinese I (0051) - 1 credit

7-11thgrade Prerequisite: None

This class begins learning the pinyin system, as students master 350 words for listening and speaking and over 170 characters for reading and 100 characters for writing. Students will be able to use simple sentences and ask questions.

Chinese II (0052) - 1 credit

8-12thgrade Prerequisites: Chinese I

This class learns more than 360 basic words for listening and speaking, and about two-thirds of the oral language vocabulary for reading and half of it for writing, adjustable depending upon the students' learning pace. They continue learning more basic sentences and questions.

Chinese III (0053) - 1 credit

9-12th grade Prerequisites: Chinese II

Students will continue expanding their Chinese by 600 words and 137 grammatical sentences. The course content focuses on campus activities and daily life and situational dialogue practice. Students will do essay writing practice.

Chinese IV (0054) - 1 credit

9-12th grade Prerequisites: Chinese III

Students will continue expanding their Chinese by 600 words for listening and speaking. They will also have a simple understanding of Chinese culture, including social, historical, and geographical. They will use situational dialogue practice and essay writing practice.

AP Chinese (0055) - 1 credit

9-12th grade Prerequisites: Chinese III

In AP Chinese, students will add 625 words and 119 grammatical sentence to their repertoire. They will also have a thorough understanding of Chinese culture, including social, historical, geographical, ways of the world. They will use situational dialogue practice and essay writing practice.

French

French I (0060) - 1 credit

7-12th grade Prerequisite: None

This is the Beginner level students learn how say things about themselves, what they like and dislike, family, friends and school. They also learn how to order food in a restaurant. FRENCH 1 is the level for survival. Students work on four competences: verbal and written expression and comprehension. The materials we use are the Bien Dit! Level 1 and authentic documents like poems, songs and video. Students also participate in Francophonie Celebrations in March.

French II (0061) - 1 credit

8-12th grade Prerequisite: Completion of French I

In this level students are able to better apply and deepen what they have learned in level 1. They are encouraged to have conversations about what they do, what they have done and what they will do; in different verb tenses. In level 2 we continue to work in the 4 competences, with a larger focus on verbal expression. Students participate in Francophonie Celebrations in March. The materials we use are the Bien Dit! Level 2 and authentic documents like poems, songs, video and short novels.

French III (0062) - 1 credit

9-12th grade Prerequisite: Completion of French II

Students learn to talk about abstract concepts like love and friendship and to tell anecdotes about everyday life. They read and write short stories. They read and write original short stories. They also have debates about current events and the news. Students participate in Francophonie Celebrations in March.

French IV (0064) - 1 credit

9th-12th grade Prerequisite: Completion of French III

Students learn to talk about abstract concepts like love and friendship and to tell anecdotes about everyday life. They read and write short stories. They read and write original short stories. They also have debates about current events and the news. Students participate in Francophonie

AP French Language (0063) - 1 credit

9-12th grade Prerequisite: Completion of French III

The minimum requirement for this level is 80% in FRENCH 3 or a B-1 level in DELF-DALF standards. In this level students consolidate their knowledge of French. They are able to argue and debate, write essays and understand authentic documents like radio shows and French movies, newspaper articles and novels.

Spanish

Spanish 9 (0070) - 1 credit

9th grade Prerequisite: Fluency in Spanish or Placement Test

In this class we explore, analyze and learn about Spanish medieval literature. We develop and work on writing, reading and speaking skills while we look at literature in a historical context.

Spanish 10 (0071), Honors Spanish 10 (0076) - 1 credit

10th grade Prerequisite: Spanish 9 or Placement Test

The 10th Grade Spanish course is designed in a way that students may develop and put into practice the four fundamental areas of the language: Read, write, speak, and listen. This course combines theory with practice with exercises covering different aspects will be practiced in the classroom. Readings covering the different literary periods/movements in Spain will be analyzed, as well as other works of current interest.

Spanish 11 (0072) Honors Spanish 11 (0077) - 1 credit

11th grade Prerequisite: Spanish 10 or Placement Test

To learn and deeply analyze some of the most significant literary expressions of pre-Columbus America, the Conquest (XVI and XVII centuries), and the literary movements that occurred up to the XIX Century. Students will identify the contributions and characteristics of these literary movements in relation to the cultural identity and role of America in them.

Spanish 12 (0073) - 1 credit

12th grade Prerequisite: Spanish 11 or Placement Test

Spanish 12 is a two-semester program taught in Spanish – Literature of XX Century Hispanic America, and Nicaraguan Literature.

AP Spanish Literature & Culture (0074) - 1 credit

12th grade Prerequisite: B or higher in SPANISH 11 and teacher recommendation.

This is a two-semester introductory course which will study the different literary movements, authors, and literary works written in Spanish of Spain, Latin America and the United States. Encourages interest in interdisciplinary study and cultural and historical relations of the different global contexts.

Spanish Language Learners (SLL)

Spanish Language Learners I (0080) - 1 credit

9-12th grade Prerequisite: No prior Spanish

This course will help students to initiate in the Spanish language by learning vocabulary lessons and acquiring functional language. This gives the SLL beginners the tools they need in order to survive in a speaking Spanish country.

Spanish Language Learners II (0081) - 1 credit

9-12th grade Prerequisite: SLL I or teacher recommendation.

The purpose of this course is to work in developing the four basic skills of the language as well as enhance the students' performance through a communicative approach and a solid foundation in grammar and vocabulary.

Spanish Language Learners III (0082) - 1 credit

9-12th grade Prerequisite: SLL II or teacher recommendation.

The purpose of this course is to continue to work in developing the four basic skills of the Spanish language as well as enhance the students' language performance in and outside the classroom. This level emphasizes the use of proper grammar structures and writing styles.

Spanish Language Learners IV (0083) - 1 credit

9-12th grade Prerequisite: SLL III or teacher recommendation.

This course aims to reinforce basic skills, continues to develop understanding and critical thinking through reading Latin American authors. It creates an interest in culture and literary studies.

AP Spanish Language (0084) - 1 credit

9-12th grade Prerequisite: SLL III or IV or teacher recommendation.

This course intends to help students pursue a college-level of reading comprehension, writing, and listening and speaking skills in Spanish. Upon the completion of this course, students have to take the corresponding AP examination that is administered in May.

Language Arts

A student must have a minimum of 4 years of Language Arts.

9 th Grade	10 th Grade	11 th Grade	12 th Grade
World Literature 9	World Literature 10	American Literature	British Literature
Honors World Literature 9	Honors World Literature 10	AP English Language	AP English Literature

9th World Literature (0100) - 1 credit

Prerequisite: none

Students will explore literature from different cultures and eras, identifying the many factors that affect the final product and reader. Students will consider literary works in relation to their own lives and experience. Students must demonstrate mastery of grammar and usage and will develop their written and spoken vocabularies.

9th Honors World Literature (0120) - 1 credit

Prerequisite: fulfill criteria including previous year's English grade, MAP Reading and Language scores and performance on literary analysis prompt.

Honors English is a program designed to engage students in active, high-level learning, thereby ensuring that every student develops the skills, habits of mind, and concepts they will need to succeed in AP courses. Students will explore literature from different cultures and eras, identifying the many factors that affect the final product and reader. Students will consider literary works in relation to their own lives and experience. Students must demonstrate mastery of grammar and usage and will develop their written and spoken vocabularies.

10th World Literature (0101) - 1 credit

Prerequisite: 9th grade World Literature

Students are expected to interpret, analyze, evaluate and critique these texts to show their understanding of the literature. The breadth of literature is subject to change, but has included: *The Alchemist*, *The Tempest*, *Night*, *Metamorphosis* and *Black Dog of Fate*. Students are expected to demonstrate these skills through the 4 modalities of language: speaking, listening, reading and writing. To do so, students must practice time management skills to keep up with independent reading and to prepare for Socratic Seminars, Literature Circles and other collaborative learning engagements.

10th Honors World Literature (0121) - 1 credit

Prerequisite: fulfill criteria including previous year's English grade, MAP Reading and Language scores and performance on literary analysis prompt

Students are expected to interpret, analyze, evaluate and critique these texts to demonstrate insightful, original analysis of literature. The breadth of literature is subject to change, but has included: *1984*, *The Tempest*, *Siddhartha*, *On The Beach*, as well as paired student selections. Students are expected to demonstrate these skills through the 4 modalities of language: speaking, listening, reading and writing. To do so, students must practice time management skills to keep up with independent reading and to prepare for Socratic Seminars, Literature Circles and other collaborative learning engagements.

American Literature (0102) - 1 credit
11th grade Prerequisite: 10th grade English

In this course, students will develop writing skills that allow them to authentically present their critical analysis of texts, and their place in the world. Students will explore metaphysical and ethical questions such as the nature of human conformity, crime and the human mind through literature passages paired with nonfiction texts. By doing so, students will begin to discover how to make personal and modern connections in U.S. culture and drama to that of the classic genre. Students will employ Noam Chomsky's *Manufacturing Consent* to develop media literacy skills for critical analysis. A culminating inquiry question, *are humans inherently good or evil?* will draw from poetry, psychology and multimodal fictional sources. Throughout, students must demonstrate reading, writing, listening and speaking skills in original and authentic published pieces, of digital, print and spoken form.

British Literature (0103) - 1 credit
12th grade Prerequisite: 11th grade English

This course will survey the profound influence that England and its former empire have had upon world literature, and in so doing, will explore themes of identity, oppression, and monstrosity through all units. Texts are subject to change but have included: *Beowulf*; *The Canterbury Tales*; *Othello*; *Frankenstein*; *Dracula*; *Cry*, *The Beloved Country* and *The Namesake*. Students will explore the dichotomy between self and other, the myriad ways we understand people and cultures in both independent and interrelated ways... In what ways does British literary history influence global citizenship and cultural awareness? Students will explore that essential question and the overarching themes through the 4 modalities of language. To do so, students must practice time management skills to keep up with independent reading and to prepare for the Socratic Seminars, Literature Circles and other collaborative learning engagements that the course is based around.

AP English Literature (0123) - 1 credit
12th grade Prerequisite: fulfill criteria including previous year's English grade, MAP Reading and Language scores and performance on literary analysis prompt

This course is designed to develop your abilities as a serious reader, writer, critical thinker, and test taker. Undoubtedly, your ability to read with sophistication will increase in this class, and, in turn, your appreciation for literature as art. Course texts are subject to change, but have included: *The Dead*, *Moby Dick*, *Song of Solomon*, *Medea*, *King Lear*, *1,000 Acres*, *Candide* and *The Things They Carried*. As you become more familiar with the technical strategies a writer employs, your understanding of the complexity of fiction, drama, and poetry will grow. Likewise, as your vocabulary increases, you shall become better suited to discover the merits of artistic expression. To struggle with ideas that elevate the human mind and increase the appreciation for the sublime is our noble goal in this course. As this is a college-level course, hard work, attention to detail, and a willingness to share your work with your peers will lead you to success. Students will work together and explore a variety of reading and writing strategies proven effective in preparing for the exam in May.

Mathematics

A student has to have 4 years of Math to graduate and a minimum of Pre-Calculus.

9th Grade	10 th Grade	11 th Grade	12 th Grade	Electives
Algebra I	Geometry	Algebra II	Pre-Calculus	Introduction to Business
Geometry	Algebra II	Pre-Calculus	Calculus	
			Statistics	

Algebra I (0150) - 1 credit

9th grade

This course is designed to strengthen a student's math skills, and prepare them for higher level mathematics for their upper grades. There will be more in-depth and comprehension as the pace can go slower for all students to be successful. In particular, the instructional program in this course provides for the use of algebraic skills with a heavy emphasis on problem-solving. Units are: Expressions and Equations, Two variable Algebra, Interpreting and Building Functions.

Geometry (0151) - 1 credit

9-10th grade Prerequisite: Algebra 1

This course serves as the foundational course for higher levels of math. A variety of Geometrical topics like points, lines, planes, angles, congruent triangles, quadrilaterals, circles, and polygons will be covered.

Algebra II (0152) - 1 credit

10-11th grade Prerequisite: Geometry

Students will use mathematical statements and representations to describe linear, exponential, logarithmic, rational, quadratic, and trigonometric functions. Students will investigate and generalize patterns with an emphasis on communication of mathematical ideas and reflection of process to deepen understanding.

Pre-Calculus (0153) - 1 credit

11-12th grade Prerequisite: Algebra II

Pre-Calculus is the preparation for Calculus. The study of the topics, concepts, and procedures of Pre-Calculus deepens students' understanding of algebra and extends their ability to apply algebra concepts and procedures at higher conceptual levels, as a tool, and in the study of other subjects.

Statistics (0155) - 1 credit

11-12th grade Prerequisite: Algebra 2 or Geometry with teacher recommendation.

This course is designed to study mathematics applied to Humanities and Social Sciences. Technological applications of the graphing calculator (TI), computer (Excel), and Internet (as time allows) are emphasized. Project-based assignments are used in assessment as well as tests and quizzes. Topics include data gathering, using different sampling methods, calculating measures of center, variation and spread by hand and on the TI Calculator, the basics of experiment design, and displaying data through graphs. Probability and game theory, and spreadsheets may be included.

Calculus (0154) - 1 credit

12th grade Prerequisite: Pre-Calculus

This course introduces the student to Calculus, stressing an intuitive approach as well as problem solving techniques. Major topics include limits, derivatives and integrals of algebraic and trigonometric functions, and applications. Emphasis is placed on being able to solve problems with and without a graphing calculator.

Electives

Introduction to Business (459) - 0.5 Credits

10th-12th grade

Students will be able to get a taste of the different areas of expertise in the business field. They will earn a basic understanding of Management, Finance, and Strategic Marketing within a cross-cultural global context. This theoretical course concentrates on developing basic knowledge of business in all of its functions. It also helps in developing transversal competencies in the curriculum.

Science

A Student has to have a minimum of 4 years of Science.

9 th Grade	10 th Grade	11 th Grade	12 th Grade	Elective
Environmental Science	Biology	Chemistry	Physics	AP Biology
				Human Anatomy and Physiology
				AP Env. Science
				Sustainable Development Studies
				Forensic Biology
				Bioengineering

Environmental Science (0249) - 1 credit

9th grade Prerequisites: none

The aim of this course is to ensure that students develop a fundamental understanding of past and present relationships among air, water, rocks, minerals and biota. The emphasis is on the interactions between humans and the environment.

Biology (0250) - 1 credit

10th grade Prerequisites: Environmental Science

Biology is the study of living things. This year we're going to be exploring a variety of topics related to biology, including: the nature of science, relationships between living and non-living things, biodiversity, principles of cell biology, human biology, and principles of genetics and evolution. We will be taking a hands-on approach to master these topics and will incorporate lab activities, group projects, case studies, as well as viewing films, reading, writing, utilization of technology, and classroom discussion.

Chemistry (0251) - 1 credit

11th grade Prerequisites: Biology and Algebra I.

Chemistry is the science that systematically studies the composition, properties, and activity of organic and inorganic substances and various elementary forms of matter. Its procedures are reproducible and its hypotheses are tested using the scientific method. Students will develop knowledge and understanding of: the history of chemistry, the nature and practice of chemistry, applications and uses of chemistry, the implications of chemistry for society and the environment, current issues, research and developments in chemistry, atomic structure, the periodic table and bonding, energy, chemical reactions (including acid/base reactions and chemical equilibrium), carbon chemistry, stoichiometry, behavior of gases, concentration and solutions.

Physics (0252) - 1 Credit

12th Grade: Prerequisite: Chemistry

The Physics course provides knowledge that enables the students to understand the physical world around them. This course is based mostly on Newtonian Mechanics; and is an algebra-based course that intends to use the students' basic skills to accurately come up with numerical solutions and critical thinking around real-life situations. Labs are an important component of this course, since they require the students to apply their knowledge and skills of analysis and synthesis. Once the students have taken Regular Physics, their understanding of how things function in the real world is vast.

Science Electives

AP Biology (0256)

11th-12th grade Prerequisites: Biology

The AP Biology course is designed to enable you to develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses — a goal of every AP course. AP Biology course is equivalent to a two-semester college introductory biology course and has been endorsed enthusiastically by higher education officials.

Human Anatomy & Physiology (0462) – 1 Credit

10th-12th Grade

Human Anatomy and Physiology is a one-year course designed for college-bound students who desire to develop an understanding and appreciation of the human body. Students will learn about the structure and function of the body, and mechanisms for maintaining homeostasis within it from modern evidence-based anatomical and physiological perspectives through a variety of strategies. Emphasis is placed on the integration of systems as they relate to normal health. Laboratory exercises provide first-hand experience with the structures and processes.

AP Environmental Science- 1 credit

12th grade Prerequisite: Biology and Chemistry

The goal of the AP Environmental Science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them.

Sustainable Development Studies- 1 credit

10th-12th grade

Students will investigate pressing environmental issues that our planet faces today, assess and predict human impact on our environment, and think about sustainable solutions for the future. Students will collect data about soil, water, air, and living organisms, and implement and study sustainable technologies such as bio pesticides, biofuels, biomaterials, bioremediation techniques,

and sustainable food production systems such as permaculture, aquaponics, and urban farming systems.

Forensic Biology (0264) - 1 Credit

10th-12th grade

Forensic Biology introduces the student to basic techniques used in a criminal investigation. This is a multidisciplinary course involving aspects Biophysics, Biochemistry, Botany, Zoology and Physiology to analyze crime scenes. Forensic biology examines body tissue, hair, bones, insects and plants and animal remains to help identify victims and support criminal investigations. Using technology in the lab and in the field, students collect and analyze biological evidence to determine the time and cause of death of victims.

Bioengineering (0265) - 1 Credit

10th-12th grade

Bioengineering introduces the student to standard techniques and concepts used in DNA modification, artificial tissue and organs, prosthetics and biomedical equipment. Students are exposed to important Biomimicry concepts used in industries. Students work in teams to solve current problems by inventing, designing, prototyping, and testing their own ideas. This course also reviews genetic information access, engineering standards, ethics, and social responsibility.

Social Studies

9 th Grade	10 th Grade	11 th Grade	12 th Grade	Electives
World History	Modern World History	US History	Economics	AP Comparative Government
		AP US History	AP Economics	AP Human Geography
				Introduction to Global Studies
				Marketing Communications
				Geografía de Nicaragua
				Historia de Nicaragua
				Cívica
				Philosophy
				Sociology

World History (0300) - 1 credit

9th grade Prerequisite: None

This course constructs the historical period from the 14th century (Renaissance, Ming Dynasty) through 1814 (Congress of Vienna). Students will develop and demonstrate understanding of this era through evidence-based historical thinking, geographical reasoning skills, and an exploration of the economic foundations and civic participation worldwide across these time periods. Outside of class time, students are responsible for keeping up with independent reading and preparing to participate in and perform on: collaborative learning engagements, in-class document based essays and Socratic Seminars.

Modern World History (0301) - 1 credit

10th grade Prerequisite: World History

This class constructs the recent history of our contemporary world (from the Congress of Vienna through September 11, 2001). Students will develop and demonstrate understanding of this era through evidence-based historical thinking, geographical reasoning skills, and an exploration of the economic foundations and civic participation worldwide across these time periods. Outside of class time, students are responsible for keeping up with independent reading and preparing to participate in and perform on: collaborative learning engagements, in-class document based essays and Socratic Seminars.

U.S. History (0302) - 1 credit

11th grade Prerequisite: Modern World History

This course constructs the recent history of the United States, from 1878 to today. Students will develop, and be required to demonstrate evidence-based writing skills for historical analysis, geographic reasoning, an understanding of economic factors and awareness of civic mindedness. Outside of class time, students are responsible for keeping up with

independent reading and preparing to participate in and perform on: collaborative learning engagements, in-class document based essays and Socratic Seminars.

AP U.S. History (0305) - 1 credit

11-12th grade Prerequisite: B or higher in World History and English and teacher recommendation.

This college-level course is offered to all high school juniors/ seniors who meet high levels of previous class achievement. AP U.S. History is a challenging review of American History in preparation for the AP Exam.

Economics (0303) - 1 credit

12th grade Prerequisite: US History

Economics is the study of how people attempt to satisfy their unlimited wants and needs through the use of limited resources. Upon completion of the class, students will have an understanding of basic economic concepts, microeconomic concepts and theories, macroeconomic policies, and international trade. In addition, students will learn how to analyze economic data, and make economic projections. Students will also learn how to use economic reasoning when making non-economic choices. Most importantly, they will come to understand that their lives are affected by decisions made by others, and vice versa.

AP Economics (0306) - 1 credit

12th grade Prerequisite: B or higher in US (AP) US History and teacher recommendation.

AP Economics provides students with an in-depth study of fundamental economic concepts that will enable them to understand how the economy as a whole functions. This course includes a study of economic performance and growth, fiscal policy, monetary policy, and international trade.

Electives

AP Comparative Government (APCG) (0308) - 1 credit

11-12th grade Prerequisite: Teacher recommendation, test scores, and a B or higher in previous history class.

APCG is offered to all high school juniors & seniors, who have successfully completed both a standard Civics and preferably US History class. APCG is a course that covers with in-depth analysis the “AP 6” core countries UK, Russia, China, Iran, Mexico, and Nigeria. To this backdrop is added an emphasis on world societal issues, particularly the change-developments over time, as well as the “thematic focus” on Sovereignty, Authority, and Power; Political Institutions; Citizens, Society, and the State; Political and Economic Change; Public Policy. APCG is a challenging college-level introductory course in preparation for the AP exam.

AP Human Geography (0307) - 1 credit

10-12th grade Prerequisite: Teacher recommendation and B or higher in previous history class.

In this course we will study a systematic approach of human geography to understand the use of spatial concepts and landscape analysis to examine human organization of space and the spatial relationships at different scales ranging from the local to the global. We will develop the ability to interpret maps, data sets, and geographic models using atlases, graphs, and charts.

Civics (Included in the Geography Course) - 0.5 credit 11-12th grade Prerequisite: None (Class instruction in Spanish)

Este curso cubre a la humanidad desde sus orígenes hasta nuestros días. Se hace especial hincapié en el cambio a lo largo del tiempo, la periodización y la comparación y el contraste de las culturas y acontecimientos mundiales. También se enfatiza el análisis de documentos, la escritura analítica y el vocabulario.

Geography of Nicaragua (0311) - 0.5 credits

9-12th grade Prerequisite: None (Class instruction in Spanish)

Para muchos, el estudio de la geografía es simplemente la descripción de las ciudades, paisajes, cuerpos de agua de una región específica, ubicación y más. Todos los conceptos mencionados anteriormente son de hecho componentes de un campo comúnmente denominado geografía física. La geografía humana, por el contrario, es el estudio de cómo los seres humanos han desarrollado o interactuado dentro de una región específica, en términos de demografía, población, producción económica y desarrollo. Esta clase tiene como objetivo presentarles los conceptos generales y los hechos de la geografía de Nicaragua, tanto física como humana.

History of Nicaragua (0312) - 0.5 credits

9-12th grade Prerequisite: None (Class instruction in Spanish)

El curso de Historia de Nicaragua tiene como objetivo proporcionar a los estudiantes un resumen actualizado de los diferentes períodos de desarrollo de la sociedad nicaragüense de manera equilibrada y objetiva.

Intro to Global Studies (0309) - 0.5 credits

9-12th grade Prerequisite: None

Required for the Global Studies Certificate, this class introduces students to globalization, the interconnections among people and places as a result of this phenomenon and various challenges within each thematic area. Topics include: processes of globalization, indicators of economic and social development, sustainable development issues, global and geo-politics, cultural integration/coherence and diversity.

Philosophy (0314) - 0.5 credits

10-12th grade Preference given to seniority

This class examines what has largely been considered the most fundamental questions of human existence. Relying on our rational and logical skills, we will study what many philosophers believe to be the answers to these deeply puzzling issues.

Sociology (0313) - 0.5 credits

9-12th grade Prerequisite: None

Sociology is the scientific study of human interaction and human group behavior in modern societies. This course covers the following concepts which are basic to sociology: (1) culture and social structure (2) the individual in society, (3) social inequality, (4) social institutions, and (5) changing social world, as related to sociology.

Global Journalism (0428) - 1 credit

9-12th grade

This elective will focus on the skills and knowledge required to produce a newspaper and press releases, and how to communicate effectively. Students will devote much of their time to the publication of their school newspaper. They will decide on the name and will write, design and format a paper that is published every 3 weeks. Students will learn how to conduct interviews, write in a variety of journalistic forms, discuss editorial positions, and help produce and edit the newspaper. They will learn how to evaluate news, advertising, and propaganda effectively. Students will also have opportunities to understand how to gain exposure and attract the press by working with our Public Relations Director on promoting events, press releases and articles.

Marketing Communications (0458) - 0.5 credit

10th-12th grade No prerequisite

Students will learn to write a marketing communication plan using the simple Planning System by looking at what information market research can and cannot provide, understanding the media (largely driven by social media, branding, buyer behavior and moving with the changing business environment).

They will manage specific marketing communication tools that marketing professionals have to put into practice at some time or other. These include selling and sales management, advertising, PR, sponsorship, sales promotion, direct mail, exhibitions, packaging, and finally, websites that work and social media that wins.

Physical Education

A student has to have two years of Physical Education (PE) for graduation.

Physical Education (0205) - 1 credit

9-10th grade

In PE, students will be working on various units to promote gross and fine motor skills including; flag football, basketball, soccer, track and field, volleyball, ping pong and badminton. Students will be assessed on uniform dress, active participation, and skills.

Technology Education

Not a requirement for ANS Diploma.

Introduction to Animation (0436) - 0.5 credits

9th-12th Grade

Students will learn traditional and digital techniques, 2-D or 3-D computer animation. In addition to basic theory and mechanics behind animation develop observational and drawing skills and study the fundamental principles of character design, layout and storyboarding.

Animation I- 0.5 credits

9th- 12th Grade

This course is ideal for students who want to explore the world of Animation more in detail and challenge their creativity as we cover different kinds of animation such as Computer Animation, Motion Graphics and Stop Motion.

iMovie for Film-making – (0438) 0.5 credit

9th-12th Grade

Students will learn the basics of filmmaking, which include: scripting/storyboarding, using multiple angles and composition techniques, story editing in iMovie and getting a clear understanding of the pre-production, production and post-production process in movie making.

Introduction to Robotics (0442)-1 Credit

8th- 12th Grade

This course is ideal for students who enjoy problem-solving and want to develop interpersonal skills through working in a collaborative team setting while building and programming robots to overcome challenges. It all adds up to tons of fun while they learn to apply science, technology, engineering, and math concepts to solve a problem. Along their discovery journey, they develop critical thinking, basic STEM applications, and even presentation skills, as they must present their solutions with a dash of creativity.

Introduction to Computer Science- 1 Credit

8th-12th Grade

This course is an introduction to computer science and the art of programming. CS50 is designed for students in grades 8 - 12, with or without prior programming experience. While a variety of programming languages are used (C, Python, SQL, Java, CSS, HTML), the main takeaway is using strategic thinking to create, within a symbolic language. Problem sets are inspired by real-world domains of biology, cryptography, finance, forensics, and gaming. This course's design was adapted by Dennis Gallo (ANS '18) from Harvard University's course of the same name CS50.

Career Orientation

Senior Capstone Project: - 1 credit

12th Grade

The Senior Capstone Project provides seniors the unique opportunity to pursue an area of interest, learn more about that issue/ topic, and share that information with the ANS community. This Project affords students the chance to demonstrate their abilities to, among others: plan strategically; problem solve; think critically and creatively; articulate ideas both verbally and in writing; communicate with and educate others; and manage their time effectively – all skills students have, theoretically, developed during their time at ANS. The Senior Capstone Project is, in short, the culmination of all of the skills that high school seniors have acquired during their academic careers thus far. The Capstone Project, if done well, will provide students an illustration of both their academic abilities and their academic/ professional interests in support of their applications to colleges/ universities. Most importantly, these transferable skills are also the keys to success at the college/ university level and beyond, regardless of the field of study.

College Advisory (0451)

12th Grade

This is a semester course offered 1st semester to seniors. The focus is on this college fit, college applications, essays and college admissions process. Students will also have the opportunity to meet with visiting college representatives. Those students planning to apply under the Early Decision or Early Application deadlines are strongly encouraged to enroll in this course. This course will be embedded in the Senior Thesis Course.