



## High School

Program of studies

2020 - 2021

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## OUR MISSION

*St. Johnsbury Academy Jeju (SJA Jeju)* is a diverse, comprehensive, and independent educational community grounded by our traditions, our deep optimism regarding young people, and our commitment to academic excellence:

**Character:** To teach good character by modeling and fostering compassion, respect, responsibility, and integrity.

**Inquiry:** To foster a love for learning by challenging individuals to pursue knowledge, creativity, and intellectual self-reliance.

**Community:** To encourage each individual to understand his or her relationships, rights, and responsibilities within a community that is itself part of the larger world.

Our culture fosters a tradition of respect for all members of our community, regardless of their nationality, ethnicity, cultural background, or economic status.

## OUR THREE PROMISES

***We will do all we can to help each student be the best person possible.***

We are committed to the values of respect, compassion, integrity, and responsibility. We have compassion and empathy and we believe in loving those most who need it most.

***We will do all we can to help each student be the best learner possible.***

We value expertise and creativity. We provide the supports and opportunities for students to pursue their passion and develop a love for learning.

***We will do all we can to help each student become part of something bigger than him/herself.***

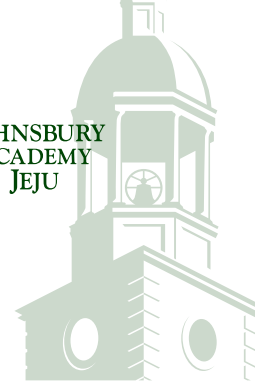
When students come to our school they become part of the most talented and diverse group of individuals they may ever know as friends and colleagues. They develop an intellectual and emotional connection to making this community a better place.

## OUR PHILOSOPHY

Employing innovative and traditional methodologies, the school is committed to personally relevant instruction. We strive to provide opportunities for students to gain a strong understanding in those studies calculated to provide a life foundation for the global citizen, enabling them to be intellectually self-reliant and to function as constructive, moral members of society.

Likewise, the school undertakes to make the acquisition of knowledge a valued social goal by developing an active appreciation of local and world culture. The school also provides opportunities for its students to build those skills useful for personal self-sufficiency.

*St. Johnsbury Academy Jeju* is committed to the idea that learning is most natural and teaching is most effective in a community atmosphere where collaboration and respect for others is part of the common daily business. Small classes, the advisor program, and a diverse offering of extracurricular activities all exist to support this notion of community.



# OUR CURRICULUM

## Teaching Philosophy

The *SJA Jeju* high school serves students in 9th-12th grades, with our inaugural graduating class earning their diplomas in June of 2020. The high school follows the concept that students learn best when appropriately challenged and encouraged to reach their highest potentials. We strive to help each student discover his or her passion in learning.

We recognize that students learn in different ways. To this end, our educators develop strong student relationships so that they can act as advisor/mentor to each child they serve and acquire a unique understanding of each student's abilities, interests, and needs. This focus on creating a personal, nurturing environment is crucial for students as they develop emotionally and intellectually and prepare for higher learning.

Our academic philosophy stresses both inquiry and project-based learning. The curriculum consists of units of study in which projects are often the key component. This helps students to develop essential skills during the process of hands-on, collaborative learning. This educational approach is not top-down, but bottom-up, as teachers facilitate student learning and intellectual development that is student-centered.

*SJA Jeju* values each student's passion and this process respects the need for meaningful engagement. Students are challenged to develop critical thinking and high-order reasoning by actively solving problems through both real-world experience and state-of-the-art simulations.

## Inquiry-Based Learning Approach

*SJA Jeju* uses an "inquiry-based" approach to learning in which students pose questions that help guide their search for understanding. Inquiry-based instruction is positioned at the heart of the high school academic classroom. High school instruction places increased emphasis on assessing students as members of a responsive learning community. Students are expected to demonstrate learning by organizing and presenting information in their areas of inquiry to increasingly formalized audiences.

While inquiry-based learning comes in all shapes and sizes and with varying number of steps in a variety of different school settings, these curricula all share a common thread regarding the processes of investigation and learning that are circular in nature.

**Immerse** - building curiosity and background knowledge

**Investigate** - students research the subject; they ask questions, look for and find answers

**Coalesce** - more succinct searching occurs, summarizing, and building new knowledge

**Go Public** - students share what they have learned with other students

Within the framework of this high school course of studies, our faculty strives to keep inquiry at the center of each academic unit. The teachers also utilize standards (and more specifically, their benchmarks) to establish learning goals for their students. Unit and lesson plans are developed to ensure that students are able to demonstrate their learning as measured against our standards and benchmarks.

## Core Curricular Content

We use AP Springboard for our English and Math programs. SpringBoard is the College Board's comprehensive instructional program in English Language Arts and Mathematics for all students

in grades 6–12. SpringBoard offers research-based instructional strategies and practices that provide a clear road map forward by preparing students for college-level studies. It also focuses on 21st-century skills in research, technology, and media.

Since the curriculum in mathematics and science begins in middle school's 8th grade with courses in Algebraic Foundations and Life Science, some high school students will be able to access a broad spectrum of advanced (AP) math and science courses beginning in 11th and 12th grades. This type of enhanced sequence would essentially enable them to design specific academic concentrations in areas like Math, Science, History, Technology and the Arts.

## Standards and Benchmarks

At *SJA Jeju* subject specific standards and benchmarks are drawn from the United States' *Common Core State Standards* (CCSS), *New Generation Science Standards* (NGSS), the AERO curriculum framework, which is supported by the State Department's Office of Overseas Schools, the *International Society for Technology in Education* (ISTE), and the *National Core Arts Standards* (NCAS).

## Unit Planning

Teachers at *SJA Jeju* use the *Understanding by Design* (UbD) framework for unit planning. By employing this framework to design units of study, learning is focused on the understanding of the grade-specific benchmarks and the broader overarching standards. Teachers begin to design units with the learning goals (standards and benchmarks) in mind from the start.

All classroom instruction, learning activities and assessments are designed to facilitate students' engagement with and understanding of the standards and benchmarks linked to the unit. Educational resources are also selected to help foster students' understanding of the unit's specific learning goals. At *SJA Jeju* the unit design process is a collaborative effort that encourages teachers to share their professional expertise with each other.

# OUR PROGRAMS

## THE SENIOR CAPSTONE

Capstone is a culminating experience for all *SJA Jeju* Seniors. The Capstone course builds upon the habits of learning inspired by the Reggio Emilia approach in our pre-primary programs as well as the inquiry-based approach that is at the heart of all instruction throughout our elementary and middle schools.

Capstone represents the culmination of all previous learning and serves as an opportunity for students to demonstrate mastery of *SJA Jeju* standards and expectations as they prepare to further their education, embark on careers, and carry their overall *SJA Jeju* experience into their personal and professional lives.

Ultimately, the capstone curriculum is linked to the very mission of the school. The development of a professional attitude sets the tone for **character**. The research and problem solving required to complete the program addresses **inquiry** and the sharing of ideas with the Academy and local communities addresses **community**.

In addition to meeting the mission of the school, the goals of the Senior Capstone course are to help students sharpen their expertise against even higher standards of college and professional rating in the following areas:

**Problem-solving:** Identifying a problem, developing a new set of skills, apply the newly developed skills to solve the problem, and reflecting on the quality of the implemented solution

**Communication:** Discipline-specific writing formats, editing, revision, and public speaking

**Citizenship:** Self-management strategies and analysis of community needs. Defining the characteristics of a professional and acting and producing to that definition

## ADVANCED PLACEMENT COURSES (AP)

The Advanced Placement program of the College Board is offered to students who have demonstrated a superior understanding of the subject matter and have signified their desire to attempt to achieve college credit for courses taken while they are still in high school (sophomores, juniors, and seniors). Many major colleges and universities, at their discretion, accept advanced placement for credit, recognizing the successful completion of an AP exam.

*SJA Jeju* will offer 16 AP courses during the 2020/21 SY for students that meet the prerequisites to take these courses. We are proud to offer the following AP course options to qualified students:

AP Chinese Language & Culture

AP Calculus AB

AP Calculus BC

AP Statistics

AP Chemistry

AP Physics I

AP Physics C

AP Environmental Science

AP Microeconomics

AP Macroeconomics

AP Psychology

AP Human Geography

AP Studio Art: 2D Design

AP Studio Art: Drawing

AP Studio Art: 3D Design

AP Computer Science Principles

Although future AP course offerings at *SJA Jeju* are still TBD, we are hopeful to add most of the following AP options in the next couple of years as we seek to grow our total number of AP courses beyond 20 different offerings: AP English Language & Composition; AP Biology; AP Research; AP Seminar; AP Spanish Language & Culture; AP World History; AP Computer Science A; AP United States History.

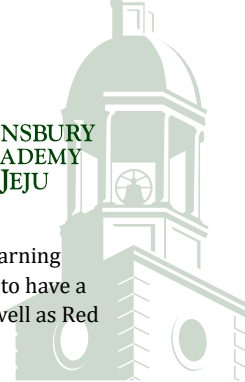
## REQUIREMENTS FOR ENROLLMENT IN AP COURSES

As AP classes require students to invest a great deal of time and effort to be successful, the following guidelines will manage eligibility for enrollment:

1. AP courses are only open to students in 10th, 11th and 12th grades.
2. Students must meet all of the course-specific prerequisites as outlined in the HS Program of Studies.
3. Students must have earned an overall GPA of 3.5 or higher (with stronger consideration/emphasis placed on subject-relevant grades when/if necessary).
4. Students can take a maximum of **two** AP courses in 11th and 12th grades, and a maximum of **one** AP course in 10th grade.
  - Students who wish to take two AP courses must have earned an overall GPA of 3.8 or higher
5. For any student considering AP courses beyond the maximum allowance, special permission must be obtained from the student's advisor, from all AP teachers in prospective courses, and from the HS Principal.
6. AP courses are all year-long courses and, thus, cannot be dropped at the start of the second semester. AP add/drop is extended beyond regular add/drop in August to ensure all students are fully committed to the course.

## ATHLETICS

*SJA Jeju's* high school follows the GEC sports calendar and participates in KISAC tournaments and athletic competitions. We are proud to offer several team and individual sports including: basketball, volleyball, badminton, soccer, track & field, swimming, tennis, and pingpong.



## ARTS

The mission of the Fine and Performing Arts Departments is to offer instruction, resources, and a culture that inspires students to develop artistic awareness, creativity, and proficiency by providing a professional environment and a comprehensive curriculum in the visual and performing arts. We believe that the exploratory creative process encourages cognitive growth and builds problem-solving skills that promote resilience and flexible thinking.

## TECHNOLOGY

The high school is a one-to-one laptop environment. All students are required to use an Apple notebook with the Apple operating system. Different technologies are integrated mindfully in all classes and will not interfere with the natural flow of discursive interactions, but instead be used as research, productivity, and innovation tools. Teachers are trained and are expected to use technology to enhance student learning while encouraging innovation and redefinition.

## MORNING ASSEMBLY

Several mornings each week, students and faculty in the secondary divisions meet for a daily assembly. Daily announcements are read with the Head of School, the Head of Secondary and Student Council often leading these and giving short talks. Moreover, students or featured guests often speak and/or perform. During morning assembly, students always sit with their advisors and alongside their classmates in their advisories. These groups become tight-knit as students see each other and their advisors each morning. Morning assemblies take place 2-3 times each week.

## ADVISORY PROGRAM

The advisory program is a natural outgrowth of the school's mission statement. The purpose of the program is to foster character, inquiry, and community. We achieve this by providing students with a faculty mentor, and by including them in a group of peers with whom they may develop close, positive, personal relationships and expand their capacity for change and growth.

The advisor is the primary connection to the school for both students and family. Students will be in an advisory group of roughly 8 classmates through their graduation. Advisory days are each morning opposite morning assemblies, meeting 2-3 times a week.

## SERVICE LEARNING

Service Learning is a valued program that stimulates curricular connections. It helps children identify genuine service needs in our community and the broader world. The Service Learning program is aligned with SJA Jeju's Mission statement: To encourage each individual to understand his or her relationships, rights, and responsibilities within a community that is itself part of the larger world.

Students are involved in the preparation and action needed to provide a service. They also reflect on the project and demonstrate or share what they have learned to others. The high school community actively

supports school-wide community service and service learning programs throughout the year. Moreover, we are proud to have a dedicated Service Learning Club each ASA semester as well as Red Cross Youth.

## KOREAN LANGUAGE, HISTORY AND CULTURE

The aim of Korean Language, History and Culture course is to provide exposure to the host country's history and culture as well as to aid in the utilization of Korea's diverse resources and enhance the educational experiences of our students. It is our firm belief that experiencing and appreciating other cultures facilitates a heightened awareness of one's own, as well as respect for the culture of others.

The school prepares its students to be responsible global citizens. Among the Promises at *SJA Jeju*, we encourage "open-mindedness, tolerance and cross-cultural understanding," and the "respect of our host country's culture, traditions and environment." The Korean Language, History and Culture program is of primary importance, and an effective tool, in attaining these goals.

## COLLEGE PREPARATION

All high school students will be assisted in the process of selecting and applying to colleges and universities by an experienced team of counselors. A sequential plan of action will be put in place to help students maximize their chances of admission, and to help both parents and students to navigate the selection and application process. SJA Jeju's College Counselor is available to meet with parents and students on an ongoing basis.

## GRADUATION REQUIREMENTS

Students must complete 4 years of high school study (grades 9-12), accumulate a minimum of 28 credits (as outlined below), and participate in 2 seasons of team sports, in order to earn and receive an SJA Jeju HS Diploma.

Courses	Credits
English	4
Science	3
Math	3
History	3
Fine & Performing Arts	2
Physical Education & Health	1
Advanced Korean Language*	1
Advanced Korean History*	1
Senior Capstone**	1
Electives (core and non-core)	9
<b>Minimum Total Required</b>	<b>28 credits</b>

\*Must be taken in 10th, 11th or 12th grade (cannot be taken in 9th grade)

\*\*Must be taken in 12th grade only

**Semester-Block Schedule :**

The SJA Jeju semester-block schedule creates more flexibility, differentiation and opportunity for advancement across subjects than most traditional schools.

Students in 9th, 10th & 11th grades must take 8 “blocks” of study (equaling either 7.5, 8.0 or 8.5 total credits) for the school year. Seniors must take 7 blocks of study including Senior Capstone. However, seniors may request an additional course to put them at 8 “blocks” of study, though this is not recommended due to the extra work involved in applying to college. As a result, students will select 31 total blocks of study over 4 years at SJA Jeju, creating a total of 13 electives for students to advance further in one or more subjects, or to explore multiple electives to broaden their academic experience.

**10th & 11th Grade Transfer Students:**

The academic transcripts from Korean or other international schools will be reviewed and credit awarded (on a pass/fail basis) based on the decision of the SJA Jeju Registrar. Students who receive credit in individual subjects will not be required to repeat those courses and will have their graduation requirements reduced as such.

**CERTIFICATES OF ACADEMIC CONCENTRATION (CACs)**

At SJA Jeju, students can choose to focus on a specific area of academic concentration. CACs recognize a student's focus and commitment by adding the area of concentration to the student diploma.

**AREAS OF CONCENTRATION FOR THE 19/20 SY:**

Visual Arts (SJA Jeju CAC-VA)

Science (SJA Jeju CAC-S)

Mathematics (SJA Jeju CAC-M)

**ADDITIONAL AREAS OF CONCENTRATION FOR THE 20/21 SY:**

Engineering (SJA Jeju CAC-E)

Social Science (SJA Jeju CAC-SS)

**REQUIREMENTS:**

1. Complete at least 2 electives above the course work required for graduation<sup>1</sup> in the relevant area of concentration.
2. Complete a minimum of 2 AP courses in the area of concentration.
3. All AP courses must be taken at SJA Jeju. Courses or tests taken outside the school will not be counted towards an area of concentration
4. Maintain a 3.5 GPA average in all courses in the concentration.
5. Must complete a Senior Capstone project on a topic related to the area of concentration that is approved by the Principal and/or Head of School.

**AREAS OF CLARIFICATION:**

AP courses that qualify for science concentration: AP Physics 1; AP Chemistry; AP Environmental Science; AP Physics C

AP courses that qualify for math concentration: AP Calculus AB; AP Calculus BC; AP Statistics

AP course options for Visual Arts Concentration: AP Studio Art 2D; AP Studio Art 3D; AP Drawing

**BEGINNING IN 20/21 SCHOOL YEAR**

AP courses for Social Sciences Concentration: AP Human Geography; AP Psychology; AP Economics (Micro/Macro)

AP courses for Engineering Concentration: AP Computer Science Principles; AP Physics I; AP Calculus AB/BC; AP Physics C

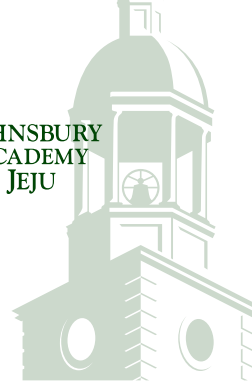
**HS DAILY ACADEMIC SCHEDULE**

Monday & Friday	
08:30 - 08:55	Morning Assembly
09:00 - 10:05	Block A
10:10 - 11:15	Block B
11:20 - 12:00	Lunch
12:05 - 13:10	Block C
13:15 - 14:20	Block D
14:25 - 15:30	Block E
15:30 - 15:55	Conference Period
16:00 - 17:00	After-school Activities

Tuesday, Wednesday & Thursday	
08:30 - 09:35	Block A
09:40 - 10:05	Advisory
10:10 - 11:15	Block B
11:20 - 12:00	Lunch
12:05 - 13:10	Block C
13:15 - 14:20	Block D
14:25 - 15:30	Block E
15:30 - 15:55	Conference Period
16:00 - 17:00	After-school Activities

<sup>1</sup> There are no Engineering graduation requirements. Therefore, students interested in meeting the elective requirement need to take both STEAM and Computer Science Foundations prior to the AP requirements for CAC-E.





# SJA JEJU HS COURSE CATALOGUE

## ENGLISH COURSES (4 credits required for graduation):

### English 9 (required : 9th grade)

This course will prepare students to be critical readers, writers, and speakers. Students will read many thought-provoking texts from a variety of genres, including *To Kill a Mockingbird* and *Romeo and Juliet*. While closely examining these texts, students will learn critical reading and analysis skills. Each unit is accompanied by 2 embedded writing assessments and 1 unit-aligned project. By the end of this course, students will have a strong grasp of argumentative and analytical writing skills, communication and presentation skills, and critical reading skills in order to be successful in English 10.

*Prerequisite: N/A*

### English 10 (required : 10th grade)

English 10 is a semester-long class that focuses on developing informative and argumentative writing skills; research, close reading and critical analysis skills; public speaking and debate skills. This semester will utilize an inquiry-based model where students focus not only on mastering various skills but also on learning to think about and question themselves and the world around them. In addition, students will work regularly in collaborative groups. For example, high quality writing is frequently the result of peer editing, writing conferences, and peer revision. Although each student will produce original writing, feedback is an essential part of the process.

*Prerequisite: English 9*

### English 11 (required : 11th grade)

English Grade 11 is a semester-length class for 11th grade students that will further prepare students for college level work by introducing increasingly complex texts with a focus on developing sophisticated thinking and writing. The class will also continue to develop each student's critical reading and writing skills with a strong emphasis on literary analysis and evidence based reasoning. With assignments based on the Common Core Standards, students will learn to develop, write and present their work to a variety of audiences.

*Prerequisite: English 10*

### English 12 (required : 12th grade)

English Grade 12 is a semester-length class for 12th grade students that will serve as the culmination of a student's high school English education. Although the class will emphasize reading, writing, and public speaking, particular emphasis will be placed on research, rhetoric, and logic. With assignments based on the Common Core Standards, students will develop increasing comfort with public speaking, informal debate, and the defense of interpretations of complex texts.

*Prerequisite: English 11*

## ELECTIVES - ENGLISH

### Public Speaking

Based on the Common Core Speaking and Listening Standards, Public Speaking will give students a venue to practice writing and delivering several types of speeches including Introduction, Informative, and Persuasive. This course is available to all HS students regardless of grade level.

*Prerequisite: N/A*

## Modern Literature

Modern Literature will primarily focus on reading and discussing texts that explore the issues and controversies of living and thriving in a modern world. The class will follow a discussion model and will use literary analysis and reader response essays to provide a means for students to explore various interpretations of the texts.

*Prerequisite: English 9*

## Screenwriting for Film

This course introduces students to the art and process of writing short movies or fictional series. It is a hands-on course where students take on various exercises and team collaborations to explore the many aspects of screenwriting, from plotting and writing dialogue to character development and plot points. The course will be a fun blend of writing sessions, short exercises, short lectures, film viewing and discussions, and critique workshops. Students will create short scripts based on genre conventions, with the goal of being selected for filming by the filmmaking students.

*Prerequisite: N/A*

## HISTORY COURSES (3 credits required for graduation):

### World History - I (required : 9th grade)

This is a survey course beginning with the earliest civilizations and highlighting important cultural, economic, and political developments throughout the world until the twelfth century. The course aims to strengthen students' reasoning skills, including comparison, contextualization, causation, continuity, and change. A diverse selection of carefully crafted projects and exercises guide students in thinking, reading, and writing as historians, with the goal of better understanding the groundbreaking nature of this period in human history and how it has shaped our modern world.

*Prerequisite: N/A*

### World History - II (required : 10th grade)

This course is a survey of the key events from life in Medieval Europe to the Industrial Revolution. The scope of the course ranges widely across all aspects of the human experience, including: economics, science, religion, philosophy, politics & law, military conflict, literature & the arts. The course will illuminate connections between our lives and those of our ancestors. Additionally, students will learn to read for comprehension, analyze information by summarizing, categorizing, and evaluating, and write by expressing facts and opinions.

*Prerequisite: World History - I*

### 20th Century History (required : 11th grade)

This course is a survey of selected topics that have shaped the 20th century from World War One to the Cold War. The goal of this course is to gain a better understanding of the events and the ideas that have shaped the contemporary world. The course also strives to prepare students to assess historical materials, evaluate relevance and reliability, and deal critically with the problems and materials in Modern 20th Century History.

*Prerequisite: World History I & II*

**ELECTIVES - HISTORY****History of Cinema**

"History of Cinema" is a theoretical film course that trains students in the art of filmmaking through the analysis and discussion of important works of cinematic history. In the course, we will examine the various "dimensions" that make up such a dynamic art form. Students will learn how to develop a historical appreciation of film based on the cinematic traditions contained within narrative, documentary, and experimental forms, and acquire a critical, technical, and aesthetic vocabulary relating to particular cinematic practices and structures. We will examine how meaning in films is shaped by the uses of camera, editing, lighting, sound, and acting and evaluate the importance of genre and the legacy of individual filmmakers throughout the history of cinema.

*Prerequisite: N/A*

**United States History**

This course is a survey of the American Revolution to World War Two, with an emphasis on the 20th century. Using primary documents, film, and audio recordings, students will learn about the various political, social, religious, and economic developments that have shaped and continue to shape the United States. The course also strives to have students either agree or disagree with the problems, events, and information in United States History.

*Prerequisite: World History I. Successful completion of 9th grade*

**AP Human Geography**

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socio economic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards (2012).

*Credits: 1.5*

*Prerequisite: English 9 - 93%, World History I - 93%, & School Permission.*

**AP Economics**

AP Economics is a college-level, full-year course designed to provide students with a thorough understanding of the principles of economics. The course is split into 2 areas of focus in order to prepare students for the AP Microeconomics and AP Macroeconomics exams in May. The aim of AP Economics is to provide the student with a learning experience equivalent to that obtained in a typical college introduction level economics course. Students will learn to think like economists – to question, to evaluate marginal costs and marginal benefits, to understand international trade and relations, and the role of government in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

*Credits: 2.0*

*Prerequisite: Algebra II & School Permission.*

**AP Psychology**

*AP Psychology is an introductory college-level psychology course. Students cultivate their understanding of the systematic and scientific study of human behavior and mental processes through inquiry-based investigations as they explore concepts like the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology.*

*Credits: 1.5*

*Prerequisite: English 9, World History I, Biology, Algebra 1 & School Permission.*

**MATH COURSES** (3 credits required for graduation):

\*Kindly note that math, due to the fact that it's a skills-based subject, follows a sequence in which all math courses are studied rather than grade-level assignments for courses. Students are only permitted to sign up for the next course within the sequence and cannot "jump around" in the sequence. However, new HS students will all be given a placement test to determine where to best place them within the SJA Jeju math sequence according to their previous learning.

The SJA Jeju HS Math Sequence is as follows:

Algebra I
Geometry
Algebra II
Trigonometry
Pre-Calculus
Calculus

**Algebra I**

In Algebra I students will reinforce their knowledge of basic algebraic concepts and will focus on evaluating and simplifying algebraic expressions and linear equations. Students will also evaluate, analyze and graph functions and relations, with special focus on linear and quadratic functions. Applications of systems of equations will be studied and some of these concepts will be used to solve statistical problems. They will also study arithmetic and geometric sequences, which will serve as an introduction to exponential functions and their applications. The course is focused on projects related to each academic unit. There will be exploratory activities related to each topic, which will be student-led and will involve collaborative work in groups. Some students may test out of Algebra I depending on their success in 8th grade math, and the math department's placement test.

*Prerequisite: N/A*

**Geometry**

This course is designed to emphasize the study of the properties and applications of common geometric figures in both two and three dimensions. It includes the study of transformations and right triangle trigonometry. Inductive and deductive thinking skills are used in problem-solving situations, and applications to the real world are stressed. It also emphasizes writing proofs to solve (prove) properties of geometric figures and advanced concepts for students with previous experience in geometry.

*Prerequisite: Algebra I*

**Algebra II**

In Algebra II students will pull together and apply the accumulation of learning that they have from their previous courses. Our key areas of focus will be: expanding the understanding of quadratic functions to include complex solutions; understanding polynomial functions; understanding rational functions; understanding radical functions; understanding logarithmic functions; and beginning trigonometric functions. Students will additionally use their knowledge of functions to model and solve statistical problems. The course is based around the ideas of project-based learning. There are several exploratory activities to do in class and students are expected to build their own knowledge with the teacher and through cooperative and independent learning.

*Prerequisite: Geometry*



## Introduction to Statistics

In this class, students will develop and use statistical tools for describing variability in data and for making informed decisions that take it into account. Units of study will be Interpreting Categorical and Quantitative Data; Making Inferences and Justifying Conclusions; Conditional Probability and the Rules of Probability; and Using Probability to Make Decisions.

*Prerequisite: Algebra II*

## Trigonometry

In Trigonometry, students will pull together and apply the accumulation of learning that they have from their previous courses. Our key areas of focus will be: Sequences and Series; Logarithmic and Exponential Functions; Functions and their graphs – including, but not limited to: polynomials, exponentials, logarithmic, rational, square and cubic root; Trigonometric Functions and their graphs; Trigonometric Identities and their proofs; as well as Analytic Trigonometry and Trigonometric Applications including the Law of Sines and Law of Cosines.

*Prerequisite: Algebra II*

## Pre-Calculus

Pre-Calculus prepares students for a more intense study of Mathematics. The study of conics is extended to include ellipses and hyperbolas. Trigonometric functions are further developed to include inverses, general triangles, and identities. Matrices provide an organizational structure in which to represent and solve complex problems. Students expand the concepts of complex numbers and the coordinate plane to represent and operate upon vectors and represent points and curves in polar and rectangular form. Students will represent and solve problems with parametric equations, vectors, and complex numbers. Finally, students will study Cavalieri's Principle to develop an understanding of limits.

*Prerequisite: Trigonometry*

## Calculus

This course covers all of the first semester as well as some of the second semester topics of a college-level calculus course. Included are studies in limits and continuity, derivatives and integrals and selected applications of them and an introduction to differential equations. Pre-Calculus topics are reviewed when appropriate to ensure contextual presentation of new material. A graphing calculator is required.

*Prerequisite: Trigonometry, Pre-Calculus and School Permission*

## AP Statistics

The AP Statistics course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

*Credits: 1.5*

*Prerequisite: Algebra II & School Permission.*

## AP Calculus AB

A rigorous and challenging course comparable to courses in colleges and universities, AP Calculus AB is designed for students with excellent mathematical skills who seek college credit, college placement or both from institutions of higher learning. Based on the College Board Advanced Placement AB syllabus, the course approaches the calculus concepts (limits and continuity, derivatives and integrals and their applications) from multiple perspectives — graphically, analytically, numerically and verbally. A graphing calculator is required.

After the completion of this course, students are expected to take the AP Calculus AB exam.

*Credits: 1.5*

*Prerequisite: Trigonometry, Pre-Calculus (B or higher) & School Permission*

## AP Calculus BC

Designed as an extension of AP Calculus AB rather than an enhancement, AP Calculus BC includes, along with all AP Calculus AB topics, additional topics such as: integration by parts and by tables, improper integrals, Euler's Method, infinite series, parametric equations, and polar coordinates and polar graphs. A graphing calculator is required. After the completion of this course, students are expected to take the AP Calculus BC exam.

*Credits: 2.0*

*Prerequisite: Trigonometry and Pre-Calculus (A or higher) OR AP Calculus AB & School Permission*

## Multivariable Calculus

Unlike AP Calculus AB and AP Calculus BC in which students study calculus of a single variable, Multivariable Calculus, a rigorous college course, focuses on functions of two or more independent variables. The concepts studied in this course are applied in many different fields — thermodynamics, electricity and magnetism, economics, modeling fluid or heat flow, etc. The topics included are vectors and the geometry of space, vector-valued functions, functions of several variables, multiple integration, vector analysis, and second order differential equations. A graphing calculator is required.

*Prerequisite: AP Calculus BC*

## SCIENCE COURSES (3 credits required for graduation):

\*The SJA Jezu science sequence begins with biology for all students. After biology, students can choose to take chemistry or physics as their next course depending on general preference and relative math ability. The entire science sequence (Biology; Physics; Chemistry) must be completed prior to AP courses (except for AP Environmental Science which only requires biology and chemistry).

### Biology (required : 9th grade)

Biology is an introductory course in the life sciences that covers a broad range of topics. These include the study of the diversity of life, chemistry of life, cellular biology, genetics and heredity, evolution, environmental science and human systems. Students learn biological concepts through the scientific practices of modeling and inquiry. Laboratory experiences foster an understanding of scientific processes and the development of scientific habits of mind. Students design and conduct investigations, analyze and present data, and formulate evidence-based conclusions.

*Prerequisite: N/A*

### Chemistry

In this course students will learn general concepts of Inorganic Chemistry. Their base of knowledge of Chemistry will be expanded further and with more mathematical rigorousness, appropriate for high school level. Students will be encouraged to learn through experimentation and questioning, and most of the key concepts in Chemistry (Atomic Structure, Periodic Table organization, Chemical Bonding and Stoichiometry) will be introduced in this fashion. Problem solving and experimental techniques will be taught, alongside new ideas. Applications of basic Algebra such as linear equations, systems of equations, and data analysis and regression, will be used throughout the course.

*Prerequisite: Biology*

**Physics**

Physics is the science that uses observation and reasoning to explain why things happen in the real world and how to predict what will happen next. In this class, we will be studying “mechanics”, with an emphasis on forces and Newton’s Laws; motion in one and two directions; and energy conservation laws. Physics, especially mechanics, explains how and why things move. This is an inquiry-based course, where laboratory experiences will emphasize and reinforce the development of physical intuitions related to the concepts and principles of physics analyzed in class.

*Prerequisite: Biology*

**Advanced Chemistry**

Advanced Chemistry continues building upon the foundations the student acquired in Chemistry. As an experiment-based course, students will learn through experimentation, designing their own lab procedures and applying their knowledge through trial and error. Several experimental techniques used in research labs will be taught. Topics include: Solutions, States of Matter, Gases, Thermochemistry, Reaction Rates, Equilibrium, Acids and Bases and Redox Reactions. Applications of Algebra such as linear and quadratic equations, systems of equations, logarithmic functions and data analysis and regression, will be used throughout the course.

*Prerequisite: Completed HS Science Sequence & School Permission*

**AP Environmental Science**

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science, through which students engage with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world. The course requires that students identify and analyze natural and human-made environmental problems, evaluate the relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary, embracing topics from geology, biology, environmental studies, environmental science, chemistry, and geography.

*Credits: 1.5*

*Prerequisite: Biology, Chemistry & School Permission*

**AP Chemistry**

This is a college-level Inorganic Chemistry course, which prepares students to successfully sit for the College Board AP Chemistry exam. Topics include: structure of matter; chemical bonds; types of reactions: stoichiometry; kinetics; chemical equilibrium; thermodynamics; and electrochemistry. Focus will be made in inquiry-based laboratory experiment with emphasis in student-led investigations. Moreover, applications of basic Algebra such as linear equations, systems of equations and data analysis and regression will be used throughout the course.

*Credits: 2.0*

*Prerequisite: Completed HS Science Sequence, Algebra II, & School Permission*

**AP Physics I**

This is an algebra-based, introductory college-level physics course. Students cultivate their understanding of Physics through inquiry-based investigations as they explore these topics: kinematics; dynamics; circular motion and gravitation; energy; momentum; simple harmonic motion; torque and rotational motion; electric charge and electric force; DC circuits; and mechanical waves and sound. This course requires that one quarter of the instructional time be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to demonstrate the foundational physics principles and apply all seven science

practices defined in the course framework.

*Credits: 1.5*

*Prerequisite: Completed HS Science Sequence & School Permission*

**AP Physics C - Mechanics and Electricity & Magnetism**

AP Physics C: Mechanics corresponds to one semester of an introductory, calculus-based college course. It is especially appropriate for students planning to major in physical science or engineering. AP Physics C: Mechanics covers kinematics; Newton’s laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation.

AP Physics C: Electricity and Magnetism corresponds to one semester of an introductory, calculus-based college course. It is especially appropriate for students planning to major in physical science or engineering. AP Physics C: Electricity and Magnetism builds upon the AP Physics C: Mechanics course. It covers electrostatics; conductors, capacitors, and dielectrics; electric circuits; magnetic fields; and electromagnetism.

*Credits: 2.0*

*Prerequisite: Completed HS Science Sequence. A grade of at least a B+ in Physics. A grade of at least a B+ in Calculus or concurrent enrollment. School Permission*

**FINE & PERFORMING ARTS COURSES**

(2 credits required for graduation):

**FINE ARTS****Art Foundations**

This beginning level art course is designed to be both enjoyable and challenging for students. An emphasis is placed on expanding the use of creativity and problem solving. No previous art training is required, but a desire to learn and an enthusiastic attitude is expected. The course is designed to support a diverse level of experience and skills in the arts. This is a foundations course that introduces students to a variety of materials and technical skills. Through numerous activities and projects, students will be expected to think and act like artists. Students will explore a wide variety of activities and projects-based assignments. This course also includes developing and expanding our visual language through art history and critiques.

*Prerequisite: N/A*

**Digital Photography**

This course introduces high school students to the art and process of digital photography. It is a hands-on course where students take on various exercises and projects to explore camera features, Adobe Photoshop, and personal aesthetic. Topics and projects will be based on the experimentation of lighting, color, composition, visual effects, angles, framing, and photographic genres. In the course, students will build a portfolio that will overtime help refine skill set and individual style.

*Prerequisite: N/A*

**Intermediate Art**

This course is a natural progression from the previous year; building upon the skills acquired in Art Foundations. Students continue to develop their skills and craftsmanship as artists. Students will continue to learn about and practice genres of 2D and 3D art including; drawing; painting; printmaking; and sculpture. The skill level expectations are higher in this course, along with the ability to increasingly think conceptually when approaching an assignment. Students are required to actively use the creative process to plan and implement their

individual ideas. Class projects will incorporate application of various media, techniques and processes helping students connect visual arts to other disciplines.

*Prerequisite: Art Foundations*

### Introduction to Sculpture

This course is an introduction to 3D media as an art form. Projects may be made from a variety of materials and tools including, but not limited to: ceramics, cardboard, wire, wood, and plastic. The emphasis of this course focuses on understanding and applying the aesthetics, processes, form, and function of 3D art forms. Competencies will include technique, craftsmanship and the expressive potential of 3D media. Students will develop a vocabulary specific to the subject and be aware of the safety issues involved in working with materials and techniques. This course is a prerequisite for AP 3D.

*Prerequisite: N/A*

### Graphic Design

The Graphic Design course is an introduction to the world of a professional designer. Students will learn design principles, the power of typography, and how to “sell” their ideas. Students will learn the basics of Adobe Suite, the same software used by professionals across the world. Over the course of the semester, students will create solutions for design needs in real-world scenarios, including events and clubs within the school itself. The final product will be a portfolio of products ranging from logos and advertisements to magazine layouts and package design. No prior art or design experience is necessary for this course, but an interest in creativity is highly beneficial.

*Prerequisite: N/A*

### AP Studio Art: Drawing

The Drawing portfolio addresses issues such as line quality, light and shade, rendering of form, composition, surface manipulation, the illusion of depth, and mark-making. Students’ portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses.

*Credits: 1.5*

*Prerequisite: Art Foundations, Intermediate Art & School Permission*

### AP Studio Art 2D

The 2-D Design portfolio addresses two-dimensional design issues and involves decision making about how to use the elements and principles of art in an integrative way. Students’ portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses.

*Prerequisite: Art Foundations, Intermediate Art & School Permission*

*Credits: 1.5*

*School Permission*

### AP Studio Art 3D

The 3-D Design portfolio involves decision making about how to use the elements and principles of art as they relate to the integration of depth, space, volume, and surface, either actual or virtual. Students’ portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college

*Credits: 1.5*

*Prerequisite: Art Foundations, Introduction to Sculpture, & School Permission*

## MUSIC

\*NOTICE: these are yearlong, every other day courses that require a year’s commitment, unlike most other HS courses that are only one semester, and the full credit is only earned at the completion of the second semester.

### Beginning Band

This class is for the HS student wishing to learn a Band Instrument (Wind/Percussion). No previous musical experience is needed. Students will be guided through the instrument selection process and then after selection is made commence the study of the instrument in a classroom setting with other instrumentalists. Study will be comprised of tone production, technical development, music repertoire development, reading musical notation and basic ensemble practices for preparation to join HS Band. Daily practice and recordings will be required along with possible performances or demo-performances throughout the year.

*Prerequisite: N/A*

### Band

This course is for the student who would like to perform in a Concert Symphonic Wind Band. Instrumentation is made up of wind (woodwind + brass) instruments and percussion. Each student should have prior musical experience (basic instrument proficiency) and basic note/music reading ability. Students will do technical studies/development as well as study/preparation of a variety of genres of music literature both in large and small ensembles. There will be required performances throughout the year as well as festival participation. Practice and recordings throughout the year will be required as class work and preparation. It is helpful if the student has his/her own instrument, but this is not a must.

*Prerequisite: Beginning Band or School Approval*

### Chorus

This course is for the student who would like to perform in a Concert Choir. Voices are mixed and made up of male (bass/tenor) and female (alto/soprano) voices. Each student should have prior choral/vocal experience and basic note/music reading ability. Students will do technical vocal studies/development as well as study/preparation of a variety of genres of music literature both in large and small ensembles. There will be required performances throughout the year as well as festival participation. Solos will be required at some point in the year. Practice and recordings throughout the year will be required as class work and preparation.

*Prerequisite: N/A*

### Orchestra

Orchestra is a performance based class for violin/viola/cello/bass, string instruments. Students will focus on technical development, repertoire preparation as well as ensemble techniques and performance practices. Student must own their own instrument and must have 2/3 yrs playing experience or must audition for director. Student must be able to read musical notation.

*Prerequisite: 2-3 years of experience or Audition. Students must own her/his own instrument.*

## FILMMAKING

### Filmmaking Foundations

Digital Filmmaking is a course that blends hands-on projects and film theory to introduce students to how movies are made. During goal-oriented projects and exercises, students work as members of a tight-knit crew while sharpening their technique. The course allows students to explore various positions within the cinematography, directing, and editing departments. Even though this introductory

course will focus primarily on the roles on a film sets, students will also be introduced to script analysis, directing, visual storytelling, editing, and lighting. As a result of the course, students will begin their personal portfolios consisting of visual exercises, scenes, and short films.

*Prerequisite: N/A*

### Intermediate Filmmaking

This course builds upon the skills already mastered in order to explore and develop the individual student's filmmaking aesthetic. Students will rotate roles within the production, cinematography, directing, and editing teams and collaborate on projects and exercises that survey three major mediums of filmmaking: the narrative form, the experimental form, and the documentary. Students will gain a more nuanced study of filmmaking as they examine the intricacies of plotting, writing dialogue, directing, cinematography, lighting, editing styles, and various genre motifs found in cinema. Students will be exposed to opportunities that will fine-tune their filmmaking strengths, as well as their aesthetic vision.

*Prerequisite: Filmmaking Foundations*

### Acting for Film

This course guides students through the development of acting skills. Students learn to master monologue and scene work through a variety of fun exercises. The aim is to enrich students' understanding of what it takes for the actor to prepare and act in short films or fictional series. The coursework includes helpful warm-ups, improv, dynamic scene work, preparation tools for the actor, short film exercises, scene studies, critique, feedback sessions, and reflection activities. By the end of the course, students will have produced a collection of filmed performances as well as short films with emphasis on acting. Seniors applying for acting programs in university are privy to helpful outside of class rehearsal sessions with the instructor.

*Prerequisite: N/A*

### Film Editing

Film Editing teaches students digital film editing, with a focus on industry-standard tools, concepts, and software. Students will edit films of various genres that are produced in other film courses. Learning video editing is an important skill that can stretch a student's academic achievement into other courses and certainly into college.

*Prerequisite: N/A*

### Directing for Film

This course teaches students how to direct actors in a short film. Students learn to master directing skills pertinent to monologue and scene work. The aim is to enrich students' understanding of what it takes for the director to prepare and direct actors in dramatic or comedic shorts. The coursework includes helpful warm-ups, improv, dynamic scene work, preparation tools for the actor, short film exercises, scene studies, critique, feedback sessions, and reflection activities. By the end of the course, students will have produced a collection of short films with emphasis on directing, which can be instrumental for seniors applying for film programs at university.

*Prerequisite: N/A*

## KOREAN COURSES (2 credits required for graduation for Korean Nationals):

The Korean Ministry of Education requires all Korean students to complete both an Advanced Korean Language & Advanced Korean History course – in either 10th, 11th or 12th grade – in order to satisfy government regulations and in order to earn one's Korean High School Diploma.

### Advanced Korean Language (required)

This course focuses on advanced Korean language. During the semester, students will develop public speech, literature, organizational skills, and research skills. The literature lesson includes the Korean short stories and poetry. Also, this course will focus on creative writing, using correct grammar and spelling, as well as sentence, paragraph, and essay structure. Students will receive feedback during the writing process to help them work toward a polished final draft.

*Prerequisite: Successful completion of 9th grade*

### Advanced Korean History (required)

This is a survey course beginning with the earliest civilizations and highlighting important cultural, economic, and political developments throughout Korean history until the 19th century. This course builds upon the historical knowledge and thinking skills learned in MS Korean History. The course aims to strengthen students' reasoning skills, including comparison, contextualization, causation, continuity, and change. A diverse selection of carefully crafted projects and exercises guide students in thinking, reading, and writing as historians, with the goal of better understanding the groundbreaking nature of this comprehensive period in Korean history. This course, by government mandate, is a yearlong course that meets every other day.

*Prerequisite: Successful completion of 9th grade*

### Korean as a Foreign Language I

This course focuses on the most important learning points for beginning level Korean learners and speakers. This class is intended for students with virtually no previous exposure to learning Korean. Students will develop basic Korean vocabulary, will learn to read and write in Korean, and will be introduced to basic grammatical structures so that they can successfully communicate in real life. Also, students will develop basic Korean writing skills, which will enable them to be successful in subsequent courses.

*Prerequisite: N/A*

### Korean as a Foreign Language II

This course focuses on improving the Korean of intermediate level students. The focus is on reading comprehension, vocabulary development as well as oral speaking. This intermediate Korean course includes practice in group interaction, public speaking, and listening comprehension.

*Prerequisite: Korean as a Foreign Language I*

### Korean Language, History and Culture

Korean Language, History and Culture is the first part of the introductory Korean Language / Culture courses. This course will introduce Hangul (Korean alphabets) and provide students with a basic foundation of Korean language skills in all the areas of listening, speaking, reading, and writing. Students will learn to communicate on a variety of daily topics such as greetings, school, family, locations, food, daily/weekend activities, and neighborhood. In addition, this course provides students (who have minimal or no prior knowledge on Korea) with key features of Korean culture, history and society.

*Prerequisite: N/A*



## PHYSICAL EDUCATION COURSES (1 credits required)

### Physical Education

Physical Education is intended to produce physically literate individuals; that is, young adults who have knowledge, skills and confidence to enjoy a lifetime of healthful physical activity. Students will develop skills in a progressive educational climate that emphasizes behavior, effort, attitude, participation, individual improvement, and skill acquisition. Students will learn various sports, write a short research paper, and be imbibed with the understanding that physical fitness is an important part of a long, healthy life. Infused in this course are also several health-focused units including: nutrition, sleep, sexual education and time management.

*Prerequisite: N/A*

## WORLD LANGUAGES COURSES

Although no credits are required in world languages for SJA Jeju's HS graduation requirements, taking courses in world languages is definitely recommended for students who seek to apply to selective, competitive US colleges and universities

### Spanish I

This is a high school beginner's course for students with no previous knowledge of the Spanish language. Students will learn and be able to: introduce him/herself, tell time, weather conditions, name classroom objects, tell likes and dislikes, identify food groups, family members, use of prepositions, infinitives, subject pronouns, use of interrogatives words and learn about possessive adjectives. The student will start to make simple sentences and he/she will be able to conjugate in present tense. The course is designed to develop and sustain the four communication skills: listening, speaking, reading, and writing.

*Prerequisite: N/A*

### Spanish II

This course is intended for students to continue to use and build up the vocabulary learned in Spanish 1. The student will continue to make comparisons, use superlatives, and will be introduced to commands. He/she will communicate in present and present-progressive tense. Students will learn the past tense conjugation (preterito), use of direct and indirect object pronouns, affirmative and negative words, use of reflexive verbs as well as different type of adjectives. This course is designed to further develop and sustain the four communication skills: listening, speaking, reading, and writing.

*Prerequisite: Spanish I*

### Spanish III

In Spanish III students will practice different tenses such as: present, past, past perfect and future tenses. Spanish 3 helps reinforce the language skills obtained in previous levels of Spanish. In this course the student will continue to improve their skills by: identifying different situations where they need to decide what form of the verb is the best option; Past tense and past-imperfect and its situational uses; present perfect, impersonal "se," negative "tú" commands; expanded use of prepositions; the present subjunctive and future tense. The course is designed to develop and sustain the four communication skills: listening, speaking, reading and writing.

*Prerequisite: Spanish II*

### Spanish IV

Spanish IV is a Pre-AP Spanish course for motivated and serious Spanish students. All students will continue to practice the skills

learned in previous courses and analyze real situations by using the correct form/tense of verbs as well as the correct mood for verbs. The past tense will be reinforced to identify its different uses. The subjunctive will be covered completely by exemplifying context/real situations natives deal with every day. In addition students will learn: positive and negative commands, all the perfect tenses, pluscuamperfecto, conditionals, passive voice, sequence of tense as well as imperfect subjunctive. At this level, the students will be able to engage in fluid conversation, read high-level texts, listen to real situations as well as being able to express themselves by writing in Spanish. The course is designed to further develop and sustain the four communication skills: listening, speaking, reading and writing.

*Prerequisite: Spanish III*

### Chinese I

This course guides students to develop their linguistic proficiency in the four areas of speaking, listening, reading, and writing. Students should also establish a foundation for their knowledge of Chinese culture, history, and customs. Students will participate in conversations on relevant topics with Chinese speakers.

*Prerequisite: N/A*

### Chinese II

The course helps students further develop their linguistic proficiency in the four areas of speaking, listening, reading, and writing, and to expand their knowledge of Chinese culture and history. Topics of study include: weather, dining, directions, birthday parties, visiting doctors, sports and travel. By the end of this course, students should be able to communicate with Chinese language speakers both orally and in written form.

*Prerequisite: Chinese I*

### Chinese III

This course continues the study of the Chinese language and the culture of the Chinese people. The goal of the course is to polish each student's grasp of Chinese vocabulary, grammar and its usage. Topics include: campus life, eating in Chinese restaurants, shopping, relationships, internet, part-time job, education and geographic features of China. Students should be able to use Chinese language to effectively communicate in appropriate settings.

*Prerequisite: Chinese II*

### Chinese IV

The course continues the study of the Chinese language and culture. The goal of this course is to strengthen each student's grasp of Chinese vocabulary, grammar, and usage. Students will be able to effectively communicate in specific environments. Topics include: festivals, changes in China, travel, life and wellness, gender equality, environmental protection, and plans for the future. This course should prepare students for success in the AP Chinese course.

*Prerequisite: Chinese III*

### AP Chinese Language & Culture

The AP Chinese Language and Culture course aims to provide qualified students with opportunities to further explore Chinese culture and improve communicative skills (interpersonal mode, interpretive mode, and presentational mode). In doing so, students will develop language proficiency in listening, speaking, reading, and writing. There are various supplementary materials and authentic materials provided in addition to the required texts. By the end of the course, students will be able to further develop communicative proficiency in Chinese, to develop students awareness and appreciation of in Chinese culture, to use critical thinking skills to compare Chinese with other languages and cultures, to use Chinese language to communicate with native Chinese speakers appropriately and to be involved with the Chinese



community. Assessments will be geared to the expectations of the AP Chinese Language and Culture Exam.

*Credits: 1.5*

*Prerequisite: Chinese IV & School Permission*

## ENGINEERING COURSES

### STEAM I

STEAM is an acronym referring to the following disciplines: Science, Technology, Engineering, Art, and Math. The main goal of STEAM at all grade levels is to understand the design process using science, technology, engineering, art and mathematics while working with a team. STEAM is a simple framework for problem solving and applies to the above subject areas. Steam is a philosophical and conceptual foundation class with an emphasis on process. STEAM is an inquiry-based curriculum with a trans-disciplinary approach. This means students can find themselves working on robotics, programming, 3D printing, workspace creation and design etc. on any given project.

*Prerequisite: N/A*

### Robotics

Students will learn the basics of control of robot systems, C+Programming, Mechanics, Motion, Autonomous movement, sensors, organization and implementation of the design and testing process. Class materials will be VEX Robotics kits. Focus will be on competitions in the VEX Robotics program and students will have the ability to compete in Robotics competitions with other schools.

*Prerequisite: N/A*

### Computer Science Foundations

Computer Science Foundations is designed to give breath and depth to various computer coding languages in order to build a strong foundation and to see where students excel. In addition, we will explore both sides of hardware and software to look at the history of where these ideas came from so that we can analyze what will come next in the future of computer science. This will be a project-based learning course where students will work in teams just as they would in a real-world scenario. By the end of this course, students will have the knowledge to be able to digest segments of code - including iterations, the ability to write their own functions, and to solve problems in a logical, systematic way.

*Prerequisite: N/A*

### AP Computer Science Principles

AP Computer Science Principles is intended to replicate an introductory college computing course. Students will hone their computational skills by analyzing, visualizing and drawing conclusions from trends in large data sets. Students are asked to think creatively to solve problems and analyze patterns using computer software, programming, and other technology. Students will develop computational thinking skills necessary for success in many disciplines. The course also strives to teach students to be creative and to use the creative process to solve computational problems. Students will construct and implement solutions to complex problems similar to what computer scientists and engineers face. This course demonstrates the relevance of computer science by highlighting the importance of computing in society. Students will study computing machines and systems, but also investigate how computing has affected a wide variety of fields and examine the ethical implications of new technologies.

*Credits: 1.5*

*Prerequisite: Algebra 1: B+, and School Permission*

## CAPSTONE

### Senior Capstone (required: 12th grade)

Each 12th grade student will be enrolled in a section of the Senior Capstone course - a full-year class that meets every other day.

Successful completion of Senior Capstone is a graduation requirement for all students and the course earns a letter grade. During semester one, this course will focus on facilitating the successful completion of the Capstone Argumentative Research Essay. During semester two, this course will focus on facilitating the successful completion of the students Capstone Project - including the learning process, product, and final presentation to the SJA Jeju community on "Capstone Day".

