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2023-24 COURSE HANDBOOK

SUIS WANYUAN HIGH SCHOOL

Catalogue

2023-2024 COURSE HANDBOOK SUIS

WANYUAN US HIGH SCHOOL Welcome

Key Information

The purpose of this handbook is to provide you with an overview of our course offerings and options for the year 2023-2024. Please take some time to carefully read over the course descriptions, especially for those courses you are interested in taking. During Semester II, our Career and University Guidance (CUG) counselors begin to work with each of our students to help them with course selections for the next school year.

Here are the steps in the course selection process:

1. CUG counselors organize workshops and individual conferences with students.
2. Course Selection Forms are distributed. Each student completes the form for his/her course selections.
3(a). Students submit their Course Selection Form (signed by parents) to the CUG Office.
3(b). Students register for their selected courses online via Renweb.
4. Students are notified of their finalized course selections by the end of May 2023.
5. Course schedules for the 2023-2024 school year will be published in June 2023.

* Please note that, due to timetable conflicts and class size limits, we are unable to guarantee that all course selections for each and every student will be possible. However, we will accommodate each student's course selection needs such that every student will meet our graduation requirements by the time he/she completes Grade 12.

Curriculum Vision Statement

Shanghai United International School Wanyuan US High School (USHS) facilitates a developmental curriculum that assists each student achieve his/her full potential. We are committed to providing a course of study that prepares each student for admission to reputable four-year colleges and universities in North America and Europe with solid undergraduate programs. With our 'East Meets West' approach, we adopt the best teaching practices from the east and west while placing a strong emphasis on pastoral care, students' emotional well-being, and providing differentiated learning paths tailored to each student's strengths and potential. We aim to provide our students with a holistic education to help them develop into knowledgeable, skillful, positive, and balanced individuals.
Using subject standards initiated in the United States (e.g. Common Core, Advanced Placement (AP), and Next Generation Science Standards), our curricula prepares our students with strong content knowledge in a broad range of subjects. Our teaching practices provide students with a platform to become independent, critical thinkers, and creative problem-solvers. We expect our students to graduate from SUIS Wanyuan as lifelong learners who are equipped with global competencies, eager to actively participate in our increasingly globalized

society, and who positively contribute to make a difference in society.

The Common Core Standards and AP Curriculum

The US Common Core Standards were drafted by experts and teachers from across the US and are designed to ensure that students are prepared for various entry-level careers, freshman-level college courses, and workforce training programs. The Common Core Standards focus on developing the critical- thinking, problem-solving, and analytical skills that students will need to lead a fulfilled and productive life in the 21st century world.

Advanced Placement (AP)

The "Core" curriculum refers to the main body of courses that students must complete in order to graduate from our USHS and be prepared for college and/or university. Students will be able to choose from both compulsory and elective courses to fulfil the graduation requirements (see below). A CUG counselor will assist students in making their course selections according to their interests, academic strengths, and career goals to ensure that each student is on the right track for successful admission into college/university programs that will lead to their chosen career. Some courses have prerequisites, which refer to courses that students must take and earn a passing grade for prior to their enrolment in the course.

Courses listed as "AP" refer to Advanced Placement college preparatory courses audited by the College Board, an American educational organization situated in New York City. Passing these courses with high marks may earn students college/university credits and will positively impact admissions to college/university. Because AP level subjects are college-level courses covering material in more depth and breadth and at a faster pace, students who wish to enroll in an AP course must adhere to the following criteria:
1. The student should have a minimum overall cumulative Grade Point Average (GPA) of 3.0 in the particular subject area (e.g. Sciences, Social Sciences, Math, English, etc.)
2. The student must meet individual course prerequisites.
3. The student must obtain Departmental Approval from the subject department.
4. Students taking an AP class are expected to register as school examinee to take the AP examination in May. Students are responsible for the examination fee.
The additional weight for all AP subjects is 1.0 - this added weighting will be reflected in the student's GPA. For more information about AP courses, please visit: www.collegeboard.org.

Elective Courses

The USHS program offers students the flexibility of taking courses according to their interests and preferences while meeting the graduation requirements. A large range of courses are offered by each Department from which students can choose to take as 'Elective' courses. Our experienced CUG counselors will guide students during each step of the course selection process. Designing one's own learning path while working towards graduation is another unique American educational tradition as this is still the model in all colleges and universities in America.

Graduation Requirements (for 3 year track hence from Y2021-2022)

A minimum of 22 credits are required for graduation. Specifically, students need to fulfil the following requirements:
•English: 3 credits
•Math: 3 credits
•Science: 3 credits
•Social Studies: 3 credits
•Word Language: 3 credits
•Arts/Drama/Music: 1 credit
•PE/Health: 1 credit
•Additional core courses: 2 credits
•Electives: 3 credits

Graduation Requirements

(for 4-Y track prior to Y2021-22)

A minimum of 24 credits are required for graduation. Specifically, students need to fulfil the following requirements:
•English: 4 credits
•Math: 4 credits
•Science: 3 credits
•Social Studies: 3 credits
•Word Language: 3 credits
•Arts: 1 credit
•PE/Health: 1 credit
•Additional core courses: 2 credits
•Electives: 3 credits

Departments and courses

ARTS

AR101: Introduction to Art

1 Year – 1.0 Elective Credit
The visual arts curriculum provides a diverse opportunity for students through the "Introduction to Art Course". Students will start to develop their creativity and imagination in combining the experimentation of various techniques. Gradually students will discover and explore multimedia in the use of traditional, new technologies and tools. In a new approach, students consider the work of artists and reflect on their own realizations all contributing to an aesthetic understanding and appreciation of Art. Students discover how

to become personally involved in their artistic endeavors from their point of view of conceptual thoughts. Grade after grade, students will build on a conceptual approach, consolidate and improve their knowledge and experience of materials, processes and practices. Students have the option of concentrating on Advanced Art Course, Independent Art course or choosing AP Studio Art.

AR208: Intermediate Visual Art

1 Year – 1.0 Elective Credit
This course allows students to build a strong foundation of visual art knowledge while fulfilling their arts elective requirements. Elements of art, observational drawing, and color theory are essential knowledge in visual art curriculum. Students have opportunities to learn, apply, and improve art-making skills, experiment with various ideas and concepts, explore diverse materials for drawing, painting, sculpture, and printmaking, and create original artworks. Sketchbook work is an ongoing, weekly component of the course. Students will also be able to develop positive working habits, such as care of materials, meeting deadlines, and effective written and verbal communication.

Prerequisites: none

AR308: Advanced Visual Art

1 Year – 1.0 Elective Credit
This elective course gives students the opportunity to build upon knowledge from prior visual art courses, and to be better prepared to take AP Art and Design the following year. Elements of art, observational drawing, creating in 3-dimensions, and color theory continue to be important in the curriculum, as students build and improve skills, experiment with materials, ideas, and techniques, utilize the principles of design, and create original artworks using assigned requirements. Sketchbook work, including homework, is a vital part of the course, where students will practice, question, inquire, experiment, and develop visual investigation. The course includes visual description, artwork analysis, and group verbal critiques. Students are expected to already have positive studio habits, including focus on assigned work, meeting deadlines, care of art studio, organized homework schedule, and effective written and verbal communication in English using art-specific vocabulary.

Prerequisites: Intermediate Visual Art

AR501C: AP Art and Design – Drawing

1 Year – 1.0 Elective Credit
The Advanced Placement (AP) Drawing course is the equivalent of a one-semester, introductory tertiary-level course in drawing. The course follows the objectives, requirements, and scoring set forth by the College Board for AP Art and Design - Drawing. AP Drawing is aimed at students who intend to continue studying in an art-related field, or advance to professional art practice.
Successful students will conduct a sustained investigation of visual art through practice, experimentation, and revision, guided by inquiry and questioning. Students are expected to synthesize materials, processes, and ideas, leading to a minimum of 15 fully-realized artworks, which will be digitally submitted as a final exam portfolio to the AP College Board. Students will practice articulating, in writing, information about their own ideas, their own artworks, and the artworks of others.

After choosing a topic of personal interest for the sustained investigation, students should expect to learn diver-gently and independently as per an undergraduate class. As in undergraduate visual art courses, AP Drawing students are also expected to work beyond scheduled class times, and so students should plan a regular homework schedule for their art-making. Homework tasks could include the creation of drawings relevant to practice, experimentation, revision, and questioning strategies, as well as developing visual skills, personal aesthetics, and art historical/cultural context.
This class will not focus on foundational visual art skills, knowledge, or terminology. It is assumed that AP-level students already know and understand these. Skills relevant to this course may include: line, shape, illusion of form, space, texture, color, value, composition, mark-making, unity, variety, rhythm, movement, proportion, scale, balance, emphasis, contrast, repetition, figure/ground, surface, and juxtaposition.

Prerequisites: Intermediate or Advanced Art at Wanyuan AND permission of the instructor

AR501A: AP Art and Design – 3-D Design (Sculpture)

1 Year – 1.0 Elective Credit
The Advanced Placement (AP) 3-D Art course is the equivalent of a one-semester, introductory college-credit course in 3-D art/sculpture. The course follows the objectives, requirements, and scoring set forth by the College Board for AP Art and Design – 3-D. AP 3-D is aimed at students who intend to continue studying in an art-related field, or advance to professional art practice.
Successful students will conduct sustained investigation of sculpture through practice, experimentation, and revision, guided by inquiry and questioning. Students are expected to synthesize materials, processes, and ideas, leading to 15 fully-realized sculptures, which will be digitally submitted as a final exam portfolio to the AP College Board. Students will practice articulating, in writing, information about their own ideas, their own artworks, and the artworks of others.
After choosing a topic of personal interest for the sustained investigation, students should expect to learn diver-gently and independently as per an undergraduate class. As in undergraduate visual art courses, AP 3-D students are expected to work beyond scheduled class times, and so students should plan a regular homework schedule for their art-making. Homework could include the creation of sculpture relevant to practice, experimentation, revision, and questioning strategies, as well as to developing visual skills, personal aesthetics, and art historical/cultural context.
This class will not focus on foundational visual art skills, knowledge, or terminology. It is assumed that AP-level students already know and understand these. Skills relevant to this course include: line, shape, plane, layer, form, space, texture, color, value, opacity, transparency, time, unity, variety, rhythm, movement, proportion, scale, balance, emphasis, contrast, repetition, juxtaposition, mass, solid, and void.

MU101: Introduction to Music

1 Year – 1.0 Elective Credit
Students will spend the term being exposed to the basic concepts of music and will apply this knowledge to creating their own music. Skills studied include: Beat, Rhythm, Melody, Harmony, Texture, and Timbre. These concepts will be applied to different musical styles, cultures, and even will be applied to electronic instruments when applicable. Students also have the opportunity to apply their musical knowledge while learning to play guitar. By the end of the course, students will be able to perform simple finger picking songs and chords.

MU204: Choral Music

1 Year – 1.0 Elective Credit

In this course, students will be learning to sing in an ensemble setting. Students will improve their singing skills and practice healthy habits that will protect the delicate vocal cords. Students will be exposed to various musical genres and even write and arrange original songs. Students taking this course will be required to perform in school events during the course of the year. Piano players are encouraged to audition for the accompanist role in the course.

Prerequisites: None

MU302: Instrumental Music (Band)

1 Year – 1.0 Elective Credit
In this course, students will continue developing their musical abilities on their instrument as a soloist as well as an ensemble musician. Students will have the chance to arrange, compose, and perform different genres of music. They will also be sharpening their playing techniques under the coaching of the teacher. Students taking this course will be required to perform in school events during the course of the year.

Prerequisites: Student should have their own instrument and should be able to demonstrate basic proficiency through an audition.

MU501: AP Music Theory

1 Year – 1.0 Elective Credit
This course aims to prepare students for the AP Music Theory examination. Students will deepen their musical literacy through analyzing musical compositions, sight-singing and sight-reading. Students will learn fundamental building blocks to music theory such as chord progressions, cadences, voice leading, etc. Students who wish to take a more serious approach about their music learning and wish to broaden their knowledge are recommended to take this course. It is also strongly recommended that the student will have acquired at least basic performance skills in voice or on an instrument.

Prerequisites: Students should have already taken at least 1 other music course at Wanyuan from grade 10-12, or with special permission.

AR107: Multimedia Arts-Introductory

1 Year – 1.0 Elective Credit
The introductory Multimedia Arts program is constructed from 6 different modules. If one module is not completed or the student receives a failing grade, they will be unable to continue on to the next level.
In each module, you will learn the theory and practical skills necessary to complete the required assignments and projects. Some of the assignments and projects will be specific to one module while other assignments and projects may combine skills and knowledge from several modules.
This course will require students to complete tasks and assignments outside the classroom and at home on their own time.

AR207: Multimedia Arts-Intermediate

1 Year – 1.0 Elective Credit
The Intermediate Multimedia Arts program is constructed from **5 different modules**. If one module is not completed or the student receives a failing grade, they will be unable to continue on to the next level.
In this course we will develop the skills in terms of creation of digital content: we will develop a

photographic style in order to tell a specific story, and organize our work in a photo book following the basics of page layering; will learn the basics of animation (stop motion, claymation, 2D); will produce a short film, from storyboarding to framing, sequencing, and sound. Students will develop a personal project of their choice.
This course will require students to complete tasks and assignments outside the classroom and at home on their own time.

AR307: Multimedia Arts-Advanced

1 Year – 1.0 Elective Credit

The Advanced Multimedia Arts program is constructed from **5 different modules**. If one module is not completed or the student receives a failing grade, they will be unable to continue on to the next level.

In this course we will further develop the skills in terms of creation of digital content: we will learn to create, and maintain a website as our online portfolio; will further discuss the social and cultural implications of the production and consumption of digital media/coexistence with a metaverse, in order to understand future issues regarding media and society; will mature our understanding and proficiency in terms of color correction and sound during the production of a short/medium film. Students will develop a personal project of their choice.

This course will require students to complete tasks and assignments outside the classroom and at home on their own time.

Prerequisite: Enrolling students must have already taken AR107 OR AR207 level Multimedia Course

Chinese/World Languages

CH001：Introduction to Chinese Culture

1 Year – 1.0 Core Credit

This course will be delivered mainly by literature reading, essay register as Narration, Argumentative Essay, Poem, Prose, Novel, Drama and Ancient classical literature will be introduced. Learning in this year will help students set up a brief understanding of literature and will also develop their knowledge and skills further for further learning in Chinese 1. Meanwhile, there are five areas for students to focus: Verbal communication, Common knowledge of Chinese literature, Literature reading with appreciation, Writing and Understanding of Chinese culture. Therefore, students are expected to maintain their enthusiasm for learning Chinese, develop advanced skills in appreciation of literature and be more confident when using this language in a wider context.

CH101: Chinese Language Arts and Chinese Culture I

1 Year – 1.0 Core Credit

This course will be delivered mainly by literature reading, essay register as Narration, Argumentative Essay, Poem, Prose, Novel, Drama and Ancient classical literature will be introduced. Learning in this year will help students set up a brief understanding of literature and will also develop their knowledge and skills further for further learning in Chinese 2. Meanwhile, there are five areas for students to focus: Verbal communication, Common knowledge of Chinese literature, Literature reading with appreciation, Writing and Understanding of Chinese culture. Therefore, students are expected to maintain their enthusiasm for learning Chinese, develop advanced skills in appreciation of literature and be more confident when using this language in a wider context. Chinese Geography, Chinese History and Governing will be also embedding in this course as for culture understanding consideration.

Prerequisites: Complete the level of G9 Chinese National middle school program.

CH201: Chinese Language Arts and Chinese Culture II

1 Year – 1.0 Core Credit
This course is a continuation of CH101. The skill of independent reading will be introduced and developed. Students will focus on five areas: verbal communication, common knowledge of Chinese literature, reading and appreciation of literature, writing, and understanding of Chinese culture. Students will be given the opportunity to appreciate literary works from different perspectives, and they are also expected to be able to express and justify their opinions with sufficient argument, support, and evidence by the end of the year. This course will help students develop an understanding of literature and improve their knowledge and skills in preparation for further study in CH301. The history of China and the Chinese economy will be embedded in this course as part of Chinese culture education. The Primary Text is the Textbook of G11 Chinese National Curriculum Chinese Language Arts, History and Governance）.

Prerequisites: Complete the course of CH101 or complete the level of G10 Chinese National middle school program.

CH301: Chinese Language Arts and Chinese Culture III

1 Year – 1.0 Core Credit
This course is an elective course that follows CH201. It mainly consists of the study of literature and the interpretation of all genres and phases of language. Throughout this course, students will continue to build up a proper, but also personal, understanding of Chinese literature and will be encouraged to study Chinese literature and language in the future. The course will focus on interpretation, critical thinking and reflection via discussions or debates. Creative writing skills will also be developed in this course. Students are expected to maintain their enthusiasm and enhance their reading capacity and reflection skills. The Primary text is the Textbook of G12 Chinese National curriculum.

Prerequisites: Complete the course of CH201 and departmental approval.

CH401: Chinese Literature and Movie Appreciation

1 Year – 1.0 Core Credit
This course is an elective course that follows CH201. It mainly consists of the study of literature and the interpretation of all genres and phases of language. Throughout this course, students will continue to build up a proper, but also personal, understanding of Chinese literature and will be encouraged to study Chinese literature and language in the future. The course will focus on interpretation, critical thinking and reflection via discussions or debates. Creative writing skills will also be developed in this course. Students are expected to maintain their enthusiasm and enhance their reading capacity and reflection skills. The Primary text is the Textbook of G12 Chinese National curriculum.

Prerequisites: Complete the course of CH201 and departmental approval.

CH402: Ancient Chinese Poetry Study and Appreciation

1 Year – 1.0 Core Credit
This course is an elective course for students who have completed CH201 with a grade of A or higher, or who have completed CH301. Students who wish to develop a deeper

appreciation of their native language and literature should take this course as an elective. This course will lead students to study the most representative writers and works of various periods in the history of Chinese literature. It aims to cultivate students' ability to analyze different works in detail and establish appropriate connections between them. This encourage students to understand the literary charm of a writer's works and develop a lifelong interest in them.

Prerequisites: a grade of "A" in CH201 and departmental approval.

WL101: Spanish I

1 Year – 1.0 Elective Credit

SUIS WY Spanish Curriculum will follow the proficiency guidelines of American Council on the Teaching of Foreign Languages ACTFL which are global characterization of integrated performance in each out four language skills: speaking writing, reading and listening. To enrich the Spanish syllabus, each of the units will be examined through the individual lenses of the Advanced Placement Spanish themes: Personal and Public Identities, Contemporary Life, Families and Communities, Beauty and Aesthetics, Science and Technology and Global Challenges. These themes were chosen because of their historical and contemporary importance in Spanish-speaking communities across the globe. Civilization, culture and languages are linked into a cross-cultural context to establish connections to understand the context of Spanish speakers. These elements are incorporated into the lessons to the everyday practice of the language following the common core objectives for the teaching of Spanish.
Grade Level: Grade 10-12

WL102: Spanish II

1 Year – 1.0 Elective Credit
SUIS WY Spanish Curriculum will follow the proficiency guidelines of American Council on the Teaching of Foreign Languages ACTFL which are global characterization of integrated performance in each out four language skills: speaking writing, reading and listening. To enrich the Spanish syllabus, each of the units will be examined through the individual lenses of the Advanced Placement Spanish themes: Personal and Public Identities, Contemporary Life, Families and Communities, Beauty and Aesthetics, Science and Technology and Global Challenges. These themes were chosen because of their historical and contemporary importance in Spanish-speaking communities across the globe. Used to create thought-provoking contexts for students to explore Spanish language and culture in their lives, these themes may be incorporated into short lessons plans lasting only a few hours, or longer units spanning days, weeks, or months.
Grade Level: Grade 10-12
Prerequisite Course(s): Spanish I SUIS credit or from another high school.
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Grade Level: Grade 10-12

Prerequisite Course(s): Spanish I SUIS credit or from another high school.

Career and University Guidance

AP Capstone

(AP Capstone courses prepare high-achieving students to receive the AP Capstone Diploma. To find out more, consult the CUG team)

CAP501: AP Seminar

1Year – 1.0 core credit
AP Capstone program is composed of two courses. AP Seminar and AP Research. AP Seminar focuses on universal skills that are of importance in all areas of study and many walks of life. These include research skills, analysis skills, collaborative teamwork skills, presentation skills, and the skills needed to form a cohesive and convincing argument.
The course is organized around the QUEST framework:
-Question and Explore -Understand and Analyze -Evaluate Multiple Perspectives -Synthesize Ideas
-Team, Transform, and Transmit
The order of the first four of these Big Ideas reflect the course's progression from initial inquiry through analysis and evaluation of existing research on a topic, to synthesizing this research to form a detailed, evidence-based argument. The final Big Idea reflects the course's focus on teamwork and communication.

Prerequisites: Departmental approval

CAP502: Research

1 Year – 1.0 core credit
AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000–5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.

Prerequisites: AP Seminar passing grade and department approval

My Career Blueprint

This course enables students to explore themselves and career pathways. Self-concept and career clusters are introduced at the beginning, so students understand relationships between their personal self-concepts and career choices. Along with that, three assessments will be conducted: Kuder Career Interests Assessment, Kuder Skills Confidence Assessment and Super's Work Values Inventory-revised. Based on the results of the assessments, students are able to state their highest areas of interests and skills as related to career clusters. After their occupation exploration in depth, students are expected to look into the education requirements for entry into occupations of their highest preference and select an education path that they

plan to follow in and after high school.

Prerequisites: Grade 9 and Grade 10 students

College Match

All students, regardless of grades or test scores, have colleges from which to choose. This course will be a practical guide for students to discover themself and choose the colleges that fit and match them. The topics are: Understand college choice as process, self-survey for the college bound, understand the qualities and characteristics of colleges, Building your college list, learning from campus visit, essay writing and making your resume work for you, the admission process revealed.

Prerequisites: Completed Kuder stage 1 program

College Application Preparation (CAP)

This course is specifically designed for G12 students. During Semester 1, students work with their CUG on their dossier at CIALFO. Students spend time writing their personal essay, researching on the opportunities available to them to pursue their study abroad in the field they have chosen, familiarize themselves with the universities which offer such programs, and prepare all the required documents for the applications. During Semester 2, students continue to work with their CUG on finalize their college applications, prepare official documents for visa application and other documents required by the college/university that they have accepted the offer.
Grading policy: students who meet the requirement of attending 90% of the class time (the three 'Tardiness count as one 'Absence' policy applies) and comply with the classroom rules will receive a grade of 'Pass, otherwise, a grade of 'Fail'.

ENGLISH LANGUAGE ARTS

EN101: English Literature I

1 Year – 1.0 Core Credit
This course establishes a foundation for success by focusing on increasing language fluency and the development of communication skills like, reading comprehension, grammar and language usage, composition, vocabulary development, study techniques, and character development. It serves as an introduction to literary analysis through study and discussion of basic elements of character, plot, setting, tone and& mood. Students will read and study a variety of narrative and expository text types, including short stories, poetry, drama, novels, news and feature articles, editorials, and essays. Students produce an array of written compositions for different purposes (narration, persuasion, description, exposition ...etc.).

EN201: English Literature II

1 Year – 1.0 Core Credit
This course focuses on the study of various literary genres by authors of various backgrounds. It is designed to provide students with an overview of texts from all over the world, and expand upon the skills learned in EN101. A balance of non-fiction and fiction texts, including drama, novels, and poetry, will be utilized for literary analysis, comparisons, and evaluation. Through reading, writing, listening and speaking, students will engage with ideas and stories from different regions of the world, and learn to appreciate why all this is still important in their 21st Century lives. Projects, presentations, activities, assignments and exams will be given to help improve students' skills and to assess improvement in their reading, writing, listening and oral

communication skills.

Prerequisites: None

EN102: English Writing I

1 Year – 1.0 Core Credit
This course is designed to reinforce the accuracy of English mechanics for high school English Language Learners. Students will be actively practicing basic grammar, speaking, listening, and reading skills so that they are properly prepared to handle the language acquisition demand required by their core and elective classes in ninth grade and beyond.

EN202: English Writing II

1 Year – 1.0 Core Credit
English 202 aims to help students transition into becoming more independent and skilled writers. Throughout the course students will improve through intensive practice of daily journals, compositions, expository and persuasive essays, creative writing, narratives, and research papers. This course also provides support for the writing assignments required in in any subject that necessitates work written in English. Vocabulary development and grammar lessons are included in the course with a strong focus on the writing process from the initial planning steps through revising and publishing.

Prerequisites: None

EN211: Novel Study

1 Year – 1.0 Elective Credit
This intensive-reading elective will examine a minimum of four novels throughout the year, each of a different genre from the previous. Each quarter we will be reading at least one novel and will focus in-depth on character development, trajectory and complexity of plots, and the mix of genres and techniques used by the authors, and how each genre has its own distinct literary style. Students will be expected to read and analyze a minimum of 400 pages in English per quarter while completing a variety of individual and group assessments such as drawing parallels from literature to real life, completing oral presentations, and writing academic essays. Throughout the progression of the course, students will improve their vocabulary and comprehension skills while learning to become better analytical writers, critical thinkers, and voracious readers.

Prerequisites: EN201/EN202

EN212: Gothic Fiction

1 Year – 1.0 Elective Credit
This class will explore the development of the English novel by examining its gothic origins. Texts include Ann Radcliffe's The Mysteries of Udolpho, Jane Austen's Northanger Abbey, Charlotte Bronte's Jane Eyre, Mary Shelley's Frankenstein, Edgar Allan Poe's short stories, Bram Stoker's Dracula, and DC Comics' Batman.

Prerequisites: None

EN206: Public Speaking

1 Year – 1.0 Elective Credit
This course is designed to offer the novice speaker a number of opportunities to organize and prepare different types of public speaking assignments. It aims to help develop students' oral

communication skills by providing a supportive atmosphere to help students overcome their anxiety and gain confidence when giving presentations and speaking in front of large and small groups. In this introductory speech course, students are exposed to a wide variety of speaking situations. Types of speeches include but are not limited to informational, persuasive, demonstration, impromptu, explanatory and sales. Students will also learn about the role of communication in our lives, spatial relationships, delivery styles, and the effectiveness of language through word choice, tone and intonation, expressions and gestures. Classes will include discussions, workshops, brainstorming sessions, live and video demonstrations and self and peer revision exercises. Public speaking is a vital component of modern public life and even more-so with as videoconferencing increasingly shares space with in-person communication. This class will introduce students to the process and practice of preparing a spoken presentation in both digital and in-person venues.

Prerequisites: EN101

EN208: Creative Writing

1 Year – 1.0 Elective Credit
This course is designed to help students craft various works of fiction, poetry, and nonfiction. In addition to the in-class writing exercises, there will be creative exercises outside of the class, and group discussions where students will critique each other's writing in a constructive workshop atmosphere. This course develops useful editorial skills that will help students improve their own writing. Through lecture and discussion, we will explore the technique and devices involved in creating fiction, poetry and nonfiction. We will read and discuss the works of many different writers, using their technique and content as a guide for the students own writing.

Prerequisites: EN101

DR201: Dramatic Arts

1 Year – 1.0 Elective Credit
This course will introduce and explore concepts of theatre and performing arts, such as using movement, voice, and emotion to express ideas in scenes and plays. Students will enhance their verbal expression including articulation and pronunciation, as well as teamwork, self-confidence, and reflection skills. These skills will be developed through character and scene study, reflective journalism, and of course, acting! This course is intended for students who want to present, perform, and gain more self confidence in front of an audience – and are not afraid to be open and participate. You will be performing on stage at least once. Passion and interest for stage acting is preferred. This course will introduce students to the basics of theater production. There will be a focus on acting and improvise, but the course will also cover the history of the theater, set design, and other elements of the dramatic arts.

Prerequisites: None

EN301: American Literature

1 Year – 1.0 Core Credit
This course is a survey course where students continue to develop and refine their reading comprehension, composition, and critical thinking skills while expanding their vocabulary. Students will be able to identify the prevalent themes and characterizations of American Literature that reflect American history and culture, and will discuss how those themes continue to influence American culture today. Students will develop informative and persuasive writing skills by improving their ability to locate, evaluate, and synthesize information from a variety of sources. This course will require more reading, analysis of literature, and proficient writing skills.

Prerequisites: EN201/EN202

EN353 Honors English

1 Year – 1.0 Core Credit
This course is a language arts class designed for high school students whose English abilities are comparatively higher than those of their peers. The course further develops the skills of higher-level academic writing and speaking as well as advanced reading ability. Students will engage in collegial academic work through the lenses of, among other themes, discrimination in society and mankind's connection with nature. At the same time, a variety of genres such as novels, short stories, historical speeches and poetry will be explored. This course is considered a Pre-Advanced Placement (AP) course focusing on world literature; students will be introduced on a basic level to the AP skills covered in the AP English Language and Literature Exams.

Prerequisites: Attend an information session with the Head of English Dept.

EN354 EN10: AP Seminar

1 Year – 1.0 Core Credit
ENG 10: AP Seminar is a fully accredited AP Capstone course that will prepare Grade 10 students to take not only AP Research but also will prepare them to take other ELA AP classes like AP Language and Composition and AP Literature. Taking ENG 10: AP Seminar in Grade 10 will allow students more flexibility in planning out which AP classes they want to take throughout the next three years of High School. ENG 10: AP Seminar takes the current Grade 11 AP Seminar course and combines it with a high-level Grade 10 ELA curriculum to form a challenging, but rewarding, experience for students who are ready to go above and beyond their normal course requirements and take an AP class in Grade 10 that will set them up for success no matter what they choose to do for the rest of their academic journey.

Participants in ENG 10: AP Seminar will be empowered to direct your own learning, choosing topics that are of personal interest to you (including topics that build on their learning in other AP courses), and conducting extended research in these topic areas. This course is designed to challenge and reward ambitious, hard- working, thoughtful and curious students. The universal applicability of the skills developed in ENG 10: AP Seminar should make the course of interest to anyone who also seeks to study other advanced courses. Participants will also be taking the first step towards earning the AP Capstone diploma, a valuable, college-recognized distinction that demonstrates how well-prepared a student is for success in tertiary education.

Prerequisites: There are no prerequisite courses for ENG 10: AP Seminar, but students must demonstrate a strong aptitude for academics across the board, with particular scrutiny given to their academic performance in English class. Though AP Seminar is a cross-curricular course, students will be expected to have strong writing and oral presentational skills, as well as be able to handle an advanced, AP-level workload.

EN402: Film as Literature

1 Year – 1.0 Elective Credit
This course will introduce students to the art of film analysis. The course will examine films and film-making through a variety of lenses. Historical, feminist, formal, and international perspectives will all be considered and engaged with.

Prerequisites: None

EN401: British Literature

1 Year – 1.0 Core Credit
This course is a study of language, literature, composition, and oral communication focusing on an exploration of points of view or perspectives across a wide variety of genres in British Literature. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in literature balanced with non-fiction texts. The course will examine the historical time periods and cultural circumstances surrounding the creation of these pieces of literature in order for students to understand how literature can bring about change. Students will be expected to read and respond to literature, independently, in group discussions and in writing. All facets of language arts - listening, speaking, reading, and writing - will be covered.

Prerequisites: EN201, EN301/EN351/EN501/EN502

EN502: AP English Language and Composition

1 Year– 1.0 Core Credit
The AP English Language and Composition course focuses on the development and revision of evidence-based analytic and argumentative writing, the rhetorical analysis of nonfiction texts, and the decisions writers make as they compose and revise. Students evaluate, synthesize, and cite research to support their arguments. Additionally, they read and analyze rhetorical elements and their effects in nonfiction texts—including images as forms of text—from a range of disciplines and historical periods. Students should be able to read and comprehend college-level texts and write grammatically correct, complete sentences.

Prerequisites: EN201/EN251, Attend an information session with the Head of English Dept.

EN501: AP English Literature and Composition

1 Year – 1.0 Core Credit
The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works.

Prerequisites: Attend an information session with the Head of English Dept.

MATHEMATICS

MA101: Geometry (Grade 9)

1 Year – 1.0 Core Credit
This course studies measurement as an abstract concept, focusing on the relationships among simple objects and how they interact. Students will be exposed to axiomatic systems and logical thinking to build new proof techniques. Students will focus on simple properties, such as area, perimeter and volume, as well as complex properties like triangle centers, circle/angle/triangle relationships, and more. Technology will play a key role in the course and students should have a laptop with Geogebra software installed.

Prerequisites: None

MA204: Pre-AP Algebra 2

1 Year – 1.0 Core Credit
Pre-AP Algebra 2 focuses deeply on the concepts and skills that are most essential for college and career success, so mastery of linear relationships is a major focus of this course. In addition to all Algebra concepts, this course helps students to learn some basics ideas about Calculus. This course focuses more on Linear and quadratic functions and equations, Trigonometry and basics of Calculus are the basic building blocks of many advanced topics in math.
Pre-AP Algebra 2 is stream lined to give students the time and space to thoroughly master these concepts and skills. The course emphasizes these essential practices for building math muscle and confidence:

- Building conceptual understanding
- Building procedural fluency
- Creating, analyzing, and using mathematical models
- Crafting mathematical arguments

Besides mastery of linear relationships, other major topics covered in this course include basic functions such as: quadratic, polynomial, radical, exponential, logarithmic, and rational, linear systems, Sequences and series, Introduction to Trigonometry, Conic sections, Limits and continuity, Basics of Differentiation and Integration.

Prerequisites: None

MA206: Pre-AP Algebra 2 (BC)

1 Year – 1.0 Core Credit
Pre-AP Algebra 1 focuses deeply on the concepts and skills that are most essential for college and career success, so mastery of linear relationships is a major focus of this course. In addition to all Algebra concepts, this course helps students to learn some basics ideas about Statistics. This course focuses more on Linear and quadratic functions and equations, Trigonometry and Statistics are the basic building blocks of many advanced topics in math.
Pre-AP Algebra 1 is Stream lined to give students the time and space to thoroughly master these concepts and skills. The course emphasizes these essential practices for building math muscle and confidence:

- Building conceptual understanding
- Building procedural fluency
- Creating, analyzing, and using mathematical models
- Crafting mathematical arguments

In Pre-AP Algebra 2 (BC), students will:
•work with their peers to build math knowledge, persevering through challenges and making important conceptual connections.
•use authentic applications of math to model real-world problems.
•acquire the tools needed for making, testing, refuting, and supporting mathematical arguments.

Besides mastery of linear and quadratic relationships, other major topics covered in this course include basic functions such as: radical, exponential, logarithmic, and rational, linear systems, Sequences and series, Conic sections, Data Analysis, Central Tendency, Normal Distributions and Introduction to Trigonometry.

Prerequisites: None

MA202: Introduction to Computer science

1 Year – 1.0 Elective Credit
This course of Introduction to Computer Science will develop students to acknowledge overall

computer science technology, analyze computing and computer network system.
In this course we value organization, persistence, creative thinking to resolve computing and network systems through front-end presentation to back-end solutions.

Prerequisites: None

MA205: Introduction to Statistics

1 Year – 1.0 Core Credits
Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability. Statistics provides tools for describing variability in data and for making informed decisions that take it into account. This course builds upon the foundational knowledge of statistics and how to apply them to real-world problems. Topics will include standard statistical topics such as: data collection, data analysis, the measures of central tendency, standard deviation, combinations and permutations, probability, sampling, and various distributions.

Prerequisites: MA204/MA 206

MA306: Introduction to Engineering

1 Year – 1.0 Elective Credit
This course will be a gateway and introduction to the discipline of engineering as students will be introduced to the design engineering process. Students will be engaged in hands-on activities relating to structural design, architectural design, Auto-CAD, 3D modelling and 3D printing. This course will encourage students to think of solutions to problems presented to them in their activities. This course is modeled after the basics of drafting courses and introduction to engineering courses offered in universities.

Prerequisites: MA204/MA206

MA353: AP Pre-Calculus

1 Year – 1.0 Core Credit
In this Pre-calculus class, students build on the knowledge acquired in Pre-AP Algebra I and Geometry. Students will continue to expand their understanding of math concepts through other arithmetical experiences.
The goal of this course is to provide students with the necessary mathematical foundations for the learning of AP Calculus the following year, including getting a good grip on the various functions such as polynomials, exponential, logarithmic and trigonometric. With AP Calculus in mind, functions are presented in one or more of the following ways: analytical (algebraic), numerical, graphical, and verbal.
Students will use functions, equations, and limits as tools to express the various mathematical concepts as well as means to analyze, explore, and understand a broad variety of mathematical relationships. In addition to using functions to represent and connect ideas in trigonometry, probability, etc. students also learn to use a symbolic language to model real life situations in our physical world.

Prerequisites: MA204/MA 206

MA402: Financial Math

1 Year – 1.0 Core Credit
This course will explore areas of mathematics that help students understand, predict, and control -as much as we can- our financial world. Topics such as the stock market, business start-ups, banking services, consumer credit, employment, income taxes, independent living,

and retirement and budgeting are the framework in which students will explore and master mathematical concepts and skills.
The purpose of this course is to provide students with the basic analytic tools they need to understand financial issues and develop sound financial strategies, which can help them to reach their financial goals, both personally and in the business world. The course Financial Mathematics will strengthen and extend students' mathematics skills, particularly their algebra foundations.

Prerequisites: MA204/MA205/MA 206

MA403: Applied Mathematics

1 Year – 1.0 Core Credit
This course is designed to introduce high school students to the practical applications of mathematical concepts in real-world situations. Topics covered may include mathematical modeling, data analysis, personal finance, measurement and geometry, probability and statistics, and practical problem-solving using mathematical tools. Emphasis will be placed on developing mathematical reasoning, critical thinking, and problem-solving skills in practical contexts.
Upon completion of the course, students should be able to understand and apply mathematical concepts and techniques to real-world problems, develop mathematical models to describe and analyze practical situations, apply mathematical tools to analyze and interpret data in various contexts, use mathematical reasoning and critical thinking to solve practical problems, communicate mathematical concepts and solutions effectively.

Prerequisites: MA204/MA205/MA 206

MA501: AP Calculus AB

1 Year – 1.0 Core Credit
AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections among these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.
It is expected that students have an exceptional understanding of the topics covered in all previous mathematics courses completed in high school, most importantly pre-calculus (MA353).

Prerequisites: MA 205/MA 204/ MA206/ MA353, Department Approval.

MA502: AP Calculus BC

1 Year – 1.0 Core Credit
AP Calculus BC is roughly equivalent to two semester college calculus courses devoted to topics in differential, integral and infinite series calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections among these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. It is expected that students have an exceptional understanding of the topics covered in all previous mathematics courses completed in high school, most importantly pre-calculus.

Prerequisites: MA353, Department Approval

MA503: AP Statistics

1 Year – 1.0 Core Credit
The goal of the course is to teach students the major concepts and tools for collecting, analyzing, and drawing conclusion from data. The students will be exposed to the following four broad themes:

1. Exploring data: Describing patterns and departure from patterns
2. Sampling and Experimentation: Planning and conducting a Study
3. Anticipating Patterns: Exploring random phenomena using probability and simulation
4. Statistical Inference: Estimating population parameters and testing hypotheses

In this course, students will be exposed to different software in order to investigate statistical concepts. For students to develop their statistical communication skills, they will be required to discuss, as well as present written and oral analyzes of real data on regular basis. It is recommended students have a foundational knowledge of statistics before attempting this course, such as completion of Introduction to Statistics (MA303) or permission from a mathematics teacher.

Prerequisites: MA204/MA 205.

MA504: AP Computer Science A

1 Year – 1.0 Core Credit

This course provides the beginning programmer with a guide to developing applications using the Java programming language. Java is popular among professional programmers because it can be used to build visually interesting graphical user interface (GUI) and Web-based applications. Java also provides an excellent environment for the beginning programmer—a student can quickly build useful programs while learning the basics of structured and object-oriented programming techniques.
Prerequisites: None

MA505 AP Computer Science Principles

1 Year – 1.0 Core Credit
This course of Computer Science Principles introduces students to the foundational concepts of science and challenge them to explore how computing and technology impact the world. It also enables students to analyze and create computing programs to solve real problems in real life with Python programming language.
In this course we value organization, persistency, creative thinking to solve problems, try to find out the most reasonable and effective methods including workflows, algorithms, and programming structures with computational thinking. The course structure includes the following big ideas Creativity, Abstraction, Data and Information, Algorithms, Programming, The Internet, Global Impact.

Prerequisites: None

MA 601: Advanced Calculus

1 Year – 1.0 Core Credit
Advanced Calculus is the study of differential, integral, and vector calculus for functions of more than one variable. Advanced Calculus is used in the physical sciences, economics, engineering, and computer graphics. Upon completion of this full year course, students will be able to extend differentiation and integration to vector-valued functions, apply vector tools to

study curvature, study the motion of a particle along a path, extend the concepts and techniques of differential calculus to functions of several variables...
Advanced Calculus is a rigorous course that builds on the skills and concepts students learned in AP Calculus BC. It is equivalent to a third semester of college level calculus. Therefore, this course will receive AP weighting when grades are calculated. It is expected that students have an exceptional understanding of the topics covered in all previous mathematics courses completed in high school, most importantly AP calculus BC.

Prerequisites: MA 502/MA 501, Department Approval

PE

PE101: Core Physical Education I and Health

1 Year – 1.0 Elective Credit
This course consists of two parts: physical education and health. The physical education part is designed to lead students to an understanding that physical activity contributes to the healthy functioning of body and mind, and is an essential component of a healthy lifestyle. The curriculum encourages students to attempt, learn and reflect on a range of new activities while working to improve their overall well-being. It promotes sportsmanship, teamwork and leadership skills. Students will develop their physical strength, coordination, speed and flexibility. Students are to explore and experiment with techniques, tactics and ways to overcome challenges.

The health component focuses on important skills and knowledge about nutrition, physical activity, the dangers of substance use and abuse, building and maintaining healthy relationships, injury prevention and safety, growth and development, sexual reproduction and personal health. The main aims of the course are to promote healthy living and lifestyle choices as well as to assist students in becoming a more health- conscious and responsible global citizen. The material is designed around topics and situations that engage student discussion and motivate students to analyze internal and external influences on their health-related decisions. The course helps students build the skills they need to protect, enhance, and promote their own health and the health of others. Students will be required to read and interpret English text and be able to communicate their thoughts in a methodical way. With the assistance of online resources students will engage in action-based research project work, which not only helps students learn how to learn, but also functions to improve class relations and communication skills.

PE201: Core Physical Education II

1 Year – 1.0 Elective Credit
Students will continue to be taught the core sports by learning both individual and team techniques, equipping them should they want to participate in Athletic teams and compete for our school. Students will improve their development in Invasion Games, Net/Wall Games, Striking/Fielding Games, whilst understanding that a positive learning environment will help them succeed. Students will learn how to become Sporting role models by encouraging each other and doing peer assessments throughout the year, with all grading rubrics being provided for each unit of study. Students will also continue to study Health and Fitness, covering both the Mental Fitness side to sport, but also Strength Conditioning and Flexibility of their individual bodies and muscles.

PE301: Advanced Physical Education

1 Year – 1.0 Elective Credit
Advanced Physical Education classes will focus on team strategies and the development of

higher level knowledge of the core sports.
Students will be expected to have knowledge and understanding of the basic techniques already. Individual sporting roles will be given in a team dynamic, whereby the student is required to perform certain tasks or roles.
Students will also continue to be equipped to become leaders in sporting environments, whereby they will have the opportunity to help develop and create their own sports ideas. Students will be required to create Skills Videos that can be used in Future PE Lessons.

SCIENCE

SC101: Physical Science（G9）

1 Year- 1.0 Core Credit
This course is designed to provide students an opportunity to explore disciplinary core ideas of physical science through scientific inquiry, exploration and through complex problem solving. These ideas include the fundamental concepts of Physics and Chemistry. Students also develop understanding of the engineering design process through STEM (Science Technology Engineering and Mathematics) based learning linking their classroom experiences to the broader social, technological and environmental issues of our modern world.
The course was designed using the Next Generation Science Standards (NGSS), where it places an emphasis on practical based laboratory investigations, scientific communication and reasoning skills as well as inquiry-based learning which prepare students for future success in the subject area. The students will learn science through the following Disciplinary core ideas: Structure & properties of Matter, Interactions of matter, Chemical reactions, Energy transfer & conservation and, Forces & Motion.
Students will be engaged with essential science and engineering practices including planning and carrying out investigations, developing and using models, obtaining and communication technical information and engaging in argument from scientific evidence.
This course will not be provided to G11/12 students.

Prerequisites: None

SC102: Life Science（G10)

1 Year- 1.0 Core Credit
The course content of Life Science is designed to continue building on a student's foundational scientific skills. The knowledge and understanding students encounter within the class provides students with a strong foundation in the unity and diversity of the living world and the biological processes of life. It is divided into six units of study which when combined, interlink the essential knowledge and understanding of core ideas of within biology with the practical inquiry-based skills that are required for a student to be deemed ready for progression into further scientific studies.
The course was designed using the Next Generation Science Standards (NGSS) for life science, which requires the learner to make connections between the crosscutting concepts of science and engineering into their study of biology. The disciple core ideas of this class include: The interaction of matter and energy in biological systems, the growth and development of organisms, the inheritance and variation of traits in organisms and the unity & diversity of life. Essential science skills build upon a student experience in physical science and includes: analyzing and interpreting data to be used in scientific argumentation, asking questions & defining problems which can be empirically tested and, developing and using models to explain scientific phenomena.

The course is also intended to engage the learner in the ever-increasing impact technology is having on biological science and in turn, the effect this is having on our lives. Students gain exposure to some of the on-going current areas of research in biotechnology, including the ethical issues surrounding this, allowing students to have a well-rounded, informed understanding of the both the benefits and short comings of the role biotech will play in their future lives.
This course will not be provided to G11/12 students.

Prerequisite: None

SC201:Biology(Grade 10-12)

1 Year – 1.0 Core Credit
This course will introduce students to the study of biology at the beginning of their course of study. Biology is the study of living organisms, their origins, how they survive, reproduce, change over time, and interact with each other and their environments. The course will focus deeply in the core areas of ecological systems, evolution, cellular systems, and genetics while actively applying science practices to construct and revise their biological knowledge. The course will provide the basis for more advanced coursework and learning experiences in biological sciences. Central ideas in the biological sciences will be highlighted, with an emphasis on the process of scientific discovery and investigation. Students will learn to synthesize ideas from multiple areas in order develop complex concepts and cooperate with their peers to solve problems as part of a team. Students will have to take responsibility for their learning process and academic success.

Prerequisites: B and above in SC100, or C and above in SC102, or equivalent.

SC302:Chemistry(G10-12)

1 Year – 1.0 Core Credit
This course is designed to develop the fundamental knowledge, skills, and abilities needed in understanding the study of matter as well as preparing students to pursue further studies in chemistry, such as the AP Chemistry course.
Foundational topics such as atomic structure, periodicity, chemical bonding, stoichiometry, and chemical reactions will be the main focus. At the end of the course, students will have a good understanding of these concepts while having developed their ability to ask clear questions, use models and representations to explain scientific phenomena, plan and perform experiments, collect detailed observations and quantitative data, use mathematical calculations to solve problems, interpret data, and effectively communicate evidence-based explanations.
To be successful in this course students will need to clearly communicate their ideas orally, written, and through various models such as diagrams. They also need to have prior basic knowledge and skills in employing algebraic mathematics to solve problems.

Prerequisites: C and above in SC100 or SC102, or equivalent.

SC301:Physics (G10-12)

1 Year – 1.0 Core Credit
Physics is designed to give students a basic understanding of physics laws and how they

apply to our daily lives. It is an introductory physics course that covers the fundamental concepts, principles, and history of physics. Mathematical skills in arithmetic, algebra, geometry, trigonometry, and vectors are required for successful completion of this course. Selected topics in physics, kinematics, dynamics, work, power, energy, momentum, heat, light, sound, waves, and electricity will be covered in this course.
Students must be able to clearly express their ideas verbally, in writing, and through different models such as diagrams in order to excel in this course. They must also have a foundation of knowledge and skills.
Inquiry-based labs will be used to explore various phenomenon and relationships studied throughout the year. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Emphasis is also placed on experimental design, data analysis, error analysis, and statement justification.

Prerequisites: C and above in SC100 or SC102, or equivalent. Successful completion in G9 Math or equivalent

SC306:Applied Sciences（ Grades 11-12）

1 Year – 1.0 Core Credit
Students may take 2 half courses (one each semester) from the list below to earn one full science credit. The course that will open for the following academic year is determined by the availability of science teacher and their area of expertise:
Option 1 - Earth & Space Science
This half year course can be taken in either semester one or semester two and will form part of a full Applied Science credit. The outline is a combined science course where students will develop understanding of a wide range of topics in Earth and Space Science (ESS) through advanced content, practice, and cross-cutting themes. The course was designed using the Next Generation Science Standards (NGSS) for earth and space sciences. It also incorporates the essential science and engineering practices including the use of models and computational thinking and, the use of data to interpret and communicate scientific information. There are five ESS standard topics in high school namely: Space Systems, History of Earth, Earth's Systems, Weather and Climate, Human Sustainability. The content of the performance expectations is based on current community-based geoscience literacy efforts and are presented with a greater emphasis on an Earth Systems Science approach. There are strong connections to mathematical practices of analyzing and interpreting data. The performance expectations strongly reflect the many societally relevant aspects of ESS (resources, hazards, environmental impacts) with an emphasis on using engineering and technology concepts to design solutions to challenges facing human society
Option 2 – Anatomy & Physiology.
This half year course can be taken in either semester one or semester two and will form part of a full Applied Science credit. This course is suited for students who have successfully earned a credit in SC 201 and have a special interest in medical science, veterinary, or developmental & cell biology. The course is designed to deepen their understanding of the structure and function of the systems of the human body while gaining an appreciation of the interdependence of internal body systems.
Students will be engaged in problem solving and critical thinking relating to clinical applications of the subject. This course is ideal for those interested in careers in sports science & medicine, clinical sciences and animal sciences. The human body will be covered per organ-system, including homeostasis and synergy amongst other organ-systems while students will also have the unique opportunity to explore and compare the anatomical features of different animals.
Option 3 – The Science of Cooking.
This course is inspired by popular applied chemistry courses now being offered by top universities. The aim of this course is to explore the basic scientific principles involved in cooking, the preparation of food, and the enjoyment of food. Through performing laboratory experiments on different foods, students will learn about the science that occurs and the affect

it has on the food we eat. Topics that may be explored in this course include molecular components of foods, the role of heat in cooking, and chemical phase changes.
At the end of this course, students will have a greater understanding of scientific concepts that they encounter every day and improve essential science skills, including experimental design, analytics, and modelling. Students also will exercise more general practical skills which can be applied to any subject area, such as critical thinking and communication skills.
Option 4 – Forensic Science.
This half year course can be taken in either semester one or semester two and will form part of a full Applied Science credit. Forensic Science is designed to provide students with hands-on experiences. This course encompasses a wide range of science concepts, and applies them to real world scenarios. Students will learn how to use physics, chemistry, anatomy, cell biology, and environmental science to solve complex interlinked problems. Students will engage in active inquiries, investigations, case studies and online activities as they develop and demonstrate conceptual understandings and research and laboratory skills described in the objectives. Safety instruction is integrated in all activities, and students will implement safe procedures and practices when manipulating equipment, materials, and models.
This course should help you see how science is used to answer questions rather than just learning science concepts. Classroom instruction will also integrate content literacy and reinforce 21st Century Learning Skills. Learners who are interested in learning about wide range of topics and also interested in logical deductive reasoning should apply.
Prerequisites: Successful completion in both SC100 and SC102 or completion of one G10 level science course (SC201, SC302 or SC301)

SC501:AP Physics 1（ G10-12）

1 Year – 1.0 Core Credit
AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through inquiry-based investigations as they explore concepts on kinematics, dynamics, work, power, energy, momentum, simple harmonic motion, torque, and rotational motion. The course requires excellent mathematical skills and students should be familiar with the rules of algebra and trigonometry. This course will also require students to spend extensive time reading and writing about physics. Lab work is integral to the full understanding of the concepts in this course. Inquiry-based labs will be used to explore various phenomenon and relationships studied throughout the year. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. Emphasis is also placed on experimental design, data analysis, error analysis, and statement justification. At the end of the course, students will take the AP Physics 1 Exam, which will test their knowledge of both the concepts taught in the classroom and their use of the correct formulas.

Prerequisites: "B" grade or higher in Physics or a comparable introductory physics class. Departmental Approval

SC502:AP Biology（ G11-12）

1 Year – 1.0 Core Credit
In AP biology, the spiral of big idea within the AP biology curriculum framework has been a major goal in this course. Combining the crosscutting concepts (Four big ideas) and the application of multiple areas of knowledge and theory (STEAM) to analysis and solve a real word problem has been the direction of our future education. The four "Big Ideas," which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about living organisms and biological systems. The following are Big Ideas:
The process of evolution explains the diversity and unity of life.
Biological systems utilize free energy and molecular building blocks to grow, to reproduce, and

to maintain dynamic homeostasis.
Living systems store, retrieve, transmit, and respond to information essential to life processes. Biological systems interact, and these systems and their interactions possess complex properties.
AP course is intended to be taken by students demonstrated a high aptitude for the essential science practices associated with Biology. AP Biology is equivalent of an introductory college-level biology course which prepare student for the AP exam, and at the same time to elevate student's understanding of biology along with other area of science and bioengineering.
In the AP biology course provided, students will gain a deep conceptual understanding of biological knowledge as well as have opportunities to apply their knowledge into science practices through inquiry-based activities and laboratory investigations. Students will develop their critical thinking and problem-solving skills through a serious of activities, hands on labs, experimental designs and assessments. Over 25% of the instructional time will be lab investigation based active learning, which include but not limited to researching journal papers, hands-on labs, and experimental/engineering designs. Labs emphasize development and testing of the hypothesis, collection, analysis and presentation of data, as well as discussion of results to discover unanswered questions about the particular topics addressed. The student-directed and inquiry-based laboratory investigations used throughout the course enable students to apply the six science practices as defined in the Curriculum Framework.

Prerequisites: Above 85% in SC201 or departmental approval.
Completion or concurrently taking MA305 Introduction to Statistics or MA505 AP statistics is recommended.

SC504:AP Chemistry（G11-12）

1 Year – 1.0 Core Credit

The AP Chemistry course provides students with a college-level foundation to support future advanced course work in chemistry. In this course students cultivate their understanding of chemistry through inquiry-based investigations. The AP Chemistry course and exam are organized around nine units which explore topics such as: atomic and molecular structure and properties, intermolecular forces and properties, chemical reactions, kinetics, thermodynamics, equilibrium, and acids and bases. About 25 percent of the instructional time is used to engage students in hands-on lab investigations where students are encouraged to ask questions, make observations and predictions, design experiments, analyze data, and construct evidence-based arguments.
To succeed in this course, students will need to cultivate good scientific practices including developing clear and detailed scientific questions and methods; representing data and scientific phenomena with appropriate means such as graphs, diagrams, or models; describing, analyzing, and interpreting different representations; solving problems using mathematical means; and developing a clear and logical scientific explanation or argument.

Prerequisites: Above 85% in SC302 Chemistry. Departmental Approval.

SC505:AP Environmental Science（ G11-12）

1 Year – 1.0 Core Credit

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 within 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.
Energy transfer, Interactions between Earth systems, Interactions between different species and the environment, and Sustainability are the big ideas that serve as the foundation of the course, enabling students to create meaningful connections among concepts and develop deeper conceptual understanding.
To successfully finish this course, the students should be able to explain environmental concepts; and analyze visual representations, sources of information, and research studies. It is also required for the students to apply mathematical skills in analyzing and interpreting quantitative data represented in tables, charts, and graphs. Lastly, the students should be able to propose and justify solutions to environmental problems.

Prerequisites: “B" or higher in one G10 level science course (SC201, SC302 or SC301)

SC506: AP Physics C（ G11-12）

1 Year – 1.0 Core Credit
The calculus-based AP Physics C course is a college-level physics course. There are two sections. Mechanics and Electricity and magnetism, in this course and they are each a one-semester-long introductory physics course.
Kinematics, Newton's laws of motion, work, energy, and power, linear momentum, circular motion and rotation, oscillations, and gravitation are all covered in Physics C: Mechanics. In AP Physics C: Electricity and Magnetism course, Electrostatics, Conductors, Capacitors, Dielectrics, Electric Circuits, Magnetic Fields and Electromagnetism are all covered.
This course should include a hands-on laboratory section, similar to that of a semester-long introductory college-level physics lab. Students should devote at least 25% of their instructional time to hands-on laboratory work. Through analyzing and debating the physical phenomenon studied in class with peers, as well as planning and performing inquiry-based laboratory experiments to solve problems through first-hand observations, data collection, analysis, and interpretation, students can learn reasoning skills used by physicists.
It is essential to have a conceptual understanding of the content in order to succeed. To excel in this course, students must have good math (calculus) and science skills. Students will be expected to compose physics principle justifications and explanations. Students will are prepared to take the AP Physics C (Mechanics and Electricity & Magnetism) Exam at the end of the course, which will assess their understanding of both the concepts learned in class and their ability to apply the correct formulas.

Prerequisites: "B" grade or higher in Physics or a comparable introductory physics class. Students should have taken or be concurrently taking AP Calculus or Pre-AP Calculus.

SC503:AP Physics 2（ G11-G12）

1 Year – 1 core credit
The AP Physics 2 course has been designed by the College Board as a course equivalent to an algebra-based college-level physics class. Students will cultivate their understanding of physics through classroom study and inquiry-based laboratory work as they explore concepts on fluids, thermodynamics, electrical force, field, and potential; electric circuits; magnetism and electromagnetic induction; optics, and quantum, atomic, and nuclear physics. Problem solving techniques and strategies are fined tuned throughout the year. The emphasis on theoretical topics, critical thinking and problem solving makes this class challenging. Conceptual understanding of the material is a requirement for success. Students must be strong in both math and science to be successful in this course. Students will be expected to write justifications and explanations of physics concepts. At the end of the course, students will take the AP Physics 2 Exam, which will test their knowledge of both the concepts taught in the classroom and their use of the correct formulas.
Prerequisites:
"B" grade or higher in AP Physics or a comparable introductory physics class

Successful completion of or taking concurrently pre-calculus or the equivalent.
Subject to departmental approval.

SOCIAL STUDIES

SS200: World History

1 Year – 1.0 Core Credit
Social Studies 200 focuses on the study of modern world history and geography. Since it is a knowledge-based and skills-based course, this class aims to help students develop an understanding, appreciation and interest in modern world history and geography and how they have greatly influenced our current world. Through a variety of hands-on learning strategies and activities, students will gain the skills necessary for them to understand and appreciate the knowledge they will gain from the content. This class particularly helps students navigate difficult concepts, understand key terms and how to use them correctly, identify geographical concepts when reading maps, create and interpret timelines, interpret charts and graphs, analyze document-based texts for primary and secondary sources, conduct surveys, interpret data and produce academic research essays.

SS205: Psychology

1 Year – 1.0 Core Credit
The purpose of this course is to introduce students to core concepts and content areas in the field of psychology, as well as methods of inquiry and evaluation. Students will master meaningful content, but they will also learn critical thinking- and enhance socio-emotional skills that will help them navigate a variety of real-world problems. Students will explore a variety of explorative questions, which may include, but are not limited to:

In what ways are we alike as members of the human family?
How often, and why, do we dream?
What do babies perceive and think?
Are some people just born smarter? Why do some people get richer, think more creatively, or relate more sensitively?
How do we sense our body's position and movement?
What is creativity and what fosters it?
How do we draw the line between normal behavior and psychological disorder?
What's going on in our brain and how can it be fooled?

SS206: Positive Psychology

1 Year – Elective credit
Psychology has normally focused on human limitations and mental illness, but positive psychology takes a different perspective: our strengths and how we can thrive and live our best lives. It will address questions like:
How can we effectively deal with stress?
How can we build positive relationships with friends, family, and other kind of relationships?
How can we become more empathetic and effective communicators?
How can we become more self-aware in our habits, strengths, and weaknesses?

Other topics of study include happiness, character strengths, positive emotions and relationships, creativity, resilience, positive connections, kindness, meaning, empathy, compassion, positive interventions, lifestyle change, and positive organizations. Reading, reflecting, projects, presentations, and class discussion are core components of this course, and it will focus heavily on real-life application. Upon completion, students should have a better understanding of themselves with regards to their strengths and weaknesses in addition to

practical tools for dealing with real life situations.

SS304: Sociology/Philosophy

1 Year – 1.0 Elective Credit
This elective course consists of two parts: Sociology and Philosophy. In the Sociology part, it studies human society and social behavior. Positive human relationships are an essential part of a civilized society, and how we interact with each other is important so that we can find answers to questions and solve problems in our world. Sociology teaches us to look at life in a scientific, systematic way. The way that we view the world comes from what we learn in our everyday activities. The values, beliefs, lifestyles of those around us, as well as historic events help to mold us into unique individuals who have varied outlooks on social reality. This course deals with the social atmosphere that helps to make us who we are and determines how we behave. Sociology will cover topics such as culture, violence, deviance, social control, socialization and personality, group behavior, social class, and social institutions. It focuses on looking at people and their ways of life as well as studying social trends, cultural changes, human development, social institutions, and collective behavior.

SS401: Introduction to Economics

1 Year – 1.0 Core Credit
This economics course will focus on major macro and micro economic concepts and theories of the U.S. and various countries around the world. A significant focus is placed on how basic economic concepts such as supply, demand, scarcity, and opportunity costs affect consumerism. Inflation, unemployment and economic growth are also significant concepts that must be understood.
The course requires note taking, interpretation of graphs, tables, maps, editorial cartoons, research, oral presentations, the use of primary/secondary materials, and the use of technology (computers and internet). The students will work cooperatively, role-play, and complete simulations to learn the importance of teamwork; plus, complete projects that enable them to work independently.

SS301: US History

1 Year – 1.0 Core Credit
This course covers the major periods of American civilization, providing an overview of pre-colonization, colonization and settlement, the Revolution and early nationhood, and expansion and reform. The topics chronicled in detail include development and industrialization, the reform era, World War II, the Cold War, and relevant topics for the present day. In addition, previously practiced historical thinking and analysis skills as well as writing skills will be reinforced, and students will practice skills such as utilizing the analysis of primary documents to evaluate historical claims.

Prerequisites: SS200, SS251

SS403: History through Film

1 Year – 1.0 Elective Credit
History through Film is designed to nurture an interest in history by showing how it influences the artistic medium of film. It is also designed to help students develop research skills as they will be expected to do research projects tied to each film we watch in class that focuses on elements of plot, historical accuracy, and liberties taken by film makers and why they may have taken them.
These films may present content in four possible ways:
• As a Factual Record: Film is used to dramatize events.
• To Convey Atmosphere: The use of fiction to convey a sense of past lifestyles, values, and

beliefs.
• Analogy: An historical event is used to point out or explain contemporary motives or actions, particularly when the event is controversial.
• A lesson in Historiography: Because the dramatic form used in films requires consistent and relatively simple motivational interpretations, students can often learn how the time period in which the film was made interpreted historical personalities and events.

Prerequisites: SS200/SS251

SS501: AP US History

1 Year – 1.0 Core Credit
United States History, Advanced Placement is a course based on the content established by the College Board. AP U.S. History is designed to be the equivalent of a two-semester introductory college or university U.S. history course. The course follows a chronological framework from 1492 to the present and focuses on multiple causation and change in United States history over time. A variety of historical themes are examined in order to place the history of the United States into larger analytical contexts. Students are expected to analyze and interpret primary sources and develop awareness of multiple interpretations of historical issues in secondary sources. Historical events and issues in U.S. history are to be examined from multiple perspectives. A comprehensive description of this course can be the College Board AP Central Course Description web page at: http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html.

Prerequisites: Departmental Approval.

SS502: AP World History

1 Year – 1.0 Core Credit
This course focuses on developing students' abilities to think conceptually about world history from approximately 1300 CE to the present, and to apply historical thinking skills as they learn about the past. Five themes of equal importance - focusing on the environment, cultures, state-building, economic systems, and social structures - provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with a special focus on historical developments and processes that cross multiple regions. Students enrolled in this course are expected to take the AP Exam.

Prerequisites: Departmental Approval.

SS503: AP Human Geography

1 Year – 1.0 Core Credit
The AP Human Geography course introduces students to the systematic study of patterns and processes that have shaped the human understanding, use, and alteration of Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. Basic essay and writing skills are necessary for this class. Students must be able to keep up with a high volume of reading related to this course. Students enrolled in this course are expected to take the AP Exam.

Prerequisites: Departmental Approval

SS505: AP Psychology

1 Year – 1.0 Core Credit

The AP Psychology course is designed to introduce students to the systematic and scientific study of behavior and mental processes of human beings and other animals. Satisfactory completion of the requirements of this course and a passing grade on the National AP Exam could earn you college credit in Psychology. This course will be taught as it would be on the college level. An AP course demands extra work and additional time outside the usual high school demands. You will be expected to do a great deal of independent reading, research, and completion of assignments. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. This course follows the APA guidelines for Advanced Placement Psychology.

SS504: AP Macro-Economics

1 Year – 1.0 Core Credit
AP Macroeconomics is a fast-paced college-level course that focuses on the decision making of individuals, businesses, and the government. Students will study a variety of economic theories and analyze their practical application in the real world.
Macro focuses on the economy as a whole, including economic measures, economic growth, fiscal policy, monetary policy, and international economics. This class will prepare you for college and potentially allows you to earn 6 university credits upon passing the AP exams. Extensive math skills are not required; however, the ability to analyze graphs and charts is essential. Student are expected to take the AP exams in May.

Prerequisites: Departmental Approval

SS504-1: AP Micro-Economics

1 Year – 1.0 Core Credit
AP Microeconomics is a fast-paced college-level course that focuses on the decision making of individuals, businesses, and the government. Students will study a variety of economic theories and analyze their practical application in the real world.
Microeconomics focuses on the supply and demand for products, the labor markets, and the role competition plays in a free market system. This class will prepare you for college and potentially allow you to earn 6 university credits upon passing both AP exams. Extensive math skills are not required; however, the ability to analyze graphs and charts is essential. Student are expected to take the AP exams in May.

Prerequisites: Departmental Approval