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# The Academic Program

#### **Cheshire Academy Mission**

Cheshire Academy is an internationally minded college- preparatory school that challenges its students to maximize their potential by developing the confidence, character, and critical thinking skills that enable them to thrive as global citizens.

#### **Academic Vision**

Cheshire Academy aims to provide the best (anywhere) education for global citizenship. We accomplish this by adhering to four tenets: Teach 21st-century skills and capacities; Enable transformative educational experiences; Develop self-awareness, empathy for others, and a global perspective; Foster the active pursuit of individual and collective wellbeing.

Our academic vision is the Academy's mission statement in action. We believe all students are unique, with their own academic interests, styles, and needs. We also believe in helping students become rationally autonomous. And while we strive to pass on knowledge, skills, and values—including those that will help students find college and career paths—we also are keen to ensure students have an active role and voice in their learning and take ownership over creating work that reflects their passions and their evolving world views.

#### **Graduation Requirements**

The distribution requirements listed below are minimums for earning a diploma or, in the case of postgraduate students, a certificate of study. In general, it is work done beyond these requirements that qualifies a student for acceptance to colleges. Students in all grade levels, including those in their postgraduate year, are required to take a minimum of five 0.5-credit courses for letter grades per semester.

The basic requirements for a diploma, completed from the start of the student's 9th-grade year, include:

- 4 credits of English, including both semesters of English during 12th grade
- 3 credits in mathematics (through the successful completion of Algebra 2 or Integrated Math II)
- · 3 credits in history or social sciences

- 2 credits in lab sciences.
- 2 credits in foreign languages (must reflect second year proficiency in one language; students who are English-language learners are exempt from this requirement)
- · 1.5 credit in fine or performing arts
- · 4 elective credits
- Successful completion of a required 1 credit gradelevel seminar for 9th-grade students
- Successful completion of three seasons of the afternoon program each year

Outside of the seminar requirement, a minimum of 20 academic credits will be required for graduation; of these credits, five must be earned in 12th grade, including one in English. The Academic Office must approve transfer credits not earned at Cheshire Academy that are submitted for graduation requirements.

In addition, 12th-grade and PG students must pass all courses, both semester and year long, and all courses during the second semester in order to qualify for a diploma or certificate. Any student who fails a course will receive no credit for that course.

A 12th grade student or PG who fails a course required for graduation will receive their diploma or certificate upon successful completion of an accredited summer course. The course must be approved in advance by the Academic Office and any associated expenses are the responsibility of the student.

#### **Grade Point Average Scale**

Grade Point Averages are based on all academic credits earned at Cheshire Academy.

A+	4.33	B+	3.33	C+	2.33	D+	1.33	Р	Pass
А	4.00	В	3.00	С	2.00	D	1.00	INC	Incomplete
A-	3.67	B-	2.67	C-	1.67	D-	0.67	WD	Withdrawn
					F	0.00			

#### **Report Cards and Comments**

Cheshire Academy's academic year is divided into two semesters. Grades and comments are reported by the faculty to the Academic Office at the end of each semester. Report cards are available through the My Cheshire portal as soon as all grades are recorded and verified, and averages are determined.

#### **Academic Honors**

In most Cheshire Academy courses, students can earn an honors designation on their grade. An academic honor roll is published after each semester for students who have attained first or second honors. Full details of requirements for earning honors in courses and the criteria for placement on the honor roll are outlined in the Student and Family Handbook.

A student receiving an "Incomplete" in any course at the end of the semester will not be eligible for academic honors unless the incomplete was due to illness or extenuating circumstances and is approved by the Academic Office.

Students with an academic integrity violation in a semester are ineligible for honors in the class and the honor roll that semester.

#### **Roxbury Academic Support Program**

The Roxbury Academic Support Program aims to develop proactive, knowledgeable, and independent learners who take responsibility for their education and academic success. To achieve this goal, we utilize our signature, research-based academic coaching model. The model includes five core components:

- 1. executive functioning skill building
- 2. learning strategy instruction
- one-on-one student-instructor sessions
- collaborative goal setting, assessment, and progress monitoring
- 5. ongoing communication between and among families, teachers, Roxbury instructors, and students

Sessions are designed to help students discover and master tools and strategies that allow them to capitalize on their strengths, support areas of challenge, and become more productive learners. Strategies are applied to the academic work in the student's classes ensuring that sessions are meaningful and relevant.

We offer multiple levels of one-to-one service to provide the most appropriate guidance, systems, and attention each student needs. Placement in one of the levels is determined on a case-by-case basis and we involve a team of adults, led by the Roxbury staff, that includes Admission and Health Center staff. Consideration of placement is also given based on the requests of parents, teachers, and administrators.

# Postgraduate Course of Study Certificate Requirements

The basic requirements for a postgraduate certificate of study include:

- 1 credit of College English
- 1 credit of math
- A minimum of 3 additional credits from the following subject areas:
  - Science (strongly recommended)
  - o A fine or performing arts elective
  - o A history and social science elective
- Successful completion of a required 0.5 credit PG seminar
- Successful completion of two seasons of afternoon activities

#### The International Baccalaureate® Diploma Programme

Cheshire Academy became an IB World School in 2011. Recognized as the leader in international education, the International Baccalaureate® (IB) Programme cultivates the knowledge, skills, and attitudes that enable students to excel at the university level. The Academy adopted the IB because it is truly student-centered, interdisciplinary, and multi-modal in its learning experience, and because the philosophy and pedagogical approaches behind it fit perfectly with the Academy's mission. Cheshire Academy has successfully integrated IB into our existing ethos, with an emphasis on providing each student the exact right level of challenge with the exact right level of support.

Students in grades 11 and 12 at Cheshire Academy may choose to pursue the full IB Diploma or, as most students do, take some IB courses based on their own interests and the level of challenge they find appropriate. While placement in higher level (HL) IB courses is by department chair approval only, standard level (SL) IB courses are accessible, meaning all students at Cheshire Academy can succeed in them. The more IB courses students take, the more interdisciplinary connections they experience.

In our IB courses, students gain balanced academic preparation, an ability to draw on knowledge and understanding of various cultures and histories, and the experience of learning how to think critically and apply what they have learned in different contexts and across disciplines.

The IB Programme understands that success in higher education and beyond involves thinking critically and creatively. The curriculum educates the whole student, developing the capacity for inquiry, research, and problem solving, as well as essential skills for communication and collaboration.

#### The IB Diploma

Students at Cheshire Academy may earn the IB Diploma in addition to their Cheshire Academy diploma. Pursuing the IB Diploma is the most academically rigorous path a student can follow at Cheshire Academy.

The course of study for the IB Diploma is a challenging and balanced program of education that prepares students in grades 11 and 12 for success at the university level and life beyond. It has been designed to address the intellectual, social, emotional, and physical well-being of students. The IB Diploma has gained recognition and respect from the world's leading universities and prepares students for effective participation in a rapidly evolving and increasingly global society as they

- develop the skills and a positive attitude toward learning that will prepare them for higher education
- study at least two languages and increase understanding of cultures, including their own
- make connections across traditional academic disciplines and explore the nature of knowledge through the program's unique Theory of Knowledge course
- undertake in-depth research into an area of interest through the lens of one or more academic disciplines in the Extended Essay
- · enhance their personal and interpersonal
- develop physically, intellectually, emotionally, and ethically
- acquire breadth and depth of knowledge, and understanding, studying courses from six subject

#### The IB Curriculum

IB Diploma students must choose one subject from each of five groups (1 to 5), ensuring breadth of knowledge and understanding in their best language, additional language(s), the social sciences, the experimental sciences, and mathematics. For the sixth subject, students are strongly encouraged to choose an arts subject from group 6; however, upon approval, a student may choose a second subject from groups 2 to 5. At least three—and not more than four—subjects are taken at higher level (HL), while the other subjects are taken at standard level (SL).

The Diploma Programme features three core elements that broaden students' educational experience and challenge them to apply their knowledge and skills.

- THE EXTENDED ESSAY asks students to engage in an independent, self-directed piece of research through an in-depth study of a question relating to one of the Diploma Programme subjects they are studying. The research culminates in a 4,000-word paper.
- THEORY OF KNOWLEDGE develops a coherent approach to learning that unifies the academic disciplines. In this course on critical thinking, students inquire into the nature of knowing and deepen their understanding of knowledge as a human construction.
- CREATIVITY, ACTIVITY, SERVICE involves students
  in a range of activities alongside their academic
  studies throughout the Diploma Programme.
  Creativity encourages students to engage in the arts
  and creative thinking. Activity seeks to develop a
  healthy lifestyle through physical activity. Service
  within the community offers a vehicle for new
  learning with academic value.

#### **IB** Assessment

Students take written examinations at the end of their IB courses which are marked by external IB examiners. Students also complete internally graded assessments during their IB courses, some of which are either initially marked by teachers and then moderated by external moderators or sent directly to external examiners.

The marks awarded for each course range from 1 (lowest) to 7 (highest). Students can also be awarded up to three additional points for their combined results on Theory of Knowledge and the Extended Essay. The diploma is awarded to students who gain at least 24 points, subject to certain minimum levels of performance across the whole Programme and to satisfactory participation in the creativity, action, and service requirement. The highest total that an IB Diploma student can be awarded is 45 points.

Assessment is criterion-based, which means student performance is measured against pre-specified assessment criteria based on the aims and objectives of each subject, rather than the performance of other students taking the same examinations. The range of scores that students have attained remains statistically stable, and universities value the rigor and consistency of the IB's assessment practice.

# The Global Citizenship Diploma Distinction

Cheshire Academy aims to provide the best (anywhere) education for global citizenship. We accomplish this by adhering to four tenets: Teach 21st-century skills and capacities; enable transformative educational experiences; develop self-awareness, empathy for others. and a global perspective; foster the active pursuit of individual and collective wellbeing. Students at Cheshire Academy are eligible to earn a special distinction on their Cheshire Academy diploma, through taking a series of courses in grades 11 and 12, across departments. which are designated by a global citizenship badge (GC). completing an approved summer project between grades 11 & 12 under the supervision of a faculty supervisor, and presentation of a capstone project at the end of grade 12. The full details of the requirements to earn the Global Citizenship Diploma Distinction can be found in the Student and Family Handbook. (The requirements for earning the Global Citizenship Diploma Distinction for students who are also pursuing the IB Diploma are different and overlapping. See the Student and Family Handbook for full details.) Our global citizenship (GC) badged courses, students focus intensely on the four tenets above. More specifically, students engage in work that focuses on diversity, equity, & inclusion, leadership & civic engagement, service, and sustainability. These courses tend to be highly experiential, project- or inquiry-based, and focused on the role students play in the world around them.

### **Departments & Courses**

Note well: Courses are offered subject to enrollment demand, staffing availability, and scheduling considerations. Not all courses are available for enrollment each year.

**ENGLISH** 

**ENG 100-ELL:** Intermediate ELL **ENG 110-ELL:** Proficient ELL

**ENG 200:** Expressions of Identity **ENG 210:** Expressions of Community

ENG 220: Expressions of Place

ENG 301/301: Literary Theory: Race <sup>GC</sup>
ENG 311/312: Literary Theory: Class <sup>GC</sup>
ENG 321/322: Literary Theory: Gender <sup>GC</sup>
ENG 330-IB: Language & Literature SL1 <sup>GC</sup>
ENG 330-IB: Language & Literature SL2 <sup>GC</sup>
ENG 331/332: Revolutionary Literature

ENG 350-IB/THE 310-IB: Literature & Performance SL GC

ENG 351/352: Literature & the Environment GC

**ENG 361/362:** Creative Writing: Fiction **ENG 371/372:** Creative Writing: Nonfiction

ENG 341/342: Dramatic Literature

ENG 381/382: Genre Fiction

ENG 390: Journalism & Multimedia Reporting GC

**ENG 400-IB:** Language & Literature HL1 **ENG 400-IB:** Language & Literature HL2

**ENG 410-IB:** Literature HL1 <sup>GC</sup> **ENG 410-IB:** Literature HL2 <sup>GC</sup> **ENG 500:** College Engish

**FINE & PERFORMING ARTS** 

ART 201/202: Drawing
ART 211/212: Painting
ART 221/222: Ceramics
ART 231/232: Printmaking
ART 241/242: Photography
ART 251/252: Digital Imaging
ART 300-IB: Visual Arts SL1 GC
ART 300-IB: Visual Arts HL1 GC
ART 400-IB: Visual Arts HL1 GC

ART 410: Art Major

MUS 201/202: Music Skills & Performance

MUS 211/212: Music Fundamentals

MUS 221/222: Music Production GC

MUS 231/232: Music & Pop Culture GC

MUS 300-IB: Music SL1 GC
MUS 300-IB: Music SL2 GC
MUS 400-IB: Music HL1 GC
MUS 400-IB: Music HL2 GC

MUS 410: Music Major

THE 201/202: Acting & Directing
THE 211/212: Theater Tech & Design

**THE 221/222:** Musical Theater **THE 300-IB:** Theatre SL1 <sup>GC</sup> **THE 300-IB:** Theatre SL2 <sup>GC</sup>

THE 310-IB/ENG 350-IB: Literature & Performance SL GC

THE 400-IB: Theatre HL1 GC
THE 400-IB: Theatre HL2 GC

**HISTORY & SOCIAL SCIENCE** 

HSS 200: Modern World History

**HSS 210:** U.S. History on the World Stage **HSS 210:** Eastern & Western Civilization **HSS 301/302:** Contemporary History

**HSS 310:** American Government & the Constitution

**HSS 320:** Human Psychology **HSS 330:** World Religions <sup>GC</sup> **HSS 341/342:** Global Issues <sup>GC</sup> **HSS 351/352:** Philosophy <sup>GC</sup>

HSS 361/362: The Art of Argument GC

**HSS 370-IB:** Economics SL1 **HSS 370-IB:** Economics SL2 **HSS 380-IB:** Geography SL <sup>GC</sup>

HSS 390-IB/SCI 390-IB: Environmental Systems &

Societies SL1 GC

HSS 390-IB/SCI 390-IB: Environmental Systems &

Societies SL2 GC

HSS 400-IB: History HL1 <sup>GC</sup>
HSS 400-IB: History HL2 <sup>GC</sup>
HSS 410-IB: Economics HL1

HSS 410-IB: Economics HL2

**LANGUAGE** 

**CHI 300-IB:** IB Chinese A Literature SL1 <sup>GC</sup> **CHI 300-IB:** IB Chinese A Literature SL2 <sup>GC</sup>

FRE 100: Novice French

**FRE 300-IB:** French ab initio SL1 <sup>GC</sup> **FRE 300-IB:** French ab initio SL2 <sup>GC</sup>

FRE 310-IB: French SL1 GC
FRE 310-IB: French SL2 GC
FRE 400-IB: French HL1 GC
FRE 400-IB: French HL2 GC
SPA 100: Novice Spanish

**SPA 300-IB:** Spanish ab initio SL1 <sup>GC</sup> **SPA 300-IB:** Spanish ab initio SL2 <sup>GC</sup>

SPA 310-IB: Spanish SL1 GC
SPA 310-IB: Spanish SL2 GC
SPA 400-IB: Spanish HL1 GC
SPA 400-IB: Spanish HL2 GC

#### **MATHEMATICS & COMPUTER SCIENCE**

MTH 100: Integrated Math I
MTH 200: Integrated Math II
MTH 210: Integrated Math II (A)
MTH 220: Integrated Math II (D)
MTH 300: Integrated Math III
MTH 310: Integrated Math III (A)
MTH 320: Integrated Math III (D)
MTH 331/332: Math Fluency
MTH 341/342: Trigonometry

MTH 351/352: Modeling GC

MTH 361/362: Logic & Probability GC

MTH 360-IB: Applications & Interpretation SL1 MTH 360-IB: Applications & Interpretation SL2

MTH 370-IB: Analysis & Approaches SL1
MTH 370-IB: Analysis & Approaches SL2
MTH 400-IB: Analysis & Approaches HL1
MTH 400-IB: Analysis & Approaches HL2

MTH 410-AP: AP Statistics GC

**CSC 300-IB:** Computer Science SL1 **CSC 300-IB:** Computer Science SL2

**CSC 311/312:** Web Design

**CSC 321/322:** Coding **CSC 331/332:** Big Data <sup>GC</sup>

**SCIENCE** 

SCI 100: Integrated Science I
SCI 200: Integrated Life Science
SCI 210: Integrated Physical Science

SCI 300: Physics

SCI 310: Anatomy & Physiology SCI 321a/322a: Forensic Science

SCI 321b/322b: Genetics & Biotechnology

**SCI 331/332:** Engineering **SCI 341/342:** Astronomy

SCI 351/352: STEM & Research Methodology GC

SCI 361a/362a: Nutrition Science SCI 361b/362b: Sports Medicine

**SCI 370-IB:** Chemistry SL1 **SCI 370-IB:** Chemistry SL2

**SCI 371a/372a:** Sustainable Energy <sup>GC</sup> **SCI 371b/372b:** Green Chemistry <sup>GC</sup>

**SCI 381a/382a:** Botany <sup>GC</sup> **SCI 381b/382b:** Ecology <sup>GC</sup>

SCI 390-IB/HSS 390-IB: Environmental Systems &

Societies SL1 GC

SCI 390-IB/HSS 390-IB: Environmental Systems &

Societies SL2 GC

SCI 400-IB: Biology HL1 GC SCI 400-IB: Biology HL2 GC SCI 420-IB: Physics HL1 SCI 420-IB: Physics HL2

#### **SEMINARS & INTERDISCIPLINARY COURSES**

SEM 100: 9th Grade Seminar

SEM 400-IB: Theory of Knowledge 1 & 2

SEM 500: PG Seminar

# **ENGLISH**

The English Department is the hub of critical thinking, cultural conversations, and creative writing at Cheshire Academy. From poetry to prose, from timeless classics to contemporary works, our students find meaning and create connections through the power of ideas and words. Challenging all assumptions, norms, and biases, we read diversely, converse deeply, and write passionately.

#### **ENG 100-ELL: Intermediate ELL**

Cheshire Academy's courses for English language learners offer an intensive, context-based, genre-focused sequence of study in writing for academic purposes. These courses are for students whose home/comfort language is not English.

Students enhance grammatical, mechanical, and lexical control. The course focuses on improving writing styles such as memoirs, scientific articles, short stories, analytical responses, and research papers. Students explore how academic writing presents problems, poses questions, gives feedback, and supports discussion in all disciplines. Rhetorical modes include analysis, description, chronology, process, argument, cause and effect, classification, comparison and contrast, and opinion.

All grades course

#### **ENG 110-ELL: Proficient ELL**

Cheshire Academy's courses for English language learners offer an intensive, context-based, genre-focused sequence of study in writing for academic purposes. These courses are for students whose home/comfort language is not English.

Students focus on models of academic genres in all disciplines and develop an understanding of the purpose of each genre, how each genre is organized, argumentative patterns, and specific language features of each genre. They develop tools to critique academic texts, understand conventions, link audience and purpose, and revise papers with structural accuracy, lexical and syntactic mastery, clarity, and coherence.

All grades course

#### **ENG 200: Expressions of Identity**

This course probes what it means to be human by asking questions about identity formation,

the relationship between individuals and society, and the ways in which various modes of expression make and convey meaning. Who we are is, in large part, shaped by our cultural heritage, but also by the decisions we make and the person we want to be. This course explores the factors that go into making those decisions.

Students in this course read a wide range of texts—novels, plays, poems, short stories, and nonfiction—from diverse regions, time periods, voices, and perspectives. Through critical engagement with these texts, students develop their own perspectives and voices. Students discuss, write about, and present their ideas in formal academic language as well as in more personal and affirming ways.

9th/10th-grade course

#### **ENG 210: Expressions of Community**

In this course, students explore the universal themes that have fascinated writers of poetry, novels, short fiction, and drama for centuries: themes such as triumph over adversity, hope and courage, jealousy, revenge, love, friendship, loyalty, free will versus duty, war, national identity, and coming-of-age journeys. Students search for and create deeper symbolic meanings and contextualize those meanings within their own worlds.

Students encounter a range of literature from various time periods and regions of the world. Students use these texts as vehicles for the important work of close readings, as well as identifying and understanding literary devices and their effect on a written work. In concert with active reading skills, students work toward clear and effective communication of their ideas in their own writing.

9th/10th-grade course

#### **ENG 220: Expressions of Place**

This course examines what it means to be shaped by the regions, homes, landscapes, and architectures that humans exist within. Students explore the reciprocal relationship between place, culture and identity formation, and literature expression. Understanding that these factors shape humans, literature, and imagination, students will question just how much interaction occurs between place, human life, and story.

Students in this course read a wide range of texts—novels, plays, poems, short stories, and nonfiction—from diverse regions, time periods, voices, and perspectives. Through critical engagement with these texts, students develop their own perspectives and voices. Students discuss, write about, and present their ideas in formal academic language and in more personal

and affirming ways. 9th/10th-grade course

#### **ENG 301/302: Literary Theory: Race GC**

Cheshire Academy's series of literary theory courses introduce students to the array of critical lenses through which a wide variety of texts can be explored and through which ideas can be generated.

In this course, students explore the ways in which race and race-consciousness shape our understanding of texts, art, and the world around us. Literary theories studied include post-colonial theory, new historicism, critical race theory, and others.

11th/12th-grade/postgraduate semester course

#### **ENG 311/312: Literary Theory: Gender GC**

Cheshire Academy's series of literary theory courses introduce students to the array of critical lenses through which a wide variety of texts can be explored and through which ideas can be generated.

In this course, students explore the ways in which gender and gender-consciousness shape our understanding of texts, art, and the world around us. Literary theories studied include feminist criticism, queer theory, gender studies, and others.

11th/12th-grade/postgraduate course

#### ENG 321/322: Literary Theory: Class GC

Cheshire Academy's series of literary theory courses introduce students to the array of critical lenses through which a wide variety of texts can be explored and through which ideas can be generated.

In this course, students explore the ways in which class and class-consciousness shape our understanding of texts, art, and the world around us. Literary theories studied include Marxist critical theory, new historicism, post-colonial theory, and others.

11th/12th-grade two-year course

# ENG 331/332: Revolutionary Literature

In this course, students discover the power that words can have to inspire and provoke change. This course challenges students to see the relationship between art and revolution, between words and action, and between literary movements and social ones.

Students read a wide range of works in this course from around the world, spanning eras and genres. Students sharpen their analysis skills by exploring several critical lenses, including new historicism and cultural studies. The course heavily emphasizes purposeful writing and speaking, putting students' words into action.

11th/12th-grade/postgraduate semester course

# ENG 330-IB: Language & Literature SL1/SL2 GC

In this course, students study language in its many forms and the cultural contexts that produce and consume it. They examine the impact that evolving cultures have on the uses of language as a means of communication within and among those cultures.

Students study nonfiction texts, including essays, speeches, journalism, and advertising, as well as novels, short stories, poetry, and drama from a wide array of regions and time periods, allowing them to closely examine the relationship between a literary text and its cultural context.

11th/12th-grade two-year course

#### **ENG 341/342: Dramatic Literature**

This course focuses on the ways in which all the world is a stage. We are always acting – projecting identities into the world that approximate how we want to see and be seen. This course explores this balance between living and performing.

In this course, students read a variety of plays and other works written for the stage. Works are studied both for their literary merit – through the lenses of critical theory -- and dramatic and performative potential. Elements of stagecraft, acting, and directing are also studied.

#### ENG 350-IB/THE 310-IB: Literature & Performance SL GC

THIS IS A ONE-YEAR IB COURSE. PLACEMENT PREFERENCE IS GIVEN TO FULL IB DIPLOMA STUDENTS, STARTING WITH 12TH-GRADE STUDENTS.

This course invites students to explore perceptions of reality and ways in which literary art forms uplift the mind. Students express emotion, create beauty, and build community by exploring the creative process and through transforming texts.

This interdisciplinary course incorporates essential elements of literature and performance and aims to explore the relationship between the two. Students approach literary and dramatic texts as readers, actors, and directors in order to develop their imagination, confidence, and creativity.

FOR STUDENTS NOT PURSUING THE IB DIPLOMA, THIS COURSE MAY BE TAKEN AS AN ENGLISH CREDIT OR A FINE & PERFORMING ARTS CREDIT.

FOR STUDENTS PURSUING THE IB DIPLOMA, IF TAKEN, THIS COURSE MUST BE THEIR GROUP 1 COURSE.

11th/12th-grade course

# ENG 351/352: Literature & the Environment GC

This course delves into the intricate relationship between literature and the environment. It explores the connection between individuals and their surroundings, and how various literary forms convey and construct meaning within environmental contexts. Just as our cultural heritage influences our sense of self, so, too, do our interactions with the natural world.

Through the analysis of novels, plays, poems, short stories, and nonfiction works from diverse regions, time periods, and perspectives, students investigate how literature reflects and shapes our perceptions of the environment and our place within it. Discussions and writing assignments encourage students to develop their own interpretations and articulate their perspectives on environmental issues, both academically and personally. This course fosters critical thinking, empathy, and a deeper understanding of our relationship with the natural world.

# **ENG 361/362: Creative Writing:** Fiction

Self-examination, reflection, and observation are essential to the craft of writing. The sharing of the self allows stories to impact others. The work that students produce in this course is grounded in imagination, as students learn to craft fiction.

Utilizing workshop and writing group techniques, students work to develop their writing skills, and produce a variety of work that reflects exposure to short stories, plays, poetry, and experimental genres. Through free-writing exercises and journaling, students articulate and explore their feelings in response to prompts that touch upon a wide range of beliefs and experiences.

All grades semester course

# **ENG 371/372: Creative Writing:** Nonfiction

Self-examination, reflection, and observation are essential to the craft of writing. The sharing of the self allows stories to impact others. The work that students produce in this course is based on personal experience.

This course immerses students in the written and spoken word, develops their writing skills, and produces a variety of work that reflects exposure to short stories, plays, poetry, memoirs, and experimental genres, all with a non-fiction focus. Through free- writing exercises and journaling, students articulate and explore their feelings in response to prompts that touch upon a wide range of beliefs and experiences.

All grades semester course

#### ENG 381/382: Genre Fiction

Too often, popular books are viewed as unserious, or not worthy of analysis, or lacking in literary merit. This course disproves that by exploring works of fiction from a variety of popular and commercially successful genres and showing the ways in which popular fiction reflect social values, promote agendas, and reveal deep human themes.

Students in this course read novels, short

stories, and plays from a variety of genres including fantasy, spy novels, science fiction, westerns, mysteries, horror, thrillers, and others.

11th/12th-grade/postgraduate semester course

# **ENG 390: Journalism & Multimedia** Reporting <sup>GC</sup>

A free press is one of the hallmarks of democracy, and few 21st century skills and capacities are as valuable as information literacy. This course challenges students to explore the world of journalism, ethics, and reportage.

This course allows students the ability to learn about journalism, journalistic ethics, and the work required to report truth, avoiding bias without sacrificing democratic principles. More than this, this course affords students the opportunity to do real journalism in a variety of media – writing, audio, photojournalism, and video.

11th/12th-grade/postgraduate course

# **ENG 400-IB: Language & Literature HL1/HL2**

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

In this course, students study language in its many forms and the cultural contexts that produce and consume it. They examine the impact that evolving cultures have on the uses of language as a means of communication within and among those cultures.

Students study nonfiction texts, including essays, speeches, journalism, and advertising, as well as novels, short stories, poetry, and drama from a wide array of regions and time periods, allowing them to closely examine the relationship between a literary text and its cultural context.

11th/12th-grade two-year course

#### **ENG 410-IB: Literature HL1/HL2 GC**

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

The study of literature enables an exploration of one of the more enduring fields of human creativity, and provides opportunities for encouraging independent, original, critical, and

clear thinking. It also promotes respect for the imagination and a perceptive approach to the understanding and interpretation of literary works.

Students appreciate the artistry of literature and develop an ability to reflect critically on their reading. Works are studied in their literary and cultural contexts, through close study of individual texts and passages, and by considering a range of critical approaches.

11th/12th-grade two-year course

### **FINE & PERFORMING ARTS**

The purpose of art is to discover, unearth, and enhance various ways of engaging with the world and the human experience. We do that in this department through performance and creative acts, which become the instruments of personal expression and which are meaningful in their relationship to the larger world.

#### **ART 201/202: Drawing**

This course focuses on drawing as a means of visual inquiry. Students learn to see with an artist's eye and to know what it is like to look at the world through that lens.

Students learn about gesture, contour line, positive and negative space, visual space, shadow and light, composition, and perspective. They use these methods to render still life, landscape, live model, and the self-portrait. Students manipulate pencil, ink, pastel, oil pastel, c

All grades semester course

#### ART 211/212: Painting

In this course, students learn to accurately discern relationships of shape, form, color, and value, and to interpret this information through various paint media. Students discover a painting's potential as a medium of communication and creative visual expression.

Students explore various approaches to the use of watercolor, acrylic, and tempera paint. Students develop disciplined technical skills such as paint handling and application. There is no prerequisite for this class, though knowledge of how to draw is helpful.

All grades semester course

#### ART 221/222: Ceramics

This course is about literally making meaning. Physical sculpture, in the form of ceramics, is one of the oldest and most powerfully enduring forms of human expression there is. This course opens students' minds to the ways in which working in a physical medium can create meaning and achieve purpose.

This course consists of hand, wheel, and mold methods of construction. Students examine special hand-building and wheel techniques, glaze and decoration methods, and firing processes. Students create both functional and decorative pieces. There is no prerequisite for

this class, though knowledge of how to draw is helpful.

All grades semester course

#### ART 231/232: Printmaking

In this course, students are exposed to a variety of printing processes such as monoprint, lithography, transfer, woodcut, linoleum, and dry point. With these methods, students learn to mix various elements to achieve the correct viscosity of ink, to apply just the right amount of ink to whatever surface they are working on, and to master the ability of wiping a plate so as to achieve a good print without under or over-wiping.

Students use the basic elements of art and principles of design to create two-dimensional works. This course is a structured yet spontaneous environment that encourages involvement and commitment to originality and self-expression. Students are introduced to the work of past and present artists who have used various printing methods to great effect as a way to inspire one's creative imagination.

All grades semester course

#### ART 241/242: Photography

Artists see the world differently than one another. The same thing, photographed by different people, can yield vastly different effects and meanings. This course teaches students how to develop their artistic visions and to notice the ways in which the visual elements of the world around them interact to affect our perceptions and our lives.

This course covers all of the tools and techniques a budding photographer needs and allows students the freedom to independently explore and develop their photographic vision. Compositional tools such as framing, "rule of thirds," light, texture, pattern, lines, symmetry, depth of field, distance, perspective, space, and balance are the center of projects and discussions.

All grades semester course

#### ART 251/252: Digital Imaging

Digital imaging is a truly 21st-century way of looking closely at the world and then representing it in terms of aesthetics and truth. In this course, students create work that reveals their spirit and vision. Students develop

their own style, mode of expression, and artistic vision.

Students are introduced to digital imaging technology and software. Emphasis is placed on the production and analysis of expressive and thoughtful artwork. By exploring digital media, students develop a body of work that reflects a range of ideation and technical versatility.

All grades semester course

#### ART 300-IB: Visual Arts SL1/SL2 GC

This course engages students in a wholly creative experience of the path artists embrace as a vital part of the creative process. Each student discovers the artist within and develops a body of work that is both personal and relevant to the current times in which we live.

Each student keeps their thoughts and ideas in a visual art journal, which becomes an invaluable tool in the creative process. Studio work involves practical exploration and artistic production. Investigative work involves independent contextual, visual, and critical investigation, and both visual and written reflection. As a culmination of the program, each student has a formal showing of their work.

11th/12th-grade two-year course

#### ART 400-IB: Visual Arts HL1/HL2 GC

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

This course engages students in a wholly creative experience of the path artists embrace as a vital part of the creative process. Each student discovers the artist within and develops a body of work that is both personal and relevant to the current times in which we live.

Each student keeps their thoughts and ideas in a visual art journal, which becomes an invaluable tool in the creative process. Studio work involves practical exploration and artistic production. Investigative work involves independent contextual, visual, and critical investigation, and both visual and written reflection. As a culmination of the program, each student has a formal showing of their work.

11th/12th-grade two-year course

#### **ART 410: Art Major**

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR.

This honors-level course, requiring department recommendation, is where the most dedicated art students pursue their passion of making and expressing meaning through art. The artistic process is the core of this class, with an intense focus on the ways in which editing, refining, revising, and reworking pieces is the true way of not just achieving an artistic vision, but of expressing it.

This class is for students who are interested in applying to art and design programs for college, although any student with a strong interest and background in the arts would certainly feel at home. In this course, students develop portfolios culminating with a body of work for the annual Art Major show. This work should represent each student's passion for the arts and the best of their abilities.

11th/12th-grade course

# MUS 201/202: Music Skills & Performance

The study of music is the study of craftsmanship in which students learn to appreciate the creation of good work. It is one of the best ways of developing the ability to think creatively and to use our imaginations to see the world in new ways. In this course, students improve their technique, write songs, form ensembles and, most importantly, play music.

Each student practices and rehearses music, and motivated students may choose to participate in one of the many performance opportunities available on campus throughout the year. Students may take this class more than once with a more challenging curriculum; advanced musicians can continue to study their main instrument or explore a secondary instrument.

All grades semester course

#### **MUS 211/212: Music Fundamentals**

In this course, students gain an understanding of the core fundamentals of music, including the basic elements of pitch, rhythm, notation, scale structure, tonality, intervals, chords, melody, harmony, and musical terminology and score reading.

Students will apply these concepts to analyzing various examples of music, creating original music, and performing various styles of music.

The study of the fundamentals of music develops listening, creative, and analytical skills, as well as encouraging cultural understanding and international mindedness. Musical study encourages inquiry into creative practices and performance processes. In this way, music is a catalyst for the expansion of critical thinking.

All grades semester course

#### **MUS 221/222: Music Production**

This course focuses on the fundamental skills that help musicians of all levels create music of any genre, from the first stages of songwriting to the final steps of recording and production. It is a 21st-century approach, studying and creating contemporary music using various kinds of technology.

Students learn how to record and edit audio. and how to produce a final product using digital audio workstations. As a culmination to the course, each student puts together an end-of-semester album that includes several written, recorded, and produced tracks. Some familiarity with reading music and/or piano playing is recommended, but not required.

All grades semester course

#### MUS 231/232: Music & Pop Culture GC

Music has always played an integral role in the development of culture and society, and in turn, culture has always influenced music. This class will explore prominent musical and cultural movements, mainly in America, from America's first musical genres to present day from Irving Berlin to The Beatles to Beyoncé.

Students will listen to, analyze, and develop a more critical understanding of the importance of music in America's history. Broad topics include traditional American genres, protest songs, and music tied to cultural movements, and analyzing the purpose of music in different contexts. Students will also analyze the relationship between current music trends and social media. Students will write, collaborate with their peers, and present research on

topics they have learned and have chosen from their own personal connection to music and pop culture.

All grades semester course

#### MUS 300-IB: Music SL1/SL2 GC

Informed and active musical engagement allows students to discover relationships between lived human experience and specific sound combinations and technologies, thus informing them more fully of the world around them and the nature of humanity. This course fosters curiosity and openness to both familiar and unfamiliar musical worlds.

Students learn to hear relationships of pitch in sound, pattern in rhythm, and unfolding sonic structures. At the standard level, and by recommendation, higher level, this course covers music perception, music creation, solo performance, and ensemble performance. This course provides all students with the opportunity to engage in the world of music as lifelong participants.

11th/12th-grade two-year course

#### MUS 400-IB: Music HL1/HL2 GC

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

Informed and active musical engagement allows students to discover relationships between lived human experience and specific sound combinations and technologies. thus informing them more fully of the world around them and the nature of humanity. This course fosters curiosity and openness to both familiar and unfamiliar musical worlds.

Students learn to hear relationships of pitch in sound, pattern in rhythm, and unfolding sonic structures. At the standard level, and by recommendation, higher level, this course covers music perception, music creation, solo performance, and ensemble performance. This course provides all students with the opportunity to engage in the world of music as lifelong participants.

11th/12th-grade two-year course

#### **MUS 410: Music Major**

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR.

This honors-level course, requiring department recommendation, is where the most dedicated music students pursue their passion of making and expressing meaning through music. The process of music mastery is the core of this class, with an intense focus on the ways in which practice, nuance, phrasing, performance, and technical mastery all come together as part of the process of making great music.

This class is for students who are interested in applying to music programs for college, although any student with a strong interest and background in music would certainly feel at home. This course builds toward regular performances throughout the year as well as audition preparation. This work should represent each student's passion for music and the best of their abilities.

11th/12th-grade course

#### THE 201/202: Acting & Directing

Studying theater helps students build confidence in public speaking and creative expression. Acting asks students to explore using their voices and bodies to portray character, plot, and emotion, while directing asks students to develop the leadership skills to coach others and enact their unique perspective of a performance. This process also relies on building trust as students create art collaboratively.

This course provides students with opportunities to develop characters, act in monologues, experiment with voice, perform scene work, and devise staged movement. Advanced students can progress to study directing methodology including how to create a directorial vision, coach actors in their process,

and give feedback in supportive and productive ways. This course provides excellent preparation for the IB SL or HL Theatre class.

All grades semester course

#### **THE 211/212: Theater Production**

Theater production, the designing of each aspect of the stage environment, is essential to the creation of effective theatrical arts.

Developing an eye and ear for creating stage pictures, color palettes, and soundscapes aids in layering meaning to any theatrical piece. This class allows students to apply the principles of design and visual art to a dramatic context.

In this course, students learn the fundamentals of all elements of theater production, including the study of lighting design, sound design, stage design, costuming, and more. Students demonstrate their skills by creating production elements that are utilized in the Fall Play and Winter Musical. Advanced students can take on leadership roles as lead designers. This course provides excellent preparation for the IB SL or HL Theatre class..

All grades semester course

#### THE 221/222: Musical Theatre GC

In this course students will explore the uniquely American art form of musical theatre. Through exploration of song, dance, performance and discussion, students will have a unique opportunity to understand the role musical theatre has in shaping our society and its influence on immigration and social justice.

Students will create a portfolio of work through a sequential timeline understanding how both the artform and history shaped American culture. Students will examine works of musical theater as written texts, performance pieces, and as musical artistry.

All grades semester course

#### THE 300-IB: Theatre SL1/SL2 GC

This multi-faceted theater-making course emphasizes the importance of working both individually and collaboratively as part of an ensemble and offers the opportunity to engage in the creative process, transforming ideas and research into action. Students have the opportunity to experience theater as creators, designers, directors, and performers.

The syllabus comprises three interrelated areas: theater in context, theater in process, and theater presentation. Students at the standard level and, by recommendation, higher level, complete a director's notebook, chronicling ideas on the staging of a specific play; a research presentation, outlining and

physically demonstrating the research into a convention of a theater tradition; and a collaborative theater project.

11th/12th-grade two-year course

collaborative theater project. 11th/12th-grade two-year course

# THE 310-IB/ENG 350-IB: Literature & Performance SL GC

THIS IS A ONE-YEAR IB COURSE. PLACEMENT PREFERENCE IS GIVEN TO FULL IB DIPLOMA STUDENTS, STARTING WITH 12TH-GRADE STUDENTS.

This course invites students to explore perceptions of reality and ways in which literary art forms uplift the mind. Students express emotion, create beauty, and build community by exploring the creative process and through transforming texts.

This interdisciplinary course incorporates essential elements of literature and performance and aims to explore the relationship between the two. Students approach literary and dramatic texts as readers, actors, and directors in order to develop their imagination, confidence, and creativity.

FOR STUDENTS NOT PURSUING THE IB DIPLOMA, THIS COURSE MAY BE TAKEN AS AN ENGLISH CREDIT OR A FINE & PERFORMING ARTS CREDIT.

FOR STUDENTS PURSUING THE IB DIPLOMA, IF TAKEN, THIS COURSE MUST BE THEIR GROUP 1 COURSE.

11th/12th-grade course

#### THE 400-IB: Theatre HL1/HL2 GC

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

This multi-faceted theater-making course emphasizes the importance of working both individually and collaboratively as part of an ensemble and offers the opportunity to engage in the creative process, transforming ideas and research into action. Students have the opportunity to experience theater as creators, designers, directors, and performers.

The syllabus comprises three interrelated areas: theater in context, theater in process, and theater presentation. Students at the standard level and, by recommendation, higher level, complete a director's notebook, chronicling ideas on the staging of a specific play; a research presentation, outlining and physically demonstrating the research into a convention of a theater tradition; and a

# HISTORY & SOCIAL SCIENCE

The History & Social Science Department is where the humanities come alive at Cheshire Academy. This is the place where we answer the deep questions about what the world is like, how it got to be this way, and how it might be different if we made it better. We start with what we know and, critically, what we THINK we know, and build to a larger understanding of the ways in which we are all connected.

#### **HSS 200: Modern World History**

This course leans into history as an interpretive discipline, allowing an opportunity for engagement with multiple perspectives and opinions. Studying history develops an understanding of the past, which leads to a deeper understanding of the nature of humans and of the world today.

In this course, students survey modern world history from the High Middle Ages to the turn of the 20th century, focusing on various aspects of politics, economics, society, and culture. Students learn to identify common themes in world history, as well as to make connections from different eras and cultures. Moreover, the course strengthens analytical and interpretive skills specifically applied to source evaluation.

10th-grade course

# HSS 210: U.S. History on the World Stage

Connecting the past to the present is vital both as a skill and as a mindset. This course examines the story of the United States through a thematic approach that emphasizes not only America through its own view, but also its role in a more globalized world. Students explore themes like immigration, race relations, the role of government, competing political philosophies, and the idea of the American Dream all while highlighting how America weaves its own story with countless others from around the world.

Through the examination of primary and secondary sources, students enhance their knowledge and understanding of the events and people that have shaped this nation. Students develop their reading, writing, and

critical thinking skills, and their ability to look at the world through the lens of a historian.

9th/10th-grade course

# HSS 220: Eastern & Western Civilization

The purpose of this course is to explore the origins, evolution, and varieties of world civilizations from their origins in Mesopotamia, Egypt, India, and China (c. 3000 BCE), through the dynamic Grecian and Roman periods, up to the start of the Middle Ages (c. 1000CE). All of these civilizations developed ideas, philosophies, religions, social values, and techniques that we may still learn from.

The course will focus on expanding students' worldviews concerning the nature of these civilizations, their varieties, successes, advancements, and failures, to allow greater perspective when interpreting our present world. While particular intricacies, as well as change over time, will not be ignored, comparison and understanding of the varieties of societies, cultural values, religions, and philosophies of the civilizations concerned will be emphasized.

9th/10th-grade course

#### **HSS 301/302: Contemporary History**

This course explores the notion that the past IS the present. Students explore what it means to live in a truly globalized, interconnected world, and what the implications of this are for their lives and the life of society and the planet.

Students examine the impetus to create colonial empires, the movement away from foreign rule toward independence, and the impacts to current day that nations have faced due to colonial pasts. This course asks students to look simultaneously to the past, present, and future, gaining skills as historians and social scientists.

11th/12th-grade/postgraduate semester course

#### **HSS 310: American Government** & the Constitution <sup>GC</sup>

This course opens students' minds to the ways in which abstract political concepts and theories have practical implications in our lives and in the way the world works. Students delve into questions about what it means to live in a pluralistic society, and how a system founded

choices are made in the satisfaction of human wants. This course encourages students to develop international perspectives, to foster a concern for global issues, and raises students' awareness of their own responsibilities at a local, national, and international level.

Economics uses scientific methodologies that include quantitative and qualitative elements. This course emphasizes the economic theories of microeconomics, which deal with economic variables affecting individuals, firms, and markets, and of macroeconomics, which deal with economic variables affecting countries, governments, and societies.

11th/12th-grade two-year course

#### HSS 380-IB: Geography SL GC

THIS IS A ONE-YEAR IB COURSE. PLACEMENT PREFERENCE IS GIVEN TO FULL IB DIPLOMA STUDENTS, STARTING WITH 12TH-GRADE STUDENTS.

This course is firmly grounded in the real world and focuses on the interactions between individuals, societies, and physical processes in both time and space. It seeks to identify trends and patterns in these interactions. It also investigates the way in which people adapt and respond to change and evaluates actual and possible management strategies associated with such change.

This course integrates physical, environmental, and human geography, and ensures that students acquire elements of both socio-economic and scientific methodologies. Geography examines relevant concepts from a variety of disciplines. This helps students develop life skills and have an appreciation of, and a respect for, alternative approaches, viewpoints, and ideas.

11th/12th-grade/postgraduate course

#### HSS 390-IB/SCI 390-IB: Environmental Systems & Societies SL1/SL2

To understand the environmental issues of the 21st century and suggest suitable management solutions, both the human and environmental aspects must be understood. Through the exploration of cause and effect, this course investigates how values interact with choices and actions, resulting in a range of environmental impacts.

Students develop an understanding that the connections between environmental systems and societies are diverse, varied, and dynamic. This course is firmly grounded in both a scientific exploration of environmental systems in their structure and function, and in the exploration of cultural, economic, ethical, political, and social interactions of societies with the environment.

FOR STUDENTS NOT PURSUING THE IB DIPLOMA, THIS COURSE MAY BE TAKEN AS A HISTORY & SOCIAL SCIENCE CREDIT OR A SCIENCE CREDIT.

FOR STUDENTS PURSUING THE IB DIPLOMA, THIS COURSE CAN COUNT AS EITHER GROUP 3 OR GROUP 4

11th/12th-grade two-year course

#### HSS 400-IB: History HL1/HL2

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

This course emphasizes the importance of encouraging students to think historically. It focuses on developing critical thinking and on an understanding of multiple interpretations of history. In this way, the course involves an engaging and critical exploration of the past.

This course is based on a comprehensive and multi-perspective approach to history. It involves the study of a variety of types of history, including political, economic, social, and cultural, and provides a balance of structure and flexibility. This course focuses on six key historical lenses: change, continuity, causation, consequence, significance, and perspective.

11th/12th-grade two-year course

#### HSS 410-IB: Economics HL1/HL2

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

The study of economics is essentially about dealing with scarcity, resource allocation, and the methods and processes by which choices are made in the satisfaction of human wants. This course encourages students to develop international perspectives, to foster a concern for global issues, and raises students' awareness of their own responsibilities at a local, national, and international level.

Economics uses scientific methodologies that include quantitative and qualitative elements. This course emphasizes the economic theories of microeconomics, which deal with economic variables affecting individuals, firms, and markets, and of macroeconomics, which deal

on the idea of equality strives and struggles to live up to that creed.

Students explore the classical foundations of the American system from Ancient Greece and Rome, the contextual debates around the substance of the Constitution, the development of the American political two-party system, the evolution of American law and justice, and broader themes of civics, rights, and the ideals and realities of American governance. This course is highly recommended for students who have not previously taken high school U.S. or American History.

11th/12th-grade/postgraduate course

#### **HSS 320: Human Psychology**

This course plumbs the depth of the human psyche. Students uncover what makes people—and themselves—tick, and they learn to analyze the world through the mind's eye.

This course provides a foundational exploration of psychology, with an emphasis on developmental psych, social cognition, personality formation, as well as topics as varied as addiction, anxiety, therapy, and trauma.

11th/12th-grade/postgraduate course

#### HSS 330: World Religions GC

The course will approach five religions of the world both analytically and empathetically. In addition to promoting an awareness of religious issues in the contemporary world through the categories of ritual, sacred text, doctrine/belief, religious experience, ethics and moral conduct, the course aims include developing an informed understanding of the diversity of world religions, fostering a respectful awareness of the significance of the beliefs and practices for the faith member, encouraging a global appreciation of the issues surrounding religious beliefs, controversies and movements in the world today, and promoting responsible and informed international citizenship.

The course includes an experiential component comprised of field trips to local places of worship and a final in-depth study of one religion chosen by each student.

11th/12th-grade/postgraduate course

#### HSS 341/342: Global Issues GC

This course offers a range of intellectual inquiry, from history and economics to physical science, moral philosophy, and literature. At its core, this class challenges students to see the ways in which they are learning in an interconnected world that they can influence.

The overall concept of this course is to explore a series of broad contemporary issues in an interdisciplinary, unit-based manner, and features a high degree of independent investigation and group sharing. Possible units of study include climate change, global terrorism, poverty, and genetic engineering.

11th/12th-grade/postgraduate semester course

#### HSS 351/352: Philosophy

This course explores the nature of thought and the questions behind how humanity got to be the way it is and how it might be made better if we were to change it. Ultimately, to study philosophy is to study the nature of being and to determine our place in the world.

In this course, students learn of the major movements and thinkers in the history of philosophy. Through reading, reflection, and discussion, students also come to form their own philosophical view and are challenged to articulate it to themselves and each other.

11th/12th-grade/postgraduate semester course

#### HSS 361/362: The Art of Argument GC

This course offers a range of intellectual inquiry, from history and economics to physical science, moral philosophy, and literature. At its core, this class challenges students to see the ways in which they are learning in an interconnected world which they can influence.

The overall concept of this course is to explore a series of broad contemporary issues in an interdisciplinary, unit-based manner, and features a high degree of independent investigation and group sharing. Possible units of study include climate change, global terrorism, poverty, and genetic engineering.

11th/12th-grade/postgraduate semester course

#### HSS 370-IB: Economics SL1/SL2

The study of economics is essentially about dealing with scarcity, resource allocation, and the methods and processes by which

with economic variables affecting countries, governments, and societies.

11th/12th-grade two-year course

#### 9th/10th-grade course

# LANGUAGE

Language classes exist to open students' minds not only to other linguistic systems, but also to provide new ways to categorize and explain realities, view and interpret the world, and understand cultural norms. Our language classes establish floors of knowledge on which students build higher and higher structures of understanding.

# CHI 300-IB: Chinese A Literature SL1/SL2 GC

This course, exclusively for native speakers of Mandarin, offers students a rare opportunity to take an IB Group 1 course in their home language. With its focus on the kinds of themes and work traditionally reserved for English courses, this class offers students the ability to improve their analytical and writing skills free of the constrainers of working in another language.

The course covers a variety of texts from a variety of genres, both those originally written in Mandarin Chinese and those translated into it. Students appreciate the artistry of literature and develop an ability to reflect critically on their reading. Works are studied in their literary and cultural contexts, through close study of individual texts and passages, and by considering a range of critical approaches.

PLACEMENT IN THIS COURSE IS RESERVED FOR STUDENTS FLUENT IN MANDARIN CHINESE

FOR STUDENTS PURSUING THE IB DIPLOMA, THIS COURSE REPLACES A GROUP 2 LANGUAGE COURSE, AND ALLOWS THEM TO EARN THE PRESTIGIOUS IB BILINGUAL DIPLOMA

11th/12th grade two-year course

#### FRE 100: Novice French

This language acquisition course focuses on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students demonstrate an awareness and understanding of the intercultural elements related to the topics studied and communicate clearly and effectively in a range of situations.

Students learn the fundamental lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

#### FRE 200/210: Intermediate French

This language acquisition course continues to focus on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students communicate clearly and effectively in a range of situations, demonstrate linguistic competence and intercultural understanding, use language appropriate to a range of interpersonal and cultural contexts, use language to express and to respond to a range of ideas in a clear, coherent, and convincing manner, and use written texts and works of literature written in French.

Students learn the advanced lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, roleplay, and write emails, blogs, articles, letters, creative stories, and advertisements.

9th/10th-grade course

### FRE 300-IB: French ab initio SL1/SL2 GC

This language acquisition course focuses on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students demonstrate an awareness and understanding of the intercultural elements related to the topics studied and communicate clearly and effectively in a range of situations.

Students learn the fundamental lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

11th/12th-grade two-year course

#### FRE 310-IB: French SL1/SL2 GC

In this language acquisition course, students focus on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students communicate clearly and effectively in a range of situations, demonstrate linguistic competence and intercultural understanding, use language appropriate to a range of interpersonal and

cultural contexts, use language to express and to respond to a range of ideas in a clear, coherent, and convincing manner, and use written texts and works of literature written in French.

Students at standard level learn the advanced lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

11th/12th-grade two-year course

#### FRE 400-IB: French HL1/HL2 GC

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

In this language acquisition course, students focus on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students communicate clearly and effectively in a range of situations, demonstrate linguistic competence and intercultural understanding, use language appropriate to a range of interpersonal and cultural contexts, use language to express and to respond to a range of ideas in a clear, coherent, and convincing manner, and use written texts and works of literature written in French.

Students at higher level learn the advanced lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

11th/12th-grade two-year course

#### SPA 100: Novice Spanish

This language acquisition course focuses on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students demonstrate an awareness and understanding of the intercultural elements related to the topics studied and communicate clearly and effectively in a range of situations.

Students learn the fundamental lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

9th/10th-grade course

#### SPA 200/210: Intermediate Spanish

This language acquisition course continues to focus on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students communicate clearly and effectively in a range of situations, demonstrate linguistic competence and intercultural understanding, use language appropriate to a range of interpersonal and cultural contexts, use language to express and to respond to a range of ideas in a clear, coherent, and convincing manner, and use written texts and works of literature written in Spanish.

Students learn the advanced lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, roleplay, and write emails, blogs, articles, letters, creative stories, and advertisements.

9th/10th-grade course

# SPA 300-IB: Spanish ab initio SL1/SL2 GC

This language acquisition course focuses on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students demonstrate an awareness and understanding of the intercultural elements related to the topics studied and communicate clearly and effectively in a range of situations.

Students learn the fundamental lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

11th/12th-grade two-year course

#### SPA 310-IB: Spanish SL1/SL2 GC

In this language acquisition course, students focus on five themes: identities, experiences, human ingenuity, social organization, and

CHESHIRE ACADEMY

sharing the planet. Students communicate clearly and effectively in a range of situations, demonstrate linguistic competence and intercultural understanding, use language appropriate to a range of interpersonal and cultural contexts, use language to express and to respond to a range of ideas in a clear, coherent, and convincing manner, and use written texts and works of literature written in Spanish.

Students at standard level learn the advanced lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

11th/12th-grade two-year course

#### SPA 400-IB: Spanish HL1/HL2 GC

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

In this language acquisition course, students focus on five themes: identities, experiences, human ingenuity, social organization, and sharing the planet. Students communicate clearly and effectively in a range of situations, demonstrate linguistic competence and intercultural understanding, use language appropriate to a range of interpersonal and cultural contexts, use language to express and to respond to a range of ideas in a clear, coherent, and convincing manner, and use written texts and works of literature written in Spanish.

Students at higher level learn the advanced lexicon and grammar necessary to communicate through speaking, listening, reading, and writing. Students respond to visual stimuli, present orally, role play, and write emails, blogs, articles, letters, creative stories, and advertisements.

11th/12th-grade two-year course

# MATHEMATICS & COMPUTER SCIENCE

The Mathematics & Computer Science Department encourages each student to comprehend and execute the study of mathematics. Committed to supporting and assisting each student in their efforts, we believe students should be active learners who take risks and work collaboratively, enjoying the core concepts of mathematics and how it helps us to better understand the world around us.

#### MTH 100: Integrated Math I

This course is the first year of a three-year integrated math sequence exploring the topics traditionally covered in Algebra I, Algebra II, Geometry, and Precalculus. This course uses an integrated approach to lay the conceptual and technical groundwork for the study of further algebra, geometry, statistics, and discrete mathematics. It is appropriate for students who have completed Pre-Algebra.

Topics from the traditional Algebra I curriculum include algebraic operations with variable expressions, solving and graphing linear equations and inequalities, and solving quadratic equations. Foundational concepts from geometry and statistics include transformations and similarity, right triangles and the Pythagorean theorem, calculating area, theoretical probability, and quantitative statistics.

9th/10th-grade course

# MTH 200/210/220: Integrated Math II/ Integrated Math II (A)/ Integrated Math II (D)

PLACEMENT IN THE ACCELERATED OR W/ DISTINCTION LEVEL REQUIRES APPROVAL BY THE DEPARTMENT CHAIR.

This course is the second year of a three-year integrated math sequence covering the topics traditionally covered in Algebra I, Algebra II, Geometry, and Precalculus. The goal of this course is to extend and apply the topics studied previously and to introduce higher-level topics. This course is appropriate for students who have completed Pre-Algebra and Algebra I (Integrated Math I). Throughout the course, there is a focus on developing problem-solving skills, evaluating the potential uses of technology in mathematics, and communicating methods and solutions.

Students learn to model and may present or produce projects incorporating content from throughout the course.

Topics in the integrated level include linear equations, inequalities and systems, graphing and analyzing functions, exponents and radicals, and quadratic functions. Concepts from geometry include parallel lines and transversals, polygon angles, triangle congruence and basic proofs, properties of quadrilaterals and circles, and 3D geometry. Additional topics in the accelerated level include exponential functions, and right triangle, non-right triangle, and unit circle trigonometry. The level with distinction involves deeper explorations, extensions, and applications of all topics and includes further proofs and trigonometric functions on the coordinate plane.

All grades course

# MTH 300/310/320: Integrated Math III/ Integrated Math III (A)/Integrated Math III (D)

PLACEMENT IN THE ACCELERATED OR W/ DISTINCTION LEVEL REQUIRES APPROVAL BY THE DEPARTMENT CHAIR.

This course is the third year of a three-year integrated math sequence covering the topics traditionally covered in Algebra I, Algebra II, Geometry, and Precalculus. The goal of this course is to integrate all previously learned math content, solidify retention of technical skills, and lead students into the questions that can be answered with higher-level study of mathematics including calculus and statistics. This course is appropriate for students who have completed Algebra I, Geometry, and Algebra II (Integrated Math II). Throughout the course, there is a focus on problem solving, comparison of methods and solutions, and self-reflection on both conceptual and technical mastery.

Topics include an integrated look at linear, quadratic, polynomial, exponential, logarithmic, radical, and rational functions, an introduction to complex numbers, equations of circles, and an in-depth study of trigonometry. Non-algebraic concepts include one-variable data analysis, graphical representations of two-variable statistics, and area and volume calculations. While the accelerated level includes sketching parent functions and their transformations without technology, as well as sequences and series, further additional

topics in the level with distinction include twodimensional vectors, theoretical probability, and an introduction to limits.

10th/11th/12th-grade/postgraduate course

#### MTH 301/302: Trigonometry

This course introduces and develops trigonometric thinking, coming to explore it and adjacent topics deeply and broadly. This semester elective centers on getting an intuitive understanding of the connection between triangles, circles, waves, and cycles. Topics will prepare students for further study in precalculus while emphasizing the ability to immediately make use of new understanding. Students will be able to apply their thinking in investigations, problem-solving, and projects.

11th/12th-grade/postgraduate semester-course

#### MTH 331/332: Math Fluency

This course is for students who want to learn a more intuitive and less formulaic version of mathematics, where fluid understanding of concepts is centered. Students will work through the basic building blocks of math at a deeper level and learn to apply them to more complex and varied situations. In this semester course, students will focus on helpful techniques and approaches to a variety of everyday math prompts.

Students will then use these skills to learn and cover mainstream content based on their proficiency levels. Topics can cover any content from Integrated Math I and II as well as prerequisite knowledge and extended learning.

11th/12th-grade/postgraduate semester-course

#### MTH 341/342: Logic & Probability GC

This course explores the idea of seeing possibilities and making choices. Students will delve into logic beginning with inductive and deductive reasoning, logic methods such as truth tables and the validity of arguments, Euler diagrams, proofs, induction, and recursion. Topics on probability will include permutations, combinations, conditional probability and independent events. The ability to reason quantitatively, see all possible outcomes, and find optimal choices are major content goals of this course.

11th/12th-grade/postgraduate semester-course

#### MTH 351/352: Modeling GC

This course explores how various real-world models and projections are utilized to better understand climate change, economics, sports, insurance, biological systems, and student interests. It will focus on how complexity can be untangled using mathematical analysis and careful consideration of contextual factors.

Students will complete projects that explain phenomena in fields relevant to them. The course will use current data in those fields as the context for making and interpreting mathematical models. Students develop an understanding of various fields, then review basic data analysis techniques to investigate and challenge current popular interpretations. Students explore how data is collected and how much the past can be extrapolated in either direction.

11th/12th-grade/postgraduate semester-course

# MTH 360-IB: Applications & Interpretation SL1/SL2

This course is designed for students with varied backgrounds and abilities in mathematics. Students develop practical mathematical skills for describing our world, modeling and solving real-world problems using the power of technology.

Students learn to create and use models with linear, exponential, natural logarithmic, cubic, and simple trigonometric functions. Students learn right-angled and non-right-angled trigonometry, bearings, surface area and volume of 3D figures, and methods for collecting, displaying, and analyzing one- and two-variable data sets.

11th/12th-grade two-year course

# MTH 370-IB: Analysis & Approaches SL1/SL2

This course develops curiosity and enjoyment of mathematics, and appreciation for its elegance and power. Students develop logical and critical thinking and refine their powers of abstraction and generalization.

This course is for students with a solid background in algebraic and geometric thinking. The course covers number sets and scientific notation, sequences and series and their financial applications, probability, onevariable statistics, linear correlation for twovariable data sets, triangle trigonometry, and analytic trigonometry.

11th/12th-grade two-year course

# MTH 400-IB: Analysis & Approaches HL1/HL2

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

This course develops curiosity and enjoyment of mathematics, and appreciation for its elegance and power. Students develop logical and critical thinking and refine their powers of abstraction and generalization.

Students with a solid background in precalculus explore exponential, logarithmic, rational, and polynomial functions and function operations, statistics and probability, sequences and series, and advanced trigonometry. The course moves on to methods of proof and the study of differential and integral calculus.

11th/12th-grade two-year course

#### MTH 410-AP: AP Statistics GC

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR.

This is a non-calculus-based, college-level introductory statistics class. This course explores problems in many fields, including business, science, sports, and public policy. Students should be confident with high school math through Algebra II or its equivalent. Department approval is required to enroll in this course.

Data analysis, collection, and probability occupy the first semester. These topics are combined to discuss inference during the second semester. Students will also understand the conditions and assumptions necessary to use particular statistical tools, construct confidence intervals, and perform hypothesis tests.

10th/11th/12th-grade/postgraduate course

# CSC 300-IB: Computer Science SL1/SL2

This course studies creativity within a global context. It raises awareness of the moral, ethical, social, economic, and environmental implications of using science and technology

and the possibilities and limitations associated with continued developments in IT systems and computer science.

This teaches computing system fundamentals, program construction using Java, systems life cycles, and software development. Students come to understand the use of computers in a variety of disciplines and learn methods to analyze problems and plan computer solutions. It is recommended that students take Coding prior to enrolling in this course.

11th/12th-grade/postgraduate two-year course

#### CSC 311/312: Web Design

We spend tremendous amounts of our lives surfing the web, but what is it, and how do the pages we work, shop, share, read, fight, and get information on come to be? This course explores the inner workings of how websites come to be and operate.

This project-based course introduces students to the wide world of web design. Students learn to create websites using open-source internet resources. They use a variety of coding languages, including HTML, CSS, SASS, and JavaScript to develop a foundation for creating and adding a variety of aspects to webpages. Students ranging from coding beginners to experienced programmers can take this course to learn new coding languages and broaden their understanding of how computers and webpages work.

All grades semester course

#### **CSC 321/322: Coding**

This course is an introduction to the exciting, rapidly growing world of coding and teaches structured program logic. Students discover the role computation and analysis of animation can play in solving problems. They learn the process of writing and debugging a program through algorithms and simulation. Good style and logical thinking will be emphasized throughout the semester. This course is appropriate for students who have completed Integrated Math I or the equivalent.

All grades semester course

#### **CSC 331/332: Big Data**

What do Google and Amazon do with all the data they collect every day? Data science is

booming. Fundamental to this course is the difference between scientific experimentation, statistics, and big data.

Students in this course learn some of the tools that data scientists use to get value from huge amounts of data. Students complete their own research on data of interest and generate statistics using software such as Stata, R, and SQL. A unit of this class also focuses on managing data with Excel. This course is appropriate for students who have completed Integrated Math I or the equivalent.

All grades semester course

# **SCIENCE**

The Science Department creates an environment that fosters an appreciation for the nature of science and its application in the real world. Through the presentation of facts, data collection, and experiential learning opportunities, students are immersed in the scientific method, where they explore core scientific concepts through risk-taking and hands-on experiences.

#### **SCI 100: Integrated Science I**

In this course, students uncover the patterns that characterize the universe, life, and the physical world. They learn to think like scientists, inquiring into systems, processes, and interactions by directly observing, questioning, and analyzing the world around them.

This course covers the spectrum of scientific fields, from biology to chemistry, from earth science to physics, and from environmental science to engineering. Students put these themes to practical use through handson research, conducting experiments, and collaborating to creatively address real-world problems.

9th-grade course

#### **SCI 200: Integrated Life Science**

In this course, students examine the interactions that characterize living and systems, explaining and predicting phenomena via the development of scientific models. They learn to think like scientists, inquiring into causes and effects by directly observing, questioning, and analyzing the world around them.

This course covers the spectrum of scientific fields, from biology to chemistry, from earth science to environmental science. Students put these themes to practical use through hands-on research, conducting experiments, and collaborating to creatively address real-world problems.

10th-grade course

#### **SCI 210: Integrated Physical Science**

In this course, students examine the interactions that characterize non-living systems, explaining and predicting phenomena via the development of scientific models. They learn to think like scientists, inquiring

into causes and effects by directly observing, questioning, and analyzing the world around them.

This course covers the spectrum of scientific fields, from chemistry to physics, and from geology to engineering. Students put these themes to practical use through handson research, conducting experiments, and collaborating to creatively address real-world problems.

10th-grade course

#### SCI 300: Physics

Physics reveals the mathematical beauty of the universe at scales ranging from subatomic to cosmological. It is the study of nature in an attempt to understand how the universe behaves.

Physics students investigate topics including an in-depth conceptual and quantitative investigation into motion, forces, energy, and electricity and magnetism, and learn to appreciate the development of scientific principles and the people who developed them. Students are expected to have succeeded in Integrated Math II or the equivalent to take this course.

11th/12th-grade/postgraduate course

#### SCI 321a/322a: Forensic Science

This course sharpens student pattern recognition, observation, analysis, and critical thinking skills. Students are challenged in this course to consider, at a deeper level, the implications of subjects like biology and skills like deductive reasoning in the real world.

Students engage in the scientific study of searching and processing crime scenes, as well as the proper collection and analysis of simulated physical evidence. Students experience a variety of procedures to analyze things such as fingerprints, hair and fiber, blood splatter, cybercrime, DNA analysis, and more.

11th/12th-grade/postgraduate semester course

# SCI 321b/322b: Genetics & Biotechnology

Genetics and Biotechnology is an interdisciplinary course that explores the principles, applications, and ethical

implications of genetic science and biotechnological innovations. Through a blend of theoretical study, laboratory experiments, and real-world applications, students will investigate the structure and function of genes, genetic variation, gene expression, and the manipulation of genetic material for practical purposes in fields such as medicine, agriculture, and industry. Newer advancements in technology like CRISPR and PCR will be introduced.

11th/12th-grade/postgraduate semester course

#### SCI 331/332: Engineering

In this course, students see science, mathematics, and engineering through the real-world connections made in the classroom. They see how these disciplines play a major role in their everyday world and the importance of being scientifically and technologically literate.

The course focuses on the design process and its application. Topics include mechanisms, energy, statics, materials, and kinematics. Students create solutions to different challenges, and then document their work and communicate their solutions to their peers.

11th/12th-grade/postgraduate semester course

#### **SCI 341/342: Astronomy**

In this introductory course, students investigate the nature of the universe and how we know about it. Concepts of scientific evidence and justification, structure and evolution, and understanding humanity's place in the universe are emphasized as we learn about the solar system, stars, galaxies, and cosmology.

Students develop an understanding of and ability to practice techniques in observational astronomy, including the practice of night sky observation and spectroscopic analysis. They pursue independent projects investigating astronomical phenomena of their choice and hone their scientific presentation and communication skills.

11th/12th-grade/postgraduate semester course

# SCI 351/352: STEM Research & Methodology GC

The STEM Research and Methodology course

is designed to provide students with the knowledge, skills, and practical experience necessary to engage in authentic scientific research across various STEM disciplines. Through a combination of classroom instruction, hands-on laboratory work, and independent research projects, students will learn research methodologies, experimental design, data analysis techniques, and effective communication of scientific findings.

11th/12th-grade/postgraduate semester course

#### SCI 361a/362a: Nutrition Science

This course offers an interdisciplinary exploration of the fundamental principles of science as they relate to human nutrition. Students will delve into the intricate relationship between science and nutrition, gaining insights into the physiological, biochemical, and molecular mechanisms underlying the role of nutrients in human health and disease. Through a combination of scientific inquiry, laboratory investigations, and practical applications, students will develop a deeper understanding of the complex interactions between diet, metabolism, and overall well-being.

11th/12th-grade/postgraduate semester course

#### SCI 261b/362b: Sports Medicine

This course provides students with a comprehensive introduction to the field of sports medicine, encompassing principles of anatomy, physiology, injury prevention, assessment, treatment, and rehabilitation. Through a combination of classroom instruction, practical laboratory exercises, and real-world applications, students will develop a foundational understanding of sports-related injuries and the principles of sports medicine.

11th/12th-grade/postgraduate semester course

#### SCI 370-IB: Chemistry SL1/SL2

Chemistry enables us to understand the properties of different materials and to transform materials into new and useful substances. Through chemistry, we can understand changes that we observe in the physical world.

This course covers core concepts in chemistry, comprising, essentially, a college-level syllabus. Topics include atomic structure, stoichiometry,

periodicity, chemical bonding and structure, energetics, kinetics, and equilibrium. The second year covers organic chemistry, analytical techniques, acids and bases, redox, and an option of medicinal chemistry. Extensive laboratory work is conducted, and problem-solving skills are emphasized throughout the course.

11th/12th-grade two-year course

#### SCI 371a/372a: Sustainable Energy GC

The Sustainable Energy course is designed to explore the principles, technologies, and policies related to the production, distribution, and utilization of sustainable energy sources. Through a combination of theoretical study, practical applications, case studies, and discussions, students will develop a comprehensive understanding of renewable energy resources, energy efficiency measures, and strategies for transitioning to a more sustainable energy future.

11th/12th-grade/postgraduate semester course

#### SCI 371b/372b: Green Chemistry GC

The Introduction to Green Chemistry course provides students with an understanding of the principles, concepts, and applications of green chemistry in addressing environmental and sustainability challenges. Through theoretical study, laboratory experiments, case studies, and discussions, students will explore innovative approaches to designing chemical products and processes that minimize environmental impact, reduce waste, and conserve resources.

11th/12th-grade/postgraduate semester course

#### SCI 381a/382a: Botany GC

This course will be an introduction to the fascinating and diverse world of plants, from the tiniest mosses to towering forest giants, and from exotic orchids to carnivorous species. The course will take a project-based approach to studying the topics of evolution, diversity, structure and function, reproduction and ethnobotany—focusing on the economic, medicinal and cultural uses of plants. Students will explore how plants fit into the ecosystem, culture, local community and the world around them.

11th/12th-grade/postgraduate semester course

#### SCI 381b/382b: Ecology GC

Ecology is an interdisciplinary course that explores the complex interactions within ecosystems, focusing mainly on streams and rivers. Through a combination of fieldwork, laboratory investigations, and classroom discussions, students will gain an understanding of the physical, chemical, and biological processes that shape habitats and support diverse aquatic communities. Emphasis will be placed on ecological principles, watershed management, and the conservation of freshwater resources.

11th/12th-grade/postgraduate semester course

#### SCI 390-IB/HSS 390-IB: **Environmental Systems & Societies** SL1/SL2 GC

To understand the environmental issues of the 21st century and suggest suitable management solutions, both the human and environmental aspects must be understood. Through the exploration of cause and effect, this course investigates how values interact with choices and actions, resulting in a range of environmental impacts.

Students develop an understanding that the connections between environmental systems and societies are diverse, varied, and dynamic. This course is firmly grounded in both a scientific exploration of environmental systems and their structure and function, and in the exploration of cultural, economic, ethical. political, and social interactions of societies with the environment.

FOR STUDENTS NOT PURSUING THE IB DIPLOMA, THIS COURSE MAY BE TAKEN AS A HISTORY & SOCIAL SCIENCE CREDIT OR A SCIENCE CREDIT.

FOR STUDENTS PURSUING THE IB DIPLOMA, THIS COURSE CAN COUNT AS EITHER GROUP 3 OR GROUP

11th/12th-grade course

SCI 400-IB: Biology HL1/HL2 GC PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

This course develops globally minded students who understand and appreciate the world's biodiversity and interconnectedness by explaining and discussing all aspects of life. Students design their own experiments to test aspects of their world and knowledge to

empower decision-making.

This course empowers students to investigate their world with the knowledge and skills needed for scientific inquiry. Students explore life from the molecular level, through organismic evolution and its ecological role.

11th/12th-grade two-year course

#### SCI 420-IB: Physics HL1/HL2

PLACEMENT IN THIS COURSE REQUIRES APPROVAL BY THE DEPARTMENT CHAIR/IB COORDINATOR.

This class is about the concepts and principles of physics, abstract thought, and the global impacts of science on the cultures of the world. Students discover and explore the nature of science through past and present discoveries and the direction of science in the future.

This course provides an in-depth exploration of measurements, uncertainties, mechanics, thermal physics, waves, electricity and magnetism, circular motion and gravitation, atomic, nuclear, and particle physics, and one option to be chosen by the teacher.

At higher level, students further explore wave phenomena, fields and forces, electromagnetic induction, and nuclear and quantum physics.

11th/12th-grade two-year course

# SEMINARS & OTHER COURSES

#### SEM 100: 9th-Grade Seminar

The 9th-grade seminar is rooted in developing confidence and character, and focuses on examining individual identity and learning how to be a successful member of the CA community. The coursework helps students develop habits for academic success, find their own voices and interests, and become engaged in all CA has to offer.

Students in 9th-grade seminars respond critically to course materials through active conversation, written reflection, and research analysis. Students utilize a variety of campus resources, including the library, Center for Writing, and Math Lab. In addition, 9th-grade seminars include local field trips and multimedia projects, and conclude with the 9th-grade seminar exhibition at the end of the semester.

9th grade course

# SEM 400-IB: Theory of Knowledge 1&2 GC

This course prompts students to be aware of themselves as thinkers, encouraging them to become more acquainted with the complexity of knowledge. Students come to recognize the need to act responsibly in an increasingly interconnected but uncertain world.

This course for full IB Diploma Programme candidates asks students to reflect critically on diverse ways of knowing and areas of knowledge. It asks questions about the role and nature of knowledge in students' cultures and the cultures of others in the wider world.

11th/12th-grade core IB Diploma Programme course

#### SEM 500: PG Seminar

This course prepares postgraduates for college and life outside school. The first semester focuses on the college preparation process, with dedicated time for work on applications (including essays and supplements), as well as discussions around learning styles, the recruitment process, practice for on-campus tours and interviews, and college athletics. The semester concludes with lessons on leadership and financial literacy, culminating in a group presentation with written reflection.

The second semester is defined by each student's individual passion through the Postgraduate Project. This is a multi-faceted assignment that requires design, critical thinking, problem-solving, research, media literacy, organization, communication skills, and hands-on experiential learning. This project is a culminating academic and intellectual experience to prepare students for college, modern careers, and adult life.

Postgraduate course

